

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF SOUTHWESTERN)
PUBLIC SERVICE COMPANY’S)
APPLICATION FOR: (1) REVISION OF)
ITS RETAIL RATES UNDER ADVICE)
NOTICE NO. 292; (2) AUTHORIZATION) CASE NO. 20-00238-UT
AND APPROVAL TO ABANDON ITS)
PLANT X UNIT 3 GENERATING)
STATION; AND (3) OTHER)
ASSOCIATED RELIEF,)
)
SOUTHWESTERN PUBLIC SERVICE)
COMPANY,)
)
APPLICANT.)
)
_____)**

DIRECT TESTIMONY

of

MARK LYTAL

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

TABLE OF CONTENTS

GLOSSARY OF ACRONYMS AND DEFINED TERMS.....	iii
LIST OF ATTACHMENTS	vi
I. WITNESS IDENTIFICATION AND QUALIFICATIONS	1
II. ASSIGNMENT AND SUMMARY OF TESTIMONY AND RECOMMENDATIONS	5
III. SELECTION AND MANAGEMENT OF ENERGY SUPPLY CAPITAL PROJECTS	10
IV. ENERGY SUPPLY CAPITAL ADDITIONS.....	19
A. ENERGY SUPPLY CAPITAL ADDITIONS FOR THE PERIOD FROM OCTOBER 1, 2019 THROUGH SEPTEMBER 30, 2020	20
B. ENERGY SUPPLY CAPITAL ADDITIONS FOR THE PERIOD FROM OCTOBER 1, 2020 THROUGH FEBRUARY 28, 2021.....	28
V. SAGAMORE CAPITAL COSTS.....	36
VI. CHANGES IN USEFUL LIVES OF ASSETS	56
A. TOLK GENERATING STATION.....	56
B. HARRINGTON GENERATING STATION	59
C. PLANT X UNIT 3	60
VII. DISMANTLEMENT OF GENERATING STATIONS.....	62
A. CARLSBAD	62
B. MOORE COUNTY	65
VERIFICATION.....	67

GLOSSARY OF ACRONYMS AND DEFINED TERMS

<u>Acronym/Defined Term</u>	<u>Meaning</u>
AFUDC	Allowance for Funds Used During Construction
Base Period	October 1, 2019 through September 30, 2020
BOP	Balance of Plant
Capital Services	Capital Services, LLC, an affiliate of Xcel Energy
CEM	Continuous Emission Monitoring
Carlsbad	Carlsbad Generating Station
Commission	New Mexico Public Regulation Commission
GSU	Generator Step Up
GT-ACO	Gas Turbine Autonomous Control Optimization
IFC	Issue for Construction
kV	kilovolt
kW	kilowatt
Moore County	Moore County Generating Station
MSA	Master Supply Agreement
MW	megawatt
NERC	North American Reliability Corporation
NSP-M	Northern States Power Company, a Minnesota corporation
O&M	operation and maintenance
OAA	Omnibus Appropriations Act

<u>Acronym/Defined Term</u>	<u>Meaning</u>
Operating Companies	Northern States Power Company, a Minnesota corporation; Northern States Power Company, a Wisconsin corporation; Public Service Company of Colorado, a Colorado corporation; and SPS
PTC	Production Tax Credit
PSA	Purchase and Sale Agreement
RFP	Request for Proposal
RPC	Regional Planning Committee
SBAC	Sootblower Air Compressors
SMA	Souder, Miller & Associates
SPP	Southwest Power Pool
SPS	Southwestern Public Service Company, a New Mexico corporation
Test Year	Historical Test Year Period consisting of the Base Period and further incorporating all proper adjustments and capital additions
Tolk	Tolk Generating Station
Total Company or total company	Total SPS (before jurisdictional allocation)
TSA	Turbine Supply Agreement
Wanzek	Wanzek Construction
Vestas	Vestas-American Wind Technology, Inc.
WBS	Work Breakdown Structure
Xcel Energy	Xcel Energy Inc.

<u>Acronym/Defined Term</u>	<u>Meaning</u>
XES	Xcel Energy Services Inc.

LIST OF ATTACHMENTS

<u>Attachment</u>	<u>Description</u>
ML-1	Total Company Amounts and Jurisdictional Percentages (<i>Filename: ML-1.xlsx</i>)
ML-2	Energy Supply Capital Additions to Plant in Service: October 1, 2019 through September 30, 2020 (<i>Filename: ML-2.xlsx</i>)
ML-3	Energy Supply Capital Additions to Plant in Service: October 1, 2020 through February 28, 2021 (<i>Filename: ML-3.xlsx</i>)
ML-4	Sagamore Wind Project Commercial Operation Notice Letter (<i>Non-native format</i>)
ML-5	Purchase and Sale Agreement for Sagamore Wind Project (<i>Non-native format</i>)
ML-6	SMA Report on Sagamore Construction (<i>Non-native format</i>)
ML-7	January 2020 Plant X Unit 3 Economic Analysis (<i>Non-native format</i>)
ML-8	December 2020 Plant X Unit 3 Economic Analysis (<i>Filename: ML-8.xlsx</i>)

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **I. WITNESS IDENTIFICATION AND QUALIFICATIONS**

2 **Q. Please state your name and business address.**

3 A. My name is Mark Lytal. My business address is 790 South Buchanan Street,
4 Amarillo, Texas 79101.

5 **Q. On whose behalf are you testifying in this proceeding?**

6 A. I am filing testimony on behalf of Southwestern Public Service Company, a New
7 Mexico corporation (“SPS”). SPS is a wholly-owned electric utility subsidiary of
8 Xcel Energy Inc. (“Xcel Energy”).

9 **Q. By whom are you employed and in what position?**

10 A. I am employed by Xcel Energy Services Inc. (“XES”), the service company
11 subsidiary of Xcel Energy, as Director, Regional Capital Projects in the Projects
12 Department of Energy Supply, which is the generation operation and maintenance
13 (“O&M”) business unit of Xcel Energy.

14 **Q. Please briefly outline your responsibilities as Director, Regional Capital
15 Projects in the Projects Department of Energy Supply.**

16 A. I am responsible for managing the capital budget process and projects for the SPS
17 region within the Energy Supply business unit. Thus, I am responsible for the
18 regional capital budget, schedules, development, and construction for all of SPS’s

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 electric generating projects. I directly manage the major projects for SPS and
2 supervise other managers handling smaller projects. My management duties
3 include promoting safety, selecting technical designs, overseeing engineers and
4 contractors, managing the bidding process, and negotiating major equipment
5 supply agreements. I work with Xcel Energy's Environmental, Regulatory,
6 Engineering and Technical Resources, and Resource Planning departments to assist
7 with scoping and planning of new generation and major generation retrofit projects.

8 **Q. Please describe your educational background.**

9 A. I have a Bachelor of Science in Mechanical Engineering from Texas Tech
10 University and a Masters of Engineering in Engineering Management from the
11 University of Colorado.

12 **Q. Please describe your professional experience.**

13 A. I have 30 years of experience in the utility industry in the design, construction,
14 operation, and maintenance of power generation plants, including coal, combustion
15 turbine/combined cycle facilities, and wind generation. I have worked with Xcel
16 Energy and SPS in engineering management and production, supervisory, project,
17 and plant engineering positions. I have also served as Director, Technical
18 Resources and Compliance. In that position, I had oversight of a multi-state, multi-

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 jurisdiction technical team of over fifty engineers, technical specialists, and
2 compliance specialists. In that role, I developed, monitored, and adjusted the
3 policies, procedures, and standards needed to apply comprehensive, effective, and
4 efficient technical knowledge and support of power plant engineering, operations,
5 and maintenance. I have also provided strategic direction and leadership of Energy
6 Supply's internal reliability standard compliance program and its implementation.

7 **Q. Have you attended or taken any special courses or seminars relating to public**
8 **utilities?**

9 A. Yes. Over my career, I have taken numerous courses and seminars related
10 specifically to the construction and operation of power plants. I have given
11 technical presentations on high energy piping, general project management, power
12 plant operations, and maintenance. I have also taken the New Mexico State course
13 on public utility rate development.

14 **Q. Do you hold a professional license?**

15 A. Yes. I am a registered profesional engineer in the State of Texas.

16 **Q. Are you a member of any professional organizations?**

17 A. Yes. I am a member of the American Society of Mechanical Engineers.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Have you testified before any regulatory authorities?**

2 A. Yes. I submitted prefiled direct testimony before the New Mexico Public
3 Regulation Commission (“Commission”) in SPS’s most recent New Mexico base
4 rate case, Case No. 19-00170-UT,¹ and I testified in support of the uncontested
5 comprehensive settlement in that case. I also submitted prefiled direct testimony
6 in SPS’s most recent base rate case before the Public Utility Commission of Texas,
7 Docket No. 49831. Finally, I have served as an expert witness during North
8 American Electric Reliability Corporation (“NERC”) standard audit engagements
9 in both engineering and leadership capacities.

¹ *In the Matter of Southwestern Public Service Company’s Application for: (1) Revision of Its Retail Rates Under Advice Notice No. 282; (2) Authorization and Approval to Shorten the Service Life of and to Abandon Its Tolk Generating Station Units; and (3) Other Related Relief*, Case No. 19-00170-UT, Direct Testimony of Mark Lytal (Jul. 1, 2019).

1 **II. ASSIGNMENT AND SUMMARY OF TESTIMONY AND**
2 **RECOMMENDATIONS**

3 **Q. What is your assignment in this proceeding?**

4 A. I have several assignments in this proceeding. First, I describe the processes that
5 the Energy Supply business area uses to select its capital projects and to manage its
6 capital expenditures.

7 Second, I present the Energy Supply capital additions placed into service
8 from October 1, 2019 through February 28, 2021, including the cost data for: (1)
9 the capital additions that closed to plant in service during the period of October 1,
10 2019 through September 30, 2020; and (2) the capital additions that have closed or
11 that are expected to close to plant in service during the period from October 1, 2020
12 through February 28, 2021.

13 Third, I discuss SPS's construction of the Sagamore Wind Project
14 ("Sagamore"), and I explain that the costs SPS incurred to construct Sagamore were
15 reasonable and necessary. I also demonstrate that the total company costs incurred
16 by SPS to construct both Sagamore and the Hale Wind Project ("Hale") are below
17 the per kilowatt ("kW") cost cap established by the Commission in Case No.
18 17-00044-UT.²

² *In the Matter of Southwestern Public Service Company's Application Requesting: (1) Issuance of a Certificate of Public Convenience and Necessity Authorizing Construction and Operation of Wind Generation and Associated Facilities, and Related Ratemaking Principles Including an Allowance for Funds Used During Construction for the Wind Generation and Associated Facilities; and (2) Approval of a Purchased Power Agreement to Obtain Wind-Generated Energy, Case No. 17-00044-UT, Final Order Adopting Certification of Stipulation with Modification at 4 (Mar. 21, 2018).*

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 Fourth, I describe the changes in service lives of assets at three of SPS's
2 generating facilities: Tolk Generating Station ("Tolk"), Harrington Generating
3 Station ("Harrington"), and Plant X Unit 3:

- 4 • In its last New Mexico rate case, which was Case No. 19-00170-UT, SPS
5 received Commission authorization to abandon the two coal-fired units at
6 Tolk for generating purposes at year-end 2032 because of groundwater
7 shortages in the area.³
- 8 • Pursuant to an agreement with the Texas Commission on Environmental
9 Quality, SPS has agreed to cease the use of coal at Harrington by 2025, and
10 SPS seeks Commission approval to end the service lives of the Harrington
11 coal-specific assets at year-end 2024 because they will no longer be needed
12 after that time.
- 13 • SPS also seeks Commission approval in this case to retire Plant X Unit 3
14 at year-end 2022.

15 The depreciation rates that SPS has proposed in this case are based on those service
16 lives.

17 Finally, I describe the decommissioning and dismantlement of the Carlsbad
18 Generating Station ("Carlsbad") and the Moore County Generating Station
19 ("Moore County"), and I explain that the costs incurred to dismantle those facilities
20 were reasonable and necessary. SPS witness Mark P. Moeller explains how SPS
21 has accounted for the dismantling costs.

³ Case No. 19-00170-UT, Certification of Stipulation at 42-44 (May 11, 2020). As I explain later in my testimony, SPS will continue to use Tolk assets other than the generating assets for voltage stability after 2032.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Please summarize the conclusions and recommendations in your testimony.**

2 A. I recommend that the Commission approve the requested amount of SPS's Energy
3 Supply capital additions in this proceeding. The Energy Supply capital additions
4 for the period of October 1, 2019 through February 28, 2021 total \$318,245,753 on
5 a New Mexico retail basis (\$981,023,247 total company), with \$17,058,972
6 (\$54,918,238 total company) of that amount attributable to projects placed in
7 service during the period of October 1, 2019 through September 30, 2020, and
8 \$301,186,781 (\$926,105,009 total company) attributable to projects placed or
9 expected to be placed in service during the period of October 1, 2020 through
10 February 28, 2021, including Sagamore. Because the projects were reasonable and
11 necessary to construct, equip, repair, and maintain SPS's generating plants and to
12 provide functional and safe facilities for SPS's operations, the Commission should
13 authorize these Energy Supply capital additions to be included in SPS's rate base.

14 I also recommend that the Commission approve SPS's proposal to abandon
15 Plant X Unit 3 in 2022 and to set depreciation rates for that unit based on a service
16 life ending in 2022. I further recommend that the Commission establish
17 depreciation rates for the Tolk generating assets based on a service life ending in
18 2032 and for the Harrington coal-specific assets based on a service life ending in
19 2024.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 With respect to Carlsbad and Moore County, I recommend that the
2 Commission find that SPS's decommissioning and dismantling expenses were
3 reasonable and necessary, and that SPS has accounted for the dismantling expenses
4 correctly.

5 **Q. How were New Mexico retail jurisdictional amounts in your testimony and**
6 **attachments calculated?**

7 A. Throughout this testimony, I quantify the expense and asset amounts on a New
8 Mexico retail basis based upon the jurisdictional allocation percentages that SPS
9 witness Stephanie N. Niemi uses to develop the New Mexico retail revenue
10 requirement reflected in her Attachment SNN-6. Ms. Niemi is responsible for
11 calculating jurisdictional allocation percentages that apply to the various costs
12 components in the cost of service. My staff and I conferred with Ms. Niemi and
13 her staff to determine the New Mexico retail jurisdictional amounts presented in
14 my testimony and attachments. If the percentages used to allocate amounts to the
15 New Mexico retail jurisdiction change, those new allocation percentages will need
16 to be applied to the total company numbers to derive updated New Mexico retail
17 amounts. Attachment ML-1 contains the total company numbers and the
18 jurisdictional percentages used to derive the New Mexico retail amounts in my
19 testimony.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Were Attachments ML-1, ML-2, ML-3, ML-7 and ML-8 prepared by you or**
2 **under your direct supervision and control?**

3 A. Yes.

4 **Q. Are Attachments ML-4 through ML-6 true and correct copies of the**
5 **documents you describe in your testimony?**

6 A. Yes.

1 **III. SELECTION AND MANAGEMENT OF ENERGY**
2 **SUPPLY CAPITAL PROJECTS**

3 **Q. Please describe the Energy Supply business area and the work that Energy**
4 **Supply performs to support SPS’s operations.**

5 A. The Energy Supply business area is a multi-regional organization of Xcel Energy.
6 Its primary purposes are the production of electricity and the delivery of that
7 electricity to the transmission systems of the Xcel Energy Operating Companies,
8 including that of SPS.⁴

9 **Q. Does the Energy Supply business area include smaller business units or**
10 **groups?**

11 A. Yes. The Energy Supply business area consists of:
12 • an Operations unit that operates and maintains power plants in the Xcel
13 Energy Operating Companies’ footprints, including the SPS region;
14 • an Environmental Services organization that supports the environmental
15 functions of the power plants;
16 • a Projects unit that provides project and engineering services for capital
17 additions;

⁴ Xcel Energy is the parent company of four utility operating companies: Northern States Power Company, a Minnesota corporation (“NSP-M”); Northern States Power Company, a Wisconsin corporation; Public Service Company of Colorado, a Colorado corporation; and SPS (collectively, “Operating Companies”).

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

- 1 • an engineering and technical support unit for O&M issues; and
2 • a Business Operations organization that performs asset analysis, budgeting,
3 reporting, and compliance.

4 **Q. What are the primary business drivers affecting Energy Supply’s capital**
5 **expenditures?**

6 A. Multiple factors drive the Energy Supply capital requirements. From SPS’s
7 perspective, the most significant factors include the age of SPS’s units and the
8 increased unit cycling made necessary by the Southwest Power Pool’s (“SPP”)
9 Integrated Marketplace. Another major driver of capital expenditures for SPS in
10 recent years has been the construction of new energy resources, such as Sagamore.

11 **Q. Does Energy Supply have a process that determines how capital projects are**
12 **evaluated and funded?**

13 A. Yes. The process begins at the plant level. As each new fiscal year approaches,
14 plant managers review their systems to identify and submit projects that they expect
15 to need over a five-year period.⁵ As part of that process, the plant managers review
16 operational and other data that allows them to identify and quantify how the

⁵ In this part of my testimony, I use the phrase “plant managers” as a type of shorthand to encompass both the actual plant managers and the other employees who assist plant managers in the evaluation process.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 proposed project meets specific drivers and criteria. The plant managers specify
2 the identified information on the project document that they submit as part of the
3 project evaluation and budgeting process.

4 **Q. What criteria do the plant managers use to evaluate potential capital projects?**

5 A. The plant managers review and prioritize proposed capital projects using multiple
6 criteria, including financial metrics such as Present Value of Revenue
7 Requirements. They also review and evaluate operational factors such as the
8 impacts on unplanned outage rates, equipment condition, environmental
9 compliance laws and regulations, efficiency, reliability, capacity, and safety.

10 **Q. Do the plant managers focus on only near-term projects, or do they focus on**
11 **both near-term and long-term projects?**

12 A. They focus on both. Some projects that they evaluate result from an operational
13 issue require a near-term solution, such as an emergent need caused by a failed
14 piece of equipment. An example of a near-term project is a failed medium-voltage
15 motor that requires a replacement or rewind. Other projects may require multiple
16 years to engineer and execute, such as the replacement of parts on a combustion
17 turbine after years of operation. New generation projects also typically take years
18 to plan and construct.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Is there a review process to evaluate the capital expenditure proposals put**
2 **forth by the plant managers?**

3 A. Yes. Plant managers submit their proposed projects to a review committee of
4 engineers and subject matter experts. Based on a review of the need for a particular
5 project and the cost estimate for the project, the committee either approves or denies
6 the request. After a list of proposed projects is approved by that committee, it is
7 passed on to a Regional Planning Committee (“RPC”) that reviews and evaluates
8 the list of projects, the ranking attributes, the timing for the expenditures, the project
9 drivers, the supporting information, and the necessity of the projects.

10 **Q. How does the RPC evaluate and rank the projects submitted by the review**
11 **committee?**

12 A. The RPC assigns numerical points to the various factors considered in the
13 evaluation process, with all of the points being summed to create an overall score
14 for the project. The RPC then ranks the projects based on those overall scores to
15 create a prioritized list of projects, which is then evaluated in light of the available
16 budget for the next year, the planned unit outage schedule for the next several years,
17 and other factors such as new environmental regulations. The RPC then makes
18 adjustments to schedules and budgets as required to account for evolving conditions
19 and factors, and it proposes a final list of projects that meets the planned budget

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 targets for the next five years. This process allows SPS to submit a five-year
2 projection of capital expenditures with estimated in-service dates to the corporate
3 capital budget process.

4 **Q. Does the RPC have any other role in the capital planning process?**

5 A. Yes. The RPC meets throughout the year to make adjustments to projects currently
6 under way and to recommend those “emergent projects” that must be undertaken
7 to meet operational or business requirements.⁶

8 **Q. Now that you have described the Energy Supply planning process generally,**
9 **please explain how the Energy Supply business area develops cost estimates**
10 **for proposed capital additions.**

11 A. The plant manager prepares the initial cost estimates and includes them in the
12 project request submitted to the RPC. The RPC then reviews the proposed project
13 cost, along with the other factors that I discussed earlier in my testimony. If the
14 RPC finds the project acceptable, the project is assigned to the regional engineering
15 manager, who then assigns it to a project manager for detailed engineering and
16 development. During this development stage, enough of the engineering work is

⁶ As I will discuss in more detail later in my testimony, “emergent projects” are unplanned projects that become necessary during the course of a budget period because of an equipment failure or other incident that threatens safety or reliability.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 undertaken to arrive at a more precise cost estimate, with the engineering being
2 performed by internal engineers or by an external engineering organization,
3 depending on the complexity.

4 **Q. Does Energy Supply have a process to help manage capital costs?**

5 A. Yes. As I explained earlier, a capital project is assigned to a project manager after
6 it has been approved for execution, with that assignment typically occurring three
7 to six months in advance of the first activity required to commence the project.
8 That gives the project manager time to work with the plant engineering and
9 technical services personnel and other subject matter experts to review and more
10 fully develop the final scope, schedule, and monthly cash flow requirements for the
11 assigned project. As part of that process, the project manager is expected to identify
12 opportunities to control capital costs.

13 **Q. Is it typical for the Energy Supply organization to use competitive bidding to**
14 **manage capital costs?**

15 A. Yes. When feasible, the project manager solicits competitive bids for the project
16 work by using the Xcel Energy Supply Chain organization to firm up cost and
17 schedule data during the engineering and purchasing activities.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Is it possible for the budgeted capital expenditures to change during the**
2 **planning process or after the project is underway?**

3 A. Yes. After a project is funded and begins, the project manager receives weekly or
4 monthly reports that track actual expenditures and compares such expenditures to
5 the capital budget for the project. Each month, significant budget variances are
6 noted and reviewed to determine the cause for the variance and to identify
7 corrective actions that can be taken. If corrective action is necessary and feasible,
8 it is implemented. Sometimes the variance is simply a timing issue and no
9 corrective action is necessary.

10 In other cases, the budget may need to be amended because the project is
11 more or less costly than originally contemplated. In such situations, a scope or
12 budget change order is developed that revises the project to align with the current
13 needs. As the Director, Regional Capital Projects, I have reviewed and approved
14 those types of requests from time to time.

15 **Q. Earlier you referred to “emergent projects.” Please explain what those are**
16 **and how SPS budgets for them.**

17 A. During the course of outage inspections, Energy Supply employees sometimes
18 discover equipment that needs significant repair or replacement to maintain unit

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 reliability. In addition, equipment occasionally fails without warning. To ensure
2 that it has the funding to address those situations, Energy Supply includes an
3 “Emergent Fund” project for each generating plant when it submits its budget
4 information. During the year following that budget submission, if equipment fails
5 or if an inspection indicates that equipment needs significant repair or replacement,
6 the plant manager submits an “emergent project” request to secure funding for the
7 repair or replacement.

8 **Q. How are capital project costs captured in the Xcel Energy accounting system?**

9 A. SPS uses what it calls a Work Breakdown Structure (“WBS”), which Mr. Moeller
10 discusses in more detail in his direct testimony. Generally speaking, overall capital
11 projects are recorded at WBS Level 1, whereas sub-projects within the overall
12 project are recorded at lower WBS Level 2, WBS Level 3, or WBS Level 4.⁷

13 **Q. How are emergent projects recorded in the WBS hierarchy?**

14 A. The actual costs incurring during the course of an emergent project are recorded at
15 WBS Level 4. All of those WBS Level 4 costs are then rolled up to a WBS Level 2
16 Emergent Fund project number in the accounting records to track what the
17 Emergent Fund monies were actually used for.

⁷ I am not an accountant, nor am I an expert on the Xcel Energy accounting systems. I provide this information only to provide context for my later discussion of WBS levels.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Is a capital WBS Level 4 order closed as soon as the equipment subject to that**
2 **order is placed in service?**

3 A. No. Frequently, minor work continues after the equipment is placed in service, and
4 charges can continue for a short period after the in-service date is recognized on a
5 WBS Level 4 order. These charges can include recognition of the final bills from
6 vendors, testing of the equipment, and settlement of any disputes.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **IV. ENERGY SUPPLY CAPITAL ADDITIONS**

2 **Q. As part of this rate case, is SPS asking to include Energy Supply capital**
3 **additions in its rate base?**

4 A. Yes. SPS is asking to include in rate base those Energy Supply capital additions
5 that closed or are expected to close to plant in service during the period of October
6 1, 2019 through February 28, 2021. SPS has included these capital additions in its
7 Test Year rate base. In Subsection A of this section, I address the capital additions
8 that closed to plant in service during the period of October 1, 2019 through
9 September 30, 2020. In Subsection B, I address the capital additions that have
10 closed to plant in service or are expected to close to plant in service during the
11 period of October 1, 2020 through February 28, 2021. All of these Energy Supply
12 capital additions support SPS's ability to provide safe and reliable electric service
13 to its customers.

14 **Q. Do the Energy Supply capital additions include any significant new projects?**

15 A. Yes. Sagamore began commercial operation in December 2020. I provide more
16 details about the Sagamore capital additions in Section V of my testimony.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **A. Energy Supply Capital Additions for the Period**
2 **from October 1, 2019 through September 30, 2020**

3 **Q. What is the dollar amount of the Energy Supply capital additions that SPS is**
4 **requesting in this case for the period October 1, 2019 through September 30,**
5 **2020?**

6 A. For the Energy Supply capital additions for the period October 1, 2019 through
7 September 30, 2020, SPS is requesting \$17,058,972 on a New Mexico retail basis
8 (\$54,918,238 total company). The New Mexico retail amount consists of:

- 9 • \$10,882,886 (\$35,417,662 total company) of Steam Production;
- 10 • \$4,170,591 (\$13,353,518 total company) of Other Production;
- 11 • \$1,878,193 (\$5,723,596 total company) of Electric Transmission; and
- 12 • \$127,303 (\$423,462 total company) of General plant capital additions.

13 **Q. Have you prepared a list of SPS's requested Energy Supply capital additions**
14 **closed to plant in service during the period October 1, 2019 through September**
15 **30, 2020?**

16 A. Yes. My Attachment ML-2 lists SPS's Energy Supply capital additions for the
17 period October 1, 2019 through September 30, 2020. Table ML-1 lists the
18 information contained in Attachment ML-2:

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1
2

Table ML-1
Information Contained in Attachment ML-2

Column A	Asset Class	Identifies the type of asset.
Column B	Witness	Identifies the witness supporting the project.
Column C	Project Category	Provides the project category that is descriptive of the project's type.
Column D	WBS Level 2 Number	Provides the WBS Level 2 number for the project.
Column E	Project Description (WBS Level 2 Description)	Provides a short title for the WBS Level 2 number for the project.
Column F	Additions to Plant in Service (October 1, 2019 – September 30, 2020) Total Company	Provides the total company dollar amount for the plant additions for the period October 1, 2019 through September 30, 2020.
Column G	Additions to Plant in Service (October 1, 2019 – September 30, 2020) NM Retail	Provides the New Mexico retail dollar amount for the plant additions for the period October 1, 2019 through September 30, 2020.

3 **Q. Please describe the Energy Supply capital additions placed in service for the**
4 **period October 1, 2019 through September 30, 2020.**

5 A. The plant additions for this period fall within one of the three following categories:
6 Reliability & Performance Enhancement, Environmental Compliance, and New
7 Generation, as shown in Table ML-2.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

Table ML-2
Energy Supply Capital Additions
for the period October 1, 2019 through September 30, 2020

Project Category	Energy Supply Capital Additions (total company)	Energy Supply Capital Additions (NM retail)
Reliability & Performance Enhancement	\$44,665,369	\$13,721,639
Environmental Compliance	\$1,299,908	\$399,427
New Generation	\$8,952,961	\$2,937,906
Total	\$54,918,238	\$17,058,972

Q. Please describe the type of projects included in the Reliability & Performance Enhancement category.

A. This category of investment contains the capital additions for maintaining and enhancing the safety, performance, and reliability characteristics of SPS's existing production plant. For example, the replacement of equipment reduces the occurrence of unplanned outages and helps to maintain a high reliability factor, which reduces the need for higher cost replacement energy. Additionally, safety projects ensure a safe workplace for employees and enable SPS to meet the safety standards established by regulatory agencies. The total investment in this category amounts to \$13,721,639 on a New Mexico retail basis (\$44,665,369 total company)

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 during the period. The projects described below account for 68% of the total dollar
2 amount of capital additions in this category. The remaining 32% of projects are
3 similar in nature in that they repair or replace aging technology, which is essential
4 to ensuring efficient and reliable business operations, and are presented on
5 Attachment ML-2.

6 **Cunningham Unit 4 - Rewind Generator** - \$2,504,747 New Mexico
7 retail (\$8,151,542 total company) (Level 2 WBS A.0001545.129) This
8 project consisted of rewinding the generator stator and rotor as well as
9 upgrading the high flow blower. This project was necessary due to an
10 existing generator failure. Siemens has urgently recommended
11 replacement of the high flow blower at the same time as the generator
12 stator and rotor rewinds occur.

13 **Nichols Unit 3 - Cooling Tower Structure** - \$1,300,613 New Mexico
14 retail (\$4,232,762 total company) (Level 2 WBS A.0001560.094) This
15 project completed the replacement of the cooling tower structure. The
16 cooling tower is over 50 years old and was in degraded condition, as has
17 been noted in reports by Burns Engineering, plant engineering, and
18 internal subject matter experts, all of whom opined that structural
19 replacement should be performed to prevent failure. The degradation
20 presented significant safety hazards to SPS personnel as well as possible
21 additional damage to the cooling tower.

22 **Cunningham Unit 2 - Replace Boiler Tubes** - \$1,217,288 New
23 Mexico retail (\$3,961,586 total company) (Level 2 WBS
24 A.0001545.131) This project replaced tubes in the front wall upper arch,
25 four corner burner panels, and a lower rear wall furnace door. It also
26 required asbestos abatement of the lower furnace starting at the burner
27 elevation, a boiler chemical clean, and all re-insulation. This work was
28 necessary due to hydrogen embrittlement damage. The Cunningham
29 Unit 2 boiler had extensive under deposit corrosion in the rear wall nose

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 arch, front wall upper arch, burner corner panels, and new furnace door,
2 and that corrosion has caused several tube failures.

3 **Harrington Unit 2 - Generator Stator Rewind** - \$898,432 New
4 Mexico retail (\$2,923,890 total company) (Level 2 WBS
5 A.0001550.421) This project was to rewind the Harrington Unit 2
6 generator stator, which was necessary because the Unit 2 generator was
7 showing gradual degradation of the tube copper resistors due to the
8 aging of the original equipment and extended period of operation. That
9 has caused dust and excessive amounts of grease to be deposited within
10 the machine. The work was recommended by the Original Equipment
11 Manufacturer and Xcel Energy's internal subject matter experts.

12 **Plant X Unit 4 - Rewind Generator Stator** - \$755,443 New Mexico
13 Retail (\$2,458,540 total company) (Level 2 WBS A.0001534.500) This
14 project was to rewind the stator of the generator on Plant X Unit 4. The
15 generator was originally put in service in 1964 without any previous
16 rewind history. An inspection found that the generator stator needed to
17 be rewound.

18 **Harrington Unit 2 - Replace Foxboro FBMs** - \$557,419 New Mexico
19 retail (\$1,814,085 total company) (Level 2 WBS A.0001550.346) This
20 project replace the Foxboro FBMs with new conversion kits that allow
21 for retention of the nosecones so that field wiring does not have to be
22 touched. The 100 Series FBMs were installed in the late 1980s and had
23 come to the end of their life cycle. SPS developed a staged replacement
24 plan to replace control system components just prior to their end-of-life,
25 and this project follows the replacement plan.

26 **Tolk Unit 1 Replace Reheat Loops** - \$466,119 New Mexico retail
27 (\$1,516,956 total company) (Level 2 WBS A.0001555.433) This project
28 replaced the bottom loops of the Tolk Unit 1 Reheat. These tubes on that
29 unit had been damaged from stress corrosion cracking, which is caused
30 by condensation pools during shutdowns due to contaminants present in
31 the condensate during cycling operation. Those contaminants settle in
32 the lower bend and begin to attack the metal, causing the stress corrosion
33 cracking.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Tolk Unit 0 - Replace Railroad Ties Phase 5 of 5** - \$276,698 New
2 Mexico retail (\$900,495 total company) (Level 2 WBS Element
3 A.0001555.104) This project replaced approximately 0.60 miles of
4 existing wooden railroad ties with concrete ties and new ballast. A 2018
5 track inspection completed by Dufrane Rail Service reported this
6 section of track to be in violation of Federal Railroad Administration
7 standards, which required replacement. This is the last portion of the
8 track to be replaced.

9 **Tolk Units 1 and 2 - Replace Mill D and Mill E Gearboxes &**
10 **Journals** - \$480,442 New Mexico retail (\$1,563,568 total company)
11 (Level 2 WBS A.0001555.221 and A.0001555.226) These projects
12 performed gearbox and journal rebuilds on Tolk Unit 1 Mill D and Tolk
13 Unit 2 Mill E. These projects were necessary because of the age of the
14 mills and the failure rates of the gearbox components, which have been
15 in service since 1983. The manufacturer-recommended life of the
16 gearbox is 30 years with proper maintenance and inspections. These
17 projects will maintain SPS's mills at optimal levels, which will maintain
18 coal quality and mill reliability. Keeping the mills in optimal condition
19 also reduces emissions and reduces slagging of the boiler by keeping
20 particle sizes small.

21 **Tolk Unit 1 - Replace Mill C Shaft** - \$222,124 New Mexico retail
22 (\$722,887 total company) (Level 2 WBS A.0001555.500) This project
23 rebuilt the Tolk Unit 1 C Mill vertical shaft, which was broken rendering
24 the mill inoperable. The C Mill is required to be operable to ensure SPS
25 is able to operate if one of the other mills fails.

26 **Plant X Unit 4 - Rewedge Generator** - \$220,733 New Mexico retail
27 (\$718,361 total company) (Level 2 WBS A.0001534.187) This project
28 rewedged the Plant X Unit 4 generator. This work was recommended
29 by Toshiba after a generator inspection indicated approximately 50% of
30 the wedges were moderately or extremely loose.

31 **Jones Unit 4 Replace Exhaust Stack Silencer Baffle** - \$213,017 New
32 Mexico retail (\$693,252 total company) (Level 2 WBS A.0001586.308)
33 This project replaced the existing exhaust baffles with six new Siemens

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 501F3 exhaust silencer baffles. Because of the number of hours of
2 continuous service at elevated temperatures, pieces were breaking off
3 and being expelled from the stack, putting personnel and equipment at
4 risk.

5 **Harrington Unit 2 - Replace Steam Cooled Spacer Tubes** - \$196,527
6 New Mexico retail (\$639,585 total company) (Level 2 WBS
7 A.0001550.406) This project replaced a complete run of the steam-
8 cooled spacer tubes on all four superheat-division panels. The steam-
9 cooled spacer tubes maintain the alignment of the division panels and
10 prevent them from swaying. These tubes experience more than normal
11 mechanical wear as the division panels sway from side to side. The
12 steam-cooled spacer tubes on this unit were original and had been in
13 service for over 30 years. This project was necessary to prevent a major
14 failure, which would cause ancillary damage.

15 **Q. Please describe the type of projects included in the Environmental Compliance**
16 **category.**

17 A. This category of investment contains the capital additions necessary for ensuring
18 SPS's compliance with existing federal and state environmental regulations,
19 including permits. For example, necessary refurbishments or replacements of
20 equipment such as air monitoring equipment, evaporation ponds, landfill, and
21 pollution control equipment needed to ensure continuing compliance are included
22 in this category. The total investment in this category amounts to \$399,427 on a
23 New Mexico retail basis (\$1,299,908 total company) during the period. The
24 projects described below account for 82% of the dollars of the total capital additions

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 in this category. The remaining 18% of projects are similar in nature in that they
2 repair or replace aging technology, which is essential to ensuring efficient and
3 reliable business operations, and they are presented on Attachment ML-2.

4 **Cunningham Units 2 and 4 - Upgrade CEMS Foxboro Systems -**
5 \$151,048 New Mexico retail (\$491,576 total company) (Level 2 WBS
6 A.0001545.112 and A.0001545.104) These projects upgraded the
7 Continous Emissions System (“CEMS”) Foxboro Systems. The
8 Application Workstations that provide CEMS data management and
9 system status monitoring for plant operation and regulatory reporting
10 were obsolete and unreliable. Thus, plant technicians were having
11 difficulty maintaining these systems because of lack of parts and
12 constant failures.

13 **Harrington Units 2 and 3 - Rebag Partial -** \$111,871 New Mexico
14 retail (\$364,076 total company) (Level 2 WBS A.0001550.235 and
15 A.0001550.208) These projects replaced the baghouse bags in seven
16 Unit 2 compartments and three Unit 3 compartments. On average, the
17 filter bags have lasted 6-8 years. As the filter bags age they become
18 more difficult to clean, resulting in higher bag-house pressure drop,
19 more ID fan horsepower, boiler load limits, bag failures and opacity
20 problems. With increased bag failures, higher bag-house pressure drops
21 become more prevalent when the unit is at full load. When multiple
22 compartments have reached this point, a forced de-rate occurs to protect
23 the fans and boiler, which affects the unit's reliability and increases the
24 risk of opacity violations. SPS therefore changes bags after the
25 compartment has been in service for 8 years or 10% of the original bags
26 have failed.

27 **Nichols Unit 0 - Replace Sprinkler Pivot S7 -** \$63,792 New Mexico
28 retail (\$207,605 total company) (Level 2 WBS Element
29 A.0001560.500) - This project replaced the existing sprinkler pivot S7
30 in section 7 near Pond 20. This work was necessary due to the number
31 and frequency of repairs at that site.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Please describe the type of projects included in the New Generation category.**

2 A. This category of investment contains the capital additions necessary to interconnect
3 parts of Sagamore to the transmission grid. The total investment in this category
4 amounts to \$2,937,906 on a New Mexico retail basis (\$8,952,961 total company)
5 during the period. The project described below accounts for 93% of the dollars of
6 the total capital additions in this category. I describe the construction of Sagamore
7 in more detail in a later section of my testimony.

8 **Sagamore Generating Facility – Network Upgrades** - \$1,747,218 New
9 Mexico retail (\$5,324,463 total company) (Level 2 WBS Elements
10 A.0001402.009, A.0001402.011, A.0001402.007, A.0001402.006,
11 A.0001402.013) This portion of the Sagamore investment contains funding
12 for the Network Upgrades necessary to interconnect Sagamore.

13 **B. Energy Supply Capital Additions for the Period**
14 **from October 1, 2020 through February 28, 2021**

15 **Q. What is the dollar amount of the Energy Supply capital additions for the**
16 **period from October 1, 2020 through February 28, 2021?**

17 A. For the Energy Supply capital additions for the period October 1, 2020 through
18 February 28, 2021, SPS is requesting \$301,186,781 on a New Mexico retail basis
19 (\$926,105,009 total company). The New Mexico retail amounts consists of:

- 20 • \$8,481,311 (\$27,601,888 total company) of Steam Production;
21 • \$270,986,154 (\$826,861,250 total company) of Other Production;

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

- 1 • \$21,485,902 (\$70,865,437 total company) of Electric Transmission; and
2 • \$233,415 (\$776,435 total company) of General Plant capital additions.

3 Attachment ML-3 lists all of the Energy Supply capital additions closed to plant in
4 service during this period.

5 **Q. Please describe the information included in Attachment ML-3, which provides**
6 **details about the dollar amount for Energy Supply capital additions for the**
7 **period October 1, 2020 through February 28, 2021.**

8 A. Table ML-3 lists the information that is contained in my Attachment ML-3:

9
10

Table ML-3
List of Information in Attachment ML-3

Column A	Asset Class	Identifies the type of asset.
Column B	Witness	Identifies the witness supporting the project.
Column C	Project Category	Provides the project category that is descriptive of the project's type.
Column D	Project Description	Provides a short title that describes the project.
Column E	Additions to Plant in Service (October 1, 2020 – February 28, 2021) Total Company	Provides the total company dollar amount for the plant additions for the period October 1, 2020 through February 28, 2021.
Column F	Additions to Plant in Service (October 1, 2020 – February 28, 2021) NM Retail	Provides the New Mexico retail dollar amount for the plant additions for the period October 1, 2020 through February 28, 2021.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Please describe the Energy Supply capital additions that have been or will be**
2 **placed in service for the period October 1, 2020 through February 28, 2021.**

3 A. The capital additions that have been or will be placed in service during the period
4 from October 1, 2020 through February 28, 2021 are similar to the projects that
5 were closed during the period from October 1, 2019 through September 30, 2020
6 and that are discussed in the previous subsection of my testimony. As with the
7 projects discussed above, these projects support SPS's ability to provide safe and
8 reliable electric service to its customers. The table below shows the project
9 categories and amounts.

10
11
12

Table ML-4
Energy Supply Capital Additions
for the Period October 1, 2020 through February 28, 2021

Project Category	Energy Supply Capital Additions (total company)	Energy Supply Capital Additions (NM retail)
Reliability & Performance Enhancement	\$63,200,597	18,077,382
Environmental Compliance	\$2,487,164	\$764,238
New Generation	\$860,417,248	\$282,345,161
Total	\$926,105,009	\$301,186,781

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Please describe the type of projects included in the Reliability & Performance**
2 **Enhancement category.**

3 A. The general description of the Reliability & Performance Enhancement category
4 provided in the previous subsection of this testimony also applies to the projects
5 included for the period October 1, 2020 through February 28, 2021, which are
6 identified as “Reliability & Performance Enhancement” on Attachment ML-3. The
7 total planned investment in this category is \$18,077,382 on a New Mexico retail
8 basis (\$63,200,597 total company) during the period. The projects described below
9 account for 74% of the total dollar amount for the capital additions in this category.
10 The remaining 26% of the projects are similar in nature in that they repair or replace
11 aging technology, which is essential to ensuring efficient and reliable business
12 operations, and are presented on Attachment ML-3.

13 **Jones Units 3 - Replace Hot Gas Path** - \$3,710,477 New Mexico retail
14 (\$12,075,514 total company) This project consists of a Hot Gas Path
15 Inspection. This inspection and any necessary parts replacement are
16 recommended by the original equipment manufacturer based on the
17 number of starts of the combustion turbine.

18 **Tolk Units 1 & 2 - Install Synchronous Condenser** - \$5,002,161 New
19 Mexico retail (\$20,632,964 total company) These projects are to
20 convert the existing generators to run as electric motors with static
21 excitation. These projects are necessary due to Tolk station having a
22 limited life left due to the water availability of the Ogallala Aquifer.
23 SPS has determined the lowest cost option for the system is to maintain
24 Tolk as a summer peaking plant (winter emergency operation only) as

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 long as possible. The models show the plant can run in a peaking-only
2 capacity until approximately 2032. SPS has also concluded that the
3 system voltage would become unstable if at least one Tolk unit is not
4 running in certain conditions. Therefore, SPS has installed synchronous
5 condensor equipment to assure that one unit is always available. With
6 the addition of wind to the system, the synchronous condensor
7 equipment will also support the system stability by running in
8 synchronous condensor mode during high wind days. This will help the
9 reactive power needs of the system.

10 **Tolk Unit 2 - Purchase and Install New Generator Step Up (“GSU”)**
11 **Transformer** - \$1,190,173 New Mexico retail (\$3,873,343 total
12 company) As part of this project, SPS is purchasing and installing a
13 new GSU transformer to replace the spare that is currently installed on
14 Tolk Station Unit 2 and to ensure that SPS has a spare GSU. The
15 currently utilized spare is not large enough for this unit at full load.
16 Because SPS is planning to convert the units to synchronous condensers
17 mode, the larger transformer is necessary.

18 **Jones Unit 0 - Effluent Water Optimization** - \$1,185,145 New
19 Mexico retail (\$3,856,980 total company) This project is necessary to
20 maximize available effluent volume and to ensure adequate pressure
21 from the City of Lubbock. It consisted of building an effluent storage
22 pond and associated systems to operate it. This project is necessary
23 because Jones Station was being forced to frequently derate the units
24 during the summer when Lubbock was unable to supply the necessary
25 amount and pressure of effluent flow. With this pond, Jones Station will
26 be able to avoid costly derates due to low pond levels and will be able
27 to supply itself with enough pressure to back flush the reactors when
28 necessary to preserve equipment.

29 **Cunningham Unit 4 - Replace Combustor Components** - \$743,407
30 New Mexico retail (\$2,419,370 total company) This project is to
31 remove and replace the Cunningham Unit 4 combustor fuel piping, fuel
32 nozzles, cover plates, cross-flame tubes, combustor baskets, transition
33 cylinders, transitions and seals. The Siemens guidelines recommend the
34 maintenance interval to be 800 equivalent starts or 16,000 equivalent

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 hours on the Westinghouse Model 501D5A Turbine, which this unit had
2 reached. Cunningham's Title V air permit also requires that this
3 inspection be performed when the unit reaches these thresholds. The
4 permit states: "The manufacturer's recommended maintenance schedule
5 shall be used to schedule and budget outages for regular maintenance."

6 **Jones Unit 1 - Rewind Exciter Rotor** - \$463,653 New Mexico retail
7 (\$1,508,930 total company) This project consists of replacing the
8 existing rotating armature of the Jones Unit 1 Westinghouse brushless
9 exciter. The refurbishment of the Jones Unit 1 exciter was based upon
10 its age, SPS's history with the exciters at Harrington, and the current
11 banding issues occurring on the Jones Unit 2 exciter.

12 **Maddox Unit 1 - Replace Superheat Terminal Tubes** - \$344,100
13 New Mexico retail (\$1,119,851 total company) This project is replacing
14 96 superheat outlet header terminal tubes and dissimilar metal welds,
15 replaced insulation and repaired the refractory as needed. This project
16 is necessary due to a leak in the reheat outlet header caused by one
17 cracked and one completely broken dissimilar metal weld.

18 **Cunningham Units 3 & 4 - CT Control Upgrade** - \$339,632 New
19 Mexico retail (\$1,105,310 total company) This project is upgrading the
20 existing TD3000 servers, the human-machine interface, and software
21 with Siemen's latest versions of hardware and software. The existing
22 control system were XP servers with Server 2003. The XP servers had
23 not been supported for over five years. The obsolescence of the hardware
24 puts the unit at risk if there were failures in the electronics.

25 **Q. Please describe the type of projects included in the Environmental Compliance**
26 **category.**

27 A. The general description of the Environmental Compliance category provided in the
28 previous subsection of this testimony also applies to the projects included for the
29 period October 1, 2020 through February 28, 2021 identified as "Environmental

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 Compliance” on Attachment ML-3. The total planned investment in this category
2 is \$764,238 on a New Mexico retail basis (\$2,487,164 total company) during the
3 period. The projects described below account for 91% of the total dollar amount
4 for the capital additions in this category. The remaining 9% of the projects are
5 similar in nature in that they repair or replace aging technology, which is essential
6 to ensuring efficient and reliable business operations, and are presented on
7 Attachment ML-3.

8 **Jones Unit 0 - NO_x Controls Enhancement** - \$514,177 New Mexico
9 retail (\$1,673,356 total company) This project is to add Siemens Gas
10 Turbine Autonomous Control Optimization (“GT-ACO”) and active
11 NO_x adjustment in order to facilitate lower load operation while
12 remaining within NO_x operating limits. The addition of the new GT-
13 ACO control logic will lower NO_x emissions and allow for greater unit
14 dispatch flexibility. This project will maintain NERC Critical
15 Infrastructure Protection requirements while also resolving the issue of
16 the current server no longer being supported by Microsoft.

17 **Maddox Unit 1 and Cunningham Unit 3 CEMs Foxboro Systems** -
18 \$121,743 New Mexico retail (\$396,205 total company) These projects
19 are to upgrad the CEMS Foxboro Systems and to install power supplies
20 and associated hardware to provide more reliablity to CEMs Reporting.
21 These were necessary because the current computer hard drives,
22 motherboards and power supplies were failing. In addition, new
23 components had become inaccessible and refurbishments had proven to
24 be unreliable.

25 **Harrington Unit 0 - Install CEMs Compressor** - \$56,004 New
26 Mexico retail (\$182,261 total company) This project includes the
27 installation of a new compressor for the CEMS instrument air system.
28 This compressor will be the primary air supply for the CEMS and will

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 help reduce the need to run multiple sootblower air compressors
2 (“SBAC”) and add needed redundancy. Currently, two SBACs are in
3 service at any one time to provide redundancy since the SBACs supply
4 the instrument air system. By installing this compressor, SPS will need
5 to run only one SBAC at a time, saving on CO₂.

6 **Q. Please describe the type of projects included in the New Generation category.**

7 A. This category of investment contains the capital additions necessary for
8 constructing Sagamore. The total planned investment in this category amounts to
9 \$282,345,161 on a New Mexico retail basis (\$860,417,248 total company) during
10 the period. The projects described below account for 99% of the dollars of the total
11 capital additions in this category.

12 **Sagamore Generating Facility – Other Production** - \$263,883,681 New
13 Mexico retail (\$804,157,822 total company) This portion of the Sagamore
14 Generating Facility contains the funding for the purchase of the wind
15 turbines and all costs associated with the installation and erection of these
16 turbines.

17 **Sagamore Generating Facility – Transmission Serving Generation and**
18 **Substation** - \$11,749,741 New Mexico retail (\$35,806,103 total company)
19 This contains the funding for the purchase and installation of materials and
20 equipment related to the collector substation and 345-kilovolt (“kV”)
21 transmission line for Sagamore. The projects associated with these costs are
22 listed on Attachment ML-3, line numbers 73 and 76.

23 **Sagamore Generating Facility – Transmission Serving Generation and**
24 **Substation** - \$4,082,770 New Mexico retail (\$12,441,815 total company)
25 This portion of the Sagamore investment contains funding for the Network
26 Upgrades necessary to interconnect Sagamore. The projects associated with
27 these costs are listed on Attachment ML-3, line numbers 77 and 78.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 For New Mexico retail ratemaking purposes, the gross plant-in-
2 service amount combined for the Hale and Sagamore projects to be
3 included in SPS's rate base in the initial rate cases for the projects
4 will not exceed \$1,675 per kW installed (total company). . . . For
5 the initial Hale rate case, the gross plant in service amount will not
6 exceed \$1,675 per kW installed (total company). For the initial
7 Sagamore rate case, the gross plant in service amount for the
8 combined projects will not exceed \$1,675 per kW installed (total
9 company). The \$1,675 per kW installed (total company) dollar
10 amount includes AFUDC, all SPP-assigned generation
11 interconnection costs, and any necessary new transmission and
12 distribution equipment or upgrades to existing transmission or
13 distribution equipment.⁸

14 **Q. If the costs of the Hale assets that SPS placed in service in its last rate case are**
15 **added to the costs of the Hale and Sagamore assets that SPS seeks to place in**
16 **service in this case, is the total amount below the cost cap that SPS agreed to**
17 **as part of the settlement resolving Case No. 17-00044-UT?**

18 A. Yes. The total cost for all of Hale and Sagamore investment that will be placed in
19 service by February 28, 2021 will be approximately \$1,562 per kW on a total
20 company basis. That is well below the \$1,675 per kW cost cap agreed to in Case
21 No. 17-00044-UT. That amount includes the Allowance for Funds Used During
22 Construction ("AFUDC"), all SPP-assigned generation interconnection costs, and
23 all new transmission and distribution equipment or upgrades to existing
24 transmission or distribution equipment.

⁸ Case No. 17-00044-UT, Modified Unanimous Comprehensive Stipulation at 9-10 (Mar. 28, 2018).

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Does SPS expect to incur any additional costs related to Sagamore after**
2 **February 28, 2021?**

3 A. Yes. SPS expects to incur certain additional costs related to Sagamore after
4 February 28, 2021, and those costs will be included in rate base in SPS's next base
5 rate case. But even with those additional forecasted costs, SPS expects the total
6 all-in capital cost for Hale and Sagamore to be no more than approximately \$1,610
7 per kW on a total company basis.

8 **Q. Please describe what is involved in building a wind generation project,**
9 **including the major construction components of Sagamore.**

10 A. Constructing a wind generation project such as Sagamore generally involves the
11 following components: construction of turbine access roads; construction of turbine
12 foundations; tower erection; trenching the collector system; constructing the
13 collector substation; constructing a high voltage generation tie line; and
14 constructing an O&M building.

15 **Q. What major contracts did SPS or its affiliates enter into associated with the**
16 **capital costs of Sagamore?**

17 A. There are several major contracts associated with the capital costs of Sagamore.
18 Each of these contracts was introduced as part of Case No. 17-00044-UT.

19 1. Capital Services, LLC, an affiliate of Xcel Energy, ("Capital Services")
20 entered into a Master Supply Agreement ("MSA") with Vestas for model

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 2.0 MW V110 Vestas wind turbines. The MSA ensured that sufficient
2 turbines were purchased to comply with the safe harbor requirements under
3 the Omnibus Appropriations Act (“OAA”) for Production Tax Credit
4 (“PTC”) benefits.

5 2. Under the scope of the MSA, SPS executed a Turbine Supply Agreement
6 (“TSA”) with Vestas to purchase the additional turbines needed to complete
7 the development of the SPS Projects and deliver the turbines to the
8 Sagamore site.

9 3. SPS entered into a Sale of Components Agreement with Capital Services to
10 purchase the wind turbines that were purchased to comply with the safe
11 harbor requirements under the OAA.

12 4. SPS entered into a Purchase and Sale Agreement (“PSA”) to acquire the
13 wind development rights from Invenergy for the Sagamore Wind Project.
14 Under the PSA, the developer was required to provide a site ready for SPS
15 to begin construction.

16 5. SPS entered into a fixed price Balance of Plant (“BOP”) construction
17 contract for the installation of the wind turbines and construction of the
18 site’s infrastructure.

19 **Q. Please describe the MSA.**

20 A. On September 15, 2016, Capital Services entered into the fixed price MSA with
21 Vestas, a leading international wind turbine supplier with manufacturing operations
22 in Colorado. The MSA governs the purchase of turbines, the delivery, inspection,
23 storage, and maintenance of the turbines, as well as the timelines for completion of
24 the turbines.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 Capital Services entered into the MSA with Vestas only after Xcel Energy
2 obtained pricing from both Vestas and other major international wind turbine
3 manufacturers, as part of an analysis for potential wind projects for the Xcel Energy
4 Operating Companies. Xcel Energy determined that the Vestas proposal offered
5 more favorable pricing and conditions, and the MSA is the result of comprehensive
6 negotiations between Xcel Energy and Vestas.

7 **Q. Why did Capital Services enter into the MSA with Vestas?**

8 A. To receive 100% of the PTC benefits, SPS or its affiliates must have made
9 expenditures of 5% of the total cost of the project by December 31, 2016. At that
10 time, SPS had not completed negotiations for the PSA and had not received
11 regulatory approvals for the project, and therefore did not know how many turbines
12 it would need to purchase. Because SPS was not in a position to purchase the
13 turbines and other assets from Vestas in 2016, Capital Services made those
14 purchases for the benefit of SPS and its customers.

15 **Q. Please describe the TSA in more detail.**

16 A. SPS entered into the TSA with Vestas on June 15, 2018. The TSA enabled the
17 purchase of the additional turbines and related equipment and delivery needed to
18 complete Sagamore. The TSA also: (1) incorporates typical turbine performance

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 terms; (2) requires timely manufacturing production, delivery, and commissioning;
2 (3) includes standard industry warranties and a supplier parent guaranty; and
3 (4) incorporates liquidated damages clauses for failure to achieve the contractual
4 milestones.

5 **Q. The Sale of Components Agreement with Capital Services is an affiliate**
6 **agreement. Has that agreement already been approved by the Commission?**

7 A. Yes. I understand that the Commission found in Case No. 17-00044-UT that the
8 Sale of Components Agreement between SPS and Capital Services was a
9 reasonable Class I Transaction under § 62-6-19(B)(1) NMSA and Rule 17.6.450
10 NMAC. However, I understand that the Commission has the ability to review the
11 costs SPS paid Capital Services for the wind turbines and to determine whether the
12 specific cost SPS is paying for each of the cost components is reasonable.

13 **Q. What types of costs did SPS incur under the Capital Services Agreement?**

14 A. SPS paid a “Confirmation Price” and a carrying charge. The “Confirmation Price”
15 consists of:

- 16 1. the price paid by Capital Services to Vestas for the turbines; and
- 17 2. the estimated “Incremental Costs,” which included:

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

- 1 a. storage and maintenance fees for the period from the date Capital
2 Services took delivery of the turbines to the date on which it delivered
3 the turbines to SPS; and
- 4 b. the cost of insuring the turbines for the period from the date Capital
5 Services took delivery of the turbines to the date on which it delivered
6 the turbines to SPS.

7 The carrying charge was calculated by applying SPS's AFUDC rate to the purchase
8 price of the turbines for each month or partial month in the "Carrying Period." The
9 Carrying Period is defined as the period from the date on which Capital Services
10 purchased the turbines until the date on which title to the turbines passes from
11 Capital Services to SPS.⁹

12 **Q. Were the costs that SPS paid to Capital Services reasonable?**

13 A. Yes. SPS paid a total of \$61,390,572 to Capital Services, broken down as follows:

14 **Table ML-4**

Description	Amount (total company)
Turbines and Towers	45,887,400
Storage Fees	1,909,127
Insurance	24,420
Carrying Costs	10,576,744
Sales Tax	2,992,881
Total	61,390,572

⁹ Under the Sale of Components Agreement, AFUDC is prorated for partial months.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 Those amounts are reasonable because:

- 2 • Capital Services sold the turbines and towers to SPS for the same amount
3 that Capital Services paid Vestas for those turbines and towers. The amount
4 paid by Capital Services to Vestas for the assets was a negotiated price
5 agreed to by independent parties in an arm's length transaction.
- 6 • Capital Services charged only the out-of-pocket costs that it incurred for
7 storage of the turbines and insurance on those turbines. It is reasonable for
8 SPS to reimburse Capital Services for those out-of-pocket costs.
- 9 • Capital Services advanced the money to purchase turbines on behalf of SPS
10 and its customers, and should be compensated for having expended funds
11 to make a purchase that enables SPS and its customers to take advantage of
12 100% of the PTCs available from Sagamore. The AFUDC rate is a
13 reasonable basis for the Carrying Cost because it reasonably approximates
14 SPS's own carrying costs for purchasing components to be installed at
15 generating facilities.

16 **Q. Please describe the PSA in more detail.**

17 A. On March 9, 2017, SPS entered into a PSA with Invenergy for the acquisition of
18 the Sagamore site. Under the PSA, Invenergy was responsible for making the site
19 “construction ready,” while SPS was responsible for construction, including roads,
20 and procurement of turbines or other equipment under the MSA or future TSAs. A
21 copy of the PSA is provided as Attachment ML-5.

22 **Q. Please describe the BOP.**

23 A. On October 13, 2017, SPS entered into a fixed-price engineering, procurement, and
24 construction agreement for the installation of the wind turbines and construction of

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 the site's infrastructure. The BOP contract bids were solicited based on the layout
2 and size of Sagamore. The scope of work for the BOP contractor includes five
3 different areas: civil, substation, generation tie line, collection system, and turbine
4 erection. Civil work consisted of constructing the new roads to each turbine
5 location, upgrading existing roads (both private and state- or county-owned), and
6 maintaining the roads throughout the construction process. Civil work also
7 included the construction of wind turbine foundations. Substation work included
8 substation design and construction. Collection system work included the
9 underground power and control wiring from each turbine to the substation. The
10 generation tie line is the high-voltage transmission line from the collector substation
11 to the point of interconnection to the Transmission System. Tower erection
12 included the setting of the tower sections, installation of the nacelle, blades, and
13 hub, and the installation of the auxiliary equipment associated with the turbine.

14 **Q. What was the process used for selecting the BOP contractor?**

15 A. The BOP contractor selection process for Sagamore followed Xcel Energy's
16 corporate policy for the procurement of services of this type. A Request for
17 Proposal ("RFP") was issued to three nationally recognized wind farm construction
18 firms that were known to have BOP engineering and constructing experience for
19 projects similar to the size and complexity to Sagamore.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 The RFP was originally issued by SPS’s affiliate, NSP-M in February 2017
2 for BOP engineering and construction efforts supporting four wind projects located
3 in Minnesota and North Dakota. An addendum to the RFP was subsequently issued
4 to bidders in July 2017 to also include the Hale and Sagamore projects in order to
5 leverage economies of scale, provide for construction efficiencies between the
6 winter and summer construction seasons, and reduce BOP costs.

7 Considering engineering design was approximately 30% complete and not
8 fully defined at the time that the bids were sought during the RFP process, pricing
9 from bidders was obtained based on open book pricing with firm unit rates with
10 anticipated quantities for items such as collector system, roads, and foundation. Bid
11 evaluation considerations included safety, pricing, technical experience, execution
12 plan, and commercial criteria such as warranties, project schedule adherence,
13 performance guarantees, financial strength of the bidders, payment schedules, and
14 insurance.

15 The commercial agreement was designed to “close” with pricing becoming
16 firm upon the completion of design, final quantities known, and issue for
17 construction (“IFC”) drawings completed. Commercial risks were mitigated during
18 the open book agreement process through the issuance to the contractor of periodic

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 limited notices to proceed; the contractor was not fully released to perform all BOP
2 work until the all quantities were known, IFC drawings issued, and final pricing
3 was established to the satisfaction of SPS.

4 **Q. Please generally explain how the construction process was managed.**

5 A. For Sagamore, XES and SPS personnel assumed overall project management
6 responsibility. In addition to internal personnel, both Vestas and the selected BOP
7 contractor, Wanzek Construction (“Wanzek”), had project management and
8 engineering personnel on site. Resources (both personnel and equipment) were
9 managed by the entire Sagamore team to advance the project. SPS also used night
10 crews to take advantage of low wind times for tower erection.

11 **Q. Through project completion, was construction performed and executed as
12 planned?**

13 A. Yes. SPS used schedule flexibility and personnel flexibility to have productive
14 work performed to accommodate poor weather days throughout the project. With
15 this flexibility, SPS was able to avoid significant change orders and acceleration
16 costs. In addition, SPS authorized the BOP contractor to lock in materials needed
17 for construction as needed, which mitigated the risk associated with these costs.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Thus far, you have been discussing the major construction and supply**
2 **contracts pertinent to Sagamore. Did SPS enter into any other agreements**
3 **regarding the Sagamore facility?**

4 A. Yes. SPS is a party to a Letter Agreement with the New Mexico Attorney General,
5 Western Resources Advocates, and the Coalition for Clean Affordable Energy
6 (collectively “Signatories”). In that Letter Agreement, the Signatories agreed that
7 SPS and Wanzek “will establish a goal that 30% (including local sub-contractors,
8 vendors and labor) of the balance of plant costs of Sagamore be from cost-effective
9 and qualified New Mexico resident businesses and construction labor,” provided
10 that:

11 [t]he ultimate percentage achieved will depend on: local sub-
12 contractor, vendor, and labor force dynamics; sub-contractor,
13 vendor and labor force qualifications, cost-effectiveness, safety
14 record, and interest; and the commitment that the programs and
15 activities described and contained in this Agreement will not result
16 in additional costs for Sagamore.

17 In addition, the Signatories agreed, among other things, that they would
18 select a mutually agreeable third-party advisor to “advise in real time, and
19 cooperatively work with SPS’s Sagamore construction team to implement” a list of
20 deliverables that were spelled out in the Letter Agreement.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Did the Signatories agree on a mutually acceptable third-party advisor to**
2 **provide real-time advice and to work cooperatively with the Sagamore**
3 **construction team?**

4 A. Yes. The parties agreed to engage Souder, Miller & Associates (“SMA”), an
5 engineering firm from Hobbs, New Mexico, to serve as the third-party advisor. As
6 required by the Letter Agreement, SPS provided periodic reports and held regular
7 meetings for the Signatories to provide transparency on the efforts by SPS, Wanzek
8 and SMA to pursue the BOP sourcing goals. The reports were intended to provide
9 a platform for continuous feedback to support the effort.

10 **Q. How much of the BOP costs were SPS and Wanzek able to source from New**
11 **Mexico resident businesses and contract labor?**

12 A. SPS and Wanzek sourced approximately \$25 million of services and products from
13 New Mexico resident businesses and vendors, which was roughly 85% of the \$30
14 million goal.¹⁰

¹⁰ Originally, the Signatories anticipated that 30% of the BOP costs might be as much as \$45-\$50 million, but the BOP costs for Sagamore turned out to be lower than the original cost estimates.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Did New Mexico residents and businesses derive any other benefits as a result**
2 **of SPS's and Wanzek's efforts under the Letter Agreement?**

3 A. Yes. New Mexico residents and business have realized and will continue to realize
4 benefits that are not counted in the BOP percentage goal, including additional direct
5 monetary benefits associated with construction. Moreover, the efforts by SPS and
6 Wanzek laid the groundwork for New Mexico-based businesses and vendors to play
7 a larger role in future renewable energy projects located within the state.

8 **Q. Please explain what you mean when you state that the Sagamore project**
9 **produced additional direct monetary benefits that are not counted in the BOP**
10 **percentage goal.**

11 A. As SMA recognized in a recent report on the Sagamore facility,¹¹ when all of the
12 dollars flowing from the Sagamore project are considered, New Mexico residents
13 and entities will realize more than \$300 million worth of benefit over the life of the
14 project, even before considering the net energy savings to SPS customers from the
15 project. The following is a partial list of the monetary benefits:

16 • The property taxes that Sagamore will produce for Roosevelt County over
17 the life of the wind farm are estimated to be approximately \$101 million.¹²

¹¹ See Attachment ML-6 for the SMA report.

¹² Attachment ML-6 at 10.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

- 1 • The landowner payments that will accrue to Roosevelt County property
2 owners over the next 25 years as a result of turbines being located on their
3 land are estimated to exceed \$89 million.¹³
- 4 • Roughly 30 full-time wind turbine personnel will be hired to operate and
5 maintain Sagamore. The total annual payroll for those employees is
6 estimated to be \$1.5 million, and the total value of the payroll to the region
7 over the 25-year life of the project is approximately \$37.5 million.¹⁴
- 8 • SPS paid more than \$40 million in gross receipts tax to the State of New
9 Mexico when it purchased the turbines.¹⁵
- 10 • The money spent in New Mexico on housing, meals, and other expenses for
11 out-of-state workers employed on the Sagamore project totaled over \$9
12 million.¹⁶
- 13 • Vestas constructed a railhead unloading facility in Lea County with a value
14 of \$725,000, and that facility will continue to be available for use by other
15 industries.¹⁷
- 16 • SPS funded new road improvements in Roosevelt County that are valued at
17 more than \$6.3 million, and those road improvements will continue to
18 benefit the residents of Roosevelt County.¹⁸
- 19 • Funds paid to New Mexico companies that did not have their New Mexico
20 Resident Firm Certificate totaled \$470,147. Those dollars did not count as

¹³ Attachment ML-6 at 10.

¹⁴ Attachment ML-6 at 11.

¹⁵ Attachment ML-6 at 11.

¹⁶ Attachment ML-6 at 11.

¹⁷ Attachment ML-6 at 12.

¹⁸ Attachment ML-6 at 12.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 part of the BOP percentage goal, even though they were paid to New Mexico
2 companies.¹⁹

3 • SPS contributed \$350,000 of roadway materials to Roosevelt County.²⁰

4 • The State of New Mexico and several New Mexico utility companies
5 received nearly \$460,000 for CID Permit/Inspections during the construction
6 of Sagamore.²¹

7 As these examples show, the BOP percentage represents only the tip of the iceberg
8 in terms of the monetary benefits flowing to New Mexico and its residents as a
9 result of the Sagamore project. Therefore, it is important to focus on the overall
10 benefits, not just the BOP percentage.

11 **Q. Has the Sagamore project also resulted in educational benefits for New Mexico**
12 **residents?**

13 A. Yes. Wanzek donated nearly \$90,000 to purchase computers for the Dora
14 Municipal School District.²² In addition, SPS donated \$6,000 to the Wind Energy
15 Program at Mesalands Community Collete to help expand the renewable energy
16 workforce in New Mexico.²³

¹⁹ Attachment ML-6 at 13.

²⁰ Attachment ML-6 at 13.

²¹ Attachment ML-6 at 13.

²² Attachment ML-6 at 12.

²³ Attachment ML-6 at 11.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. Has the Sagamore project produced any conservation benefits in addition to**
2 **the renewable energy produced by the turbines at the site?**

3 A. Yes. SPS provided \$4 million to fund the purchase of conservation easements and
4 to implement a series of management activities to improve Lesser Prairie Chicken
5 habitat in areas south of Sagamore. SPS also worked to eliminate or relocate 135
6 turbines that would have been built near the Lesser Prairie Chicken habitat at the
7 southern edge of the Sagamore footprint.

8 **Q. You also testified earlier that SPS and Wanzek helped lay the groundwork for**
9 **New Mexico firms to play a larger role in future renewable energy projects in**
10 **the state. How did SPS and Wanzek accomplish that?**

11 A. At the time SPS and Wanzek began searching for businesses and contractors to bid
12 on Sagamore projects, New Mexico had only 16 businesses that had the New
13 Mexico Business Certification. In large part because of the outreach by SPS,
14 Wanzek, and SMA to find New Mexico residents and businesses to work on
15 Sagamore, New Mexico now has nearly 60 certificate holders.²⁴ Moreover, as part
16 of its engagement with the Sagamore project, SMA has informed New Mexico
17 colleges and apprenticeship programs of the construction worker needs of

²⁴ Attachment ML-6 at 7.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 renewable energy projects so that those educational institutions can tailor their
2 training to produce graduates who have the skills and training to work on renewable
3 energy projects in New Mexico. As a result of those efforts, New Mexico residents
4 and businesses are likely to have greater opportunities to work on future renewable
5 energy projects in the state.

6 Sagamore also provided valuable experience to those New Mexico-based
7 businesses and vendors that provided goods or services on the project. SMA notes
8 that 45 New Mexico firms gained renewable energy experience by performing work
9 or providing services for the project.²⁵

10 **Q. Why were SPS and Wanzek unable to reach the goal of sourcing 30% of the**
11 **BOP work at Sagamore from New Mexico residents and contractors?**

12 A. The size of the Sagamore project and the timing of construction were two very large
13 barriers to reaching the goal. Some New Mexico contractors that were interested
14 in the project simply could not produce the deliverables for such a large project,
15 particularly under the timeline that was necessary to meet the December 31, 2020
16 deadline for completing construction.²⁶ It likely would have been more viable to

²⁵ Attachment ML-6 at 8.

²⁶ The deadline was driven by the need to place the Sagamore facility in commercial operation by December 31, 2020 to obtain the full value of PTCs available under federal tax law. It is my understanding that the deadline to complete construction was later extended because of Covid-19, but that had not occurred at the time what Wanzek was selecting sub-contractors.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 find New Mexico businesses for a project with a smaller scope and with a more
2 relaxed timeline for completing construction.²⁷

3 Cost was another factor. In some instances, the selection of a New Mexico
4 firm would have led to significant cost increases compared to what Wanzek or an
5 out-of-state contractor charged for the same work. For example, one New Mexico
6 contractor submitted a bid that was 4% higher than the winning bid for that
7 particular part of the project, even though the winning bidder had far more
8 experience than the New Mexico-based contractor.²⁸ It would have been
9 unreasonable for SPS and Wanzek to accept the higher bid, particularly since the
10 Letter Agreement specifically made the BOP percentage goal contingent on New
11 Mexico-based businesses and vendors being cost-competitive.

12 The location of the facility may have been another factor that discouraged
13 New Mexico-based businesses from submitting bids. Had the project been closer
14 to Albuquerque or another major population center in New Mexico, it might have
15 elicited more interest from New Mexico-based contractors and vendors.

²⁷ SMA notes that there “is already a significant shortage of electrical labor in New Mexico that is required for both Wind and Solar Farm projects.” Attachment ML-6 at 14. Therefore, it is not clear that New Mexico-based businesses would have been able to capture a significantly greater share of the Sagamore work even on a more relaxed schedule.

²⁸ The higher bid would have increased the wind turbine foundation costs for the project by approximately \$650,000.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 Nevertheless, as a result of the efforts by SPS, Wanzek and SMA, New
2 Mexico now has far more certified businesses to pursue these types of projects in
3 the future. Moreover, because of SMA's outreach to educational institutions, New
4 Mexico businesses are likely to have a better prepared workforce to compete for
5 renewable energy projects in the future. Finally, as I explained earlier, New
6 Mexico residents and businesses have realized or will realize approximately \$300
7 million of monetary benefits, separate and apart from the percentage-of-BOP
8 amount and the energy cost savings that Sagamore will produce for SPS customers.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **VI. CHANGES IN USEFUL LIVES OF ASSETS**

2 **Q. What topic do you address in this section of your testimony?**

3 A I first provide an overview of Tolk and explain how SPS plans to operate that
4 facility on a going-forward basis. Next, I discuss SPS's plan to cease burning coal
5 at Harrington by year-end 2024, and I support SPS's request to reduce the service
6 lives of the Harrington coal-specific assets, which will not be in service after year-
7 end 2024. Finally, I discuss SPS's request to abandon and retire Plant X Unit 3 at
8 year-end 2022.

9 **A. Tolk Generating Station**

10 **Q. Please briefly describe Tolk.**

11 A. Tolk consists of two coal-powered steam turbine units located in Lamb County,
12 Texas. Tolk Unit 1 has a nominal capacity of approximately 540 MW, and Tolk
13 Unit 2 has a nominal capacity of approximately 542 MW, for a total net capacity
14 of 1,082 MW.

15 **Q. When did the Tolk units begin commercial operation?**

16 A. Tolk Unit 1 began commercial operation in 1982. Tolk Unit 2 began commercial
17 operation in 1985.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. What were the originally approved service lives for the Tolk units?**

2 A. The Tolk units originally had 35-year approved service lives in New Mexico.
3 Under those originally approved service lives, Tolk Unit 1 would have been retired
4 in 2017, and Tolk Unit 2 would have been retired in 2020. In subsequent rate cases,
5 however, the service lives of both units were extended from 35 years to 60 years.
6 Thus, before the parties reached agreement on shorter service lives in Case No.
7 19-00170-UT, Tolk Unit 1 was scheduled to retire in 2042, and Tolk Unit 2 was
8 scheduled to retire in 2045.

9 **Q. What agreement did the parties reach in Case No. 19-00170-UT regarding the**
10 **service lives of the Tolk units?**

11 A. In Case No. 19-00170-UT, the parties agreed to the following with respect to the
12 Tolk units:

13 The date of abandonment and retirement for generating purposes
14 (collectively, “abandonment”) of Tolk will be set at December 31,
15 2032. Notwithstanding that abandonment date, for the purposes of
16 this base rate case, Tolk’s depreciation rates are to be calculated
17 based on a remaining useful life through December 31, 2037, which
18 constitutes approximately half of the increase in depreciation rates
19 that would result from moving fully to the 2032 depreciation rates.
20 The Signatories will not oppose the full application of depreciation
21 rates associated with the 2032 abandonment date in SPS’s next base
22 rate case (to be filed in or about January 2021).²⁹

²⁹ Case No. 19-00170-UT, Uncontested Comprehensive Stipulation at 4-5 (Jan. 13, 2020). The Commission approved the parties’ agreement without modification.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 Consistent with that agreement, SPS's proposed depreciation rates for the Tolk
2 generating asset assume service lives ending in 2032.

3 **Q. Does SPS plan to generate electricity from the Tolk units on a year-round basis**
4 **until they are retired at the end of 2032?**

5 A. No. In order to conserve the economically recoverable water from the Ogallalla
6 Aquifer, SPS will reduce generating operations at Tolk on a going-forward basis.
7 Beginning in 2021, SPS will offer the Tolk units into the market during the on-peak
8 months based primarily on economic dispatch principles, but during the off-peak
9 months the units will be offline unless called upon by SPP to run because of
10 operational conditions.

11 **Q. Has SPS made any other changes to the way that the Tolk units are operated?**

12 A. Yes. As I explained in an earlier section of my testimony, SPS installed
13 synchronous condenser equipment at Tolk. That synchronous condenser
14 equipment will be used to support voltage stability for the transmission system
15 during periods when the Tolk units are not being used to generate energy. SPS
16 witness Jarred J. Cooley discusses the need for the synchronous condenser
17 equipment in more detail in his testimony.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **B. Harrington Generating Station**

2 **Q. Please describe SPS’s plan to cease burning coal at Harrington.**

3 A. On November 10, 2020, SPS announced that it had reached an agreement with the
4 Texas Commission on Environmental Quality to cease burning coal at Harrington
5 by year-end 2024.

6 **Q. How will that affect the service lives of the assets at Harrington?**

7 A. The conversion will not affect the service lives of most of the Harrington assets
8 because the boilers at that plant were originally designed to burn either coal or
9 natural gas. However, the coal-specific assets at Harrington will become obsolete
10 after 2024, because those assets cannot be used to deliver natural gas to the
11 generating facility. For that reason, SPS requests that the Commission approve
12 depreciation rates for the coal-specific assets based on a service life ending in
13 December 2024.

14 **Q. Please describe the specific Harrington assets that are encompassed within the**
15 **phrase “coal-specific assets.”**

16 A. The phrase “coal-specific assets” encompasses the bottom ash system, the coal
17 feeder system, the coal handling system, the fly ash disposal system, the
18 precipitator/ash collection system, the railway system, the soot blowing system, and

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 the dust collection system. My staff provided Mr. Moeller with the information he
2 needed to assign new service lives to those assets.

3 **C. Plant X Unit 3**

4 **Q. Please describe Plant X Unit 3.**

5 A. Plant X Unit 3 is one of four generating units at Plant X, a natural gas-fired
6 generating station located near Earth, Texas. Plant X Unit 3 has a rated capacity of
7 93 MWs.

8 **Q. Why is SPS proposing to abandon and retire Plant X Unit 3?**

9 A. Plant X Unit 3 was placed in service in 1955, so it is approximately 65 years old,
10 and its outages have become more frequent in recent years. After the most recent
11 outage, SPS concluded that it would not be cost-effective to incur the capital and
12 O&M costs to return Plant X Unit 3 to service, particularly since the unit is not
13 needed for capacity.

14 **Q. Has SPS determined how much it would cost to return Plant X Unit 3 to
15 service?**

16 A. Yes. In January 2020, SPS performed an initial analysis that concluded it would
17 require capital expenditures of approximately \$4.5 million just to repair the Unit 3
18 boiler, although that repair alone would not be sufficient to allow Unit 3 to run

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 reliably and efficiently.³⁰ SPS also determined that it would need to incur
2 approximately \$625,000 of incremental O&M costs if Unit 3 was returned to
3 service. Based on that initial analysis, SPS decided it would not be cost-effective
4 to restore the unit to service.

5 In preparation for its request to abandon and retire Unit 3, SPS performed a
6 new, more comprehensive analysis in December 2020 to determine whether it was
7 still more cost-effective to retire the unit than to return it to service. That analysis,
8 which is Attachment ML-8, concluded that it would require capital expenditures of
9 approximately \$10.5 million to repair the boiler and to complete all of the other
10 repairs that would be necessary for Unit 3 to run reliably and efficiently for any
11 appreciable length of time. In addition, SPS concluded that it would need to incur
12 nearly \$1 million of incremental O&M costs if the unit were returned to service.
13 That analysis confirmed that it would not be cost-effective to incur the significant
14 costs necessary to return Plant X Unit 3 to service.

³⁰ That initial analysis is Attachment ML-7.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **VII. DISMANTLEMENT OF GENERATING STATIONS**

2 **A. Carlsbad**

3 **Q. Please describe the Carlsbad facility.**

4 A. The Carlsbad facility consisted of a Westinghouse W-191 G gas turbine that was
5 installed in 1967. In the spring of 2016, when Carlsbad was nearing the end of its
6 expected service life, Xcel Energy conducted a retirement assessment and
7 determined that it would be more beneficial for customers if SPS retired the unit
8 early rather than to continue operating it.

9 **Q. Did SPS seek Commission authority to abandon Carlsbad?**

10 A. Yes. In accordance with NMSA 1978, § 62-9-5, SPS applied to the Commission
11 for authority to retire and abandon the use of the Carlsbad facility in Case No.
12 17-00089-UT.³¹ As part of that application, SPS stated that it would address
13 recovery of any unrecovered investment and costs to decommission and dismantle
14 Carlsbad in its next applicable base rate case following Case No. 17-00255-UT.³²

³¹ *In the Matter of Southwestern Public Service Company's Application Requesting Approval to Retire and Abandon its Carlsbad Generating Station*, Case no. 17-00089-UT, Final Order Adopting Recommended Decision (Dec. 7, 2017).

³² *In the Matter of Southwestern Public Service Company's Application for Revision of its Retail Electric Rates Pursuant to Advice Notice No. 272*, Case No. 17-00255-UT, New Final Order on Partial Mandate from the New Mexico Supreme Court (Mar. 6, 2019).

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 **Q. What was the outcome of Case No. 17-00089-UT?**

2 A. SPS's application was approved, with two conditions. First, if the net cost of
3 removal exceeded \$150,000 on a New Mexico jurisdictional basis, SPS was
4 required to file a report to report the outcome of the project along with detailed
5 justification for all expenses incurred. Second, SPS was ordered to identify and
6 provide detailed explanation regarding any Carlsbad-related costs SPS seeks to
7 recover in the rates set in the rate case filed subsequent to the completion of
8 dismantling and decommission, which is this rate case.³³

9 **Q. Has SPS fulfilled those two conditions?**

10 A. Yes. With respect to the first requirement, the net cost of removal did not exceed
11 \$150,000 on a New Mexico jurisdictional basis. Thus, SPS was not required
12 to prepare and file that report.

13 With respect to the second requirement, this portion of my testimony, along
14 with the relevant portion of Mr. Moeller's direct testimony, identifies and provides
15 the detailed explanation regarding the Carlsbad-related costs.³⁴ More specifically,

³³ *Id.*

³⁴ I also supported the decommissioning and dismantling costs in SPS's base rate case, Case No. 19-00170-UT. The issue was not addressed in the Uncontested Comprehensive Stipulation approved by the Commission in that case, however. Therefore, Mr. Moeller and I are again addressing the Carlsbad dismantlement costs in this case.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 I describe the decommissioning and dismantling process and provide the final cost
2 for the decommissioning and dismantling of Carlsbad. Mr. Moeller describes the
3 accounting treatment for the decommissioning and dismantling costs.

4 **Q. When was Carlsbad retired?**

5 A. Carlsbad was retired on December 31, 2017.

6 **Q. Has Carlsbad been decommissioned and dismantled?**

7 A. Yes.

8 **Q. Please describe the decommissioning and dismantling process.**

9 A. Decommissioning and dismantling included de-energizing the equipment,
10 disconnecting the generator from the grid, removing all plant consumables
11 (chemicals, fuels, oils, water, etc.) and disconnecting plant utilities. Once that was
12 completed, SPS removed the equipment, piping, concrete, and conduit down to four
13 feet below ground level. The remaining hole was then filled in with native soils
14 and covered with one foot of white rock/gravel.

15 **Q. Did SPS issue a RFP for the decommissioning and dismantling process?**

16 A. Yes. SPS issued an RFP to five third-party contractors seeking bids to perform the
17 dismantling activities. Of the five contractors, only three returned bids. SPS used
18 the standard criteria of contractor qualifications, work history, safety performance,

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 and price in analyzing and awarding the bids received. All three of the bids were
2 inclusive of the scrap value of the equipment.

3 **Q. Did SPS put any of the decommissioned equipment for sale on the market?**

4 A. Yes. SPS put the equipment out for bid, but there were no interested parties.
5 Accordingly, SPS did not recover any funds from the decommissioned equipment.

6 **B. Moore County**

7 **Q. Please describe the Moore County facility.**

8 A. The Moore County facility consisted of a single gas-fired generating unit located
9 in Moore County, Texas. The facility, which was placed in service in 1954, had a
10 rated capacity of 49 MWs. Two other units on the site were dismantled, as well as
11 other support structures located on the site. These units were abandoned over 50
12 years ago.

13 **Q. Has Moore County been decommissioned and dismantled?**

14 A. Yes. Moore County was dismantled in 2019 and 2020.

15 **Q. Please describe the decommissioning and dismantling process.**

16 A. The decommissioning and dismantling of Moore County included de-energizing
17 the equipment, disconnecting the generator from the grid, removing all plant
18 consumables (chemicals, fuels, oils, water, etc.) and disconnecting plant utilities.

Case No. 20-00238-UT
Direct Testimony
of
Mark Lytal

1 Once that was completed, SPS performed and extensive asbestos abatement and
2 removed the equipment, piping, concrete, and conduit down to four feet below
3 ground level. The remaining hole was then filled in with native soils for native
4 grass.

5 **Q. Did SPS issue an RFP for the decommissioning and dismantling process?**

6 A. Yes. The RFP that I described earlier for Carlsbad was also used to identify the
7 contractor to decommission and dismantle Moore County.

8 **Q. Did SPS put any of the Moore County decommissioned equipment for sale on
9 the market?**

10 A. No. The decommissioned equipment had no value, so SPS did not try to sell it on
11 the market. The equipment was scrapped, and the value was included in the
12 contractor's bid to offset the dismantling cost.

13 **Q. Does this conclude your pre-filed direct testimony?**

14 A. Yes.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF SOUTHWESTERN)
PUBLIC SERVICE COMPANY'S)
APPLICATION FOR: (1) REVISION OF)
ITS RETAIL RATES UNDER ADVICE)
NOTICE NO. 292; (2) AUTHORIZATION) CASE NO. 20-00238-UT
AND APPROVAL TO ABANDON ITS)
PLANT X UNIT 3 GENERATING)
STATION; AND (3) OTHER)
ASSOCIATED RELIEF,)
)
SOUTHWESTERN PUBLIC SERVICE)
COMPANY,)
)
APPLICANT.)
)
)**

VERIFICATION

On this day, January 2, 2021, I, Mark Lytal, swear and affirm under penalty of perjury under the law of the State of New Mexico, that my testimony contained in Direct Testimony of Bryan R. Davis is true and correct.

/s/ Mark Lytal

MARK LYTAL

Southwestern Public Service Company
Total Company Amounts and Jurisdictional Percentages

Line No.	Witness	Description	Page No.	Line No.	Total Company Amount	Number Scale	Allocator (Name)	TY Allocator (%)	NM Amount
1	Loyal	Energy Supply Capital Additions from October 1, 2019 through February 28, 2021	7	9	\$ 981,023,247	Dollars	(1)	(1)	\$ 318,245,753
2	Loyal	Energy Supply Capital Additions from October 1, 2019 through September 30, 2020	7	10	\$ 54,918,238	Dollars	(1)	(1)	\$ 17,058,972
3	Loyal	Energy Supply Capital Additions from October 1, 2020 through February 28, 2021	7	13	\$ 926,105,009	Dollars	(1)	(1)	\$ 301,186,781
4	Loyal	Energy Supply Capital Additions from October 1, 2019 through September 30, 2020	20	7	\$ 54,918,238	Dollars	(1)	(1)	\$ 17,058,972
5	Loyal	Steam Production Additions from October 1, 2019 through September 30, 2020	20	9	\$ 35,417,662	Dollars	12CP-PROD	30.73%	\$ 10,882,886
6	Loyal	Other Production Additions from October 1, 2019 through September 30, 2020	20	11	\$ 13,553,518	Dollars	(1)	(1)	\$ 4,170,591
7	Loyal	Electric Transmission Additions from October 1, 2019 through September 30, 2020	20	13	\$ 5,723,596	Dollars	(1)	(1)	\$ 1,878,193
8	Loyal	General Plant Additions from October 1, 2019 through September 30, 2020	20	14	\$ 423,462	Dollars	LABXAG	30.06%	\$ 127,303
9	Loyal	Reliability & Performance Enhancement	22	Table ML-2	\$ 44,665,569	Dollars	(1)	(1)	\$ 13,721,639
10	Loyal	Environmental Compliance	23	Table ML-2	\$ 1,299,908	Dollars	12CP-PROD	30.73%	\$ 399,427
11	Loyal	New Generation	23	Table ML-2	\$ 8,952,961	Dollars	ENERGY	32.81%	\$ 2,937,906
12	Loyal	Total	23	Table ML-2	\$ 54,918,238	Dollars	(1)	(1)	\$ 17,058,972
13	Loyal	Reliability & Performance Enhancement	23	Table ML-2	\$ 44,665,569	Dollars	(1)	(1)	\$ 13,721,639
14	Loyal	Cunningham Unit 4 - Rewind Generator	23	11	\$ 8,151,542	Dollars	12CP-PROD	30.73%	\$ 2,504,747
15	Loyal	Nichols Unit 3 - Cooling Tower Structure	23	19	\$ 4,232,762	Dollars	12CP-PROD	30.73%	\$ 1,300,613
16	Loyal	Cunningham Unit 2 - Replace Boiler Tubes	24	5	\$ 3,961,586	Dollars	12CP-PROD	30.73%	\$ 1,217,288
17	Loyal	Harrington Unit 2 - Generator Stator Rewind	24	15	\$ 2,923,890	Dollars	12CP-PROD	30.73%	\$ 898,432
18	Loyal	Plant X Unit 4 - Rewind Generator Stator	24	26	\$ 2,458,540	Dollars	12CP-PROD	30.73%	\$ 755,442
19	Loyal	Harrington Unit 2 - Replace Foxboro FBMs	24	33	\$ 1,814,085	Dollars	12CP-PROD	30.73%	\$ 557,419
20	Loyal	Toik Unit 1 Replace Reheat Loops	25	7	\$ 1,516,956	Dollars	12CP-PROD	30.73%	\$ 466,119
21	Loyal	Toik Unit 0 - Replace Railroad Ties Phase 3 of 5	25	16	\$ 900,495	Dollars	12CP-PROD	30.73%	\$ 276,698
22	Loyal	Toik Units 1 and 2 - Replace Mill D and Mill E Gearboxes & Journals	25	25	\$ 1,563,568	Dollars	12CP-PROD	30.73%	\$ 480,442
23	Loyal	Toik Unit 1 - Replace Mill C Shaft	26	1	\$ 722,877	Dollars	12CP-PROD	30.73%	\$ 222,120
24	Loyal	Plant X Unit 4 - Rewedge Generator	26	9	\$ 718,361	Dollars	12CP-PROD	30.73%	\$ 220,733
25	Loyal	Jones Unit 4 Replace Exhaust Stack Silencer Baffle	26	16	\$ 693,252	Dollars	12CP-PROD	30.73%	\$ 213,017
26	Loyal	Harrington Unit 2 - Replace Steam Cooled Spacer Tubes	26	24	\$ 639,585	Dollars	12CP-PROD	30.73%	\$ 196,527
27	Loyal	Environmental Compliance	27	6	\$ 1,299,908	Dollars	12CP-PROD	30.73%	\$ 399,427
28	Loyal	Cunningham Units 2 and 4	27	13	\$ 491,576	Dollars	12CP-PROD	30.73%	\$ 151,048
29	Loyal	Harrington Units 2 and 3 - Rebag Partial	27	23	\$ 364,076	Dollars	12CP-PROD	30.73%	\$ 111,871
30	Loyal	Nichols Unit 0 - Replace Sprinkler Pivot S7	28	14	\$ 207,605	Dollars	12CP-PROD	30.73%	\$ 63,792
31	Loyal	New Generation	28	23	\$ 8,952,961	Dollars	(1)	(1)	\$ 2,937,906
32	Loyal	Saganore Generating Facility - Network Upgrades	29	1	\$ 5,324,463	Dollars	ENERGY	32.81%	\$ 1,747,218
33	Loyal	Energy Supply Capital Additions from October 1, 2020 through February 28, 2021	30	11	\$ 926,105,009	Dollars	(1)	(1)	\$ 301,186,781
34	Loyal	Steam Production Additions from October 1, 2020 through February 28, 2021	30	13	\$ 27,601,888	Dollars	12CP-PROD	30.73%	\$ 8,481,311
35	Loyal	Other Production Additions from October 1, 2020 through February 28, 2021	30	14	\$ 826,861,250	Dollars	(1)	(1)	\$ 270,986,154
36	Loyal	Electric Transmission Additions from October 1, 2020 through February 28, 2021	30	15	\$ 70,865,437	Dollars	(1)	(1)	\$ 21,485,902
37	Loyal	General Plant Additions from October 1, 2020 through February 28, 2021	30	17	\$ 776,435	Dollars	LABXAG	30.06%	\$ 233,415
38	Loyal	Reliability & Performance Enhancement	32	Table ML-4	\$ 63,200,597	Dollars	(1)	(1)	\$ 18,077,382
39	Loyal	Environmental Compliance	32	Table ML-4	\$ 2,487,164	Dollars	12CP-PROD	30.73%	\$ 764,238
40	Loyal	New Generation	32	Table ML-4	\$ 860,417,248	Dollars	ENERGY	32.81%	\$ 282,345,161
41	Loyal	Total	32	Table ML-4	\$ 926,105,009	Dollars	(1)	(1)	\$ 301,186,781
42	Loyal	Reliability & Performance Enhancement	32	7	\$ 63,200,597	Dollars	(1)	(1)	\$ 18,077,382
43	Loyal	Jones Unit 3 - Replace Hot Gas Path	32	13	\$ 12,075,514	Dollars	12CP-PROD	30.73%	\$ 3,710,477
44	Loyal	Toik Units 1 & 2 - Install Synchronous Condenser	32	20	\$ 20,632,964	Dollars	12CP-TRANS	24.24%	\$ 5,002,161
45	Loyal	Toik Unit 2 - Purchase and Install New Generator Step Up Transformer	33	15	\$ 3,873,343	Dollars	12CP-PROD	30.73%	\$ 1,190,173
46	Loyal	Jones Unit 0 - Effluent Water Optimization	33	24	\$ 3,856,980	Dollars	12CP-PROD	30.73%	\$ 1,185,145

Southwestern Public Service Company
Total Company Amounts and Jurisdictional Percentages

Line No.	Witness	Description	Page No.	Line No.	Total Company Amount	Number Scale	Allocator (Name)	TY Allocator (%)	NM Amount
47	Lytal	Cunningham Unit 4 - Replace Combustor Components	34	1	\$ 2,419,370	Dollars	12CP-PROD	30.73%	\$ 743,407
48	Lytal	Jones Unit 1 - Rewind Exciter Rotor	34	14	\$ 1,508,930	Dollars	12CP-PROD	30.73%	\$ 463,653
49	Lytal	Maddox Unit 1 - Replace Superheat Terminal Tubes	34	21	\$ 1,119,851	Dollars	12CP-PROD	30.73%	\$ 344,100
50	Lytal	Cunningham Unit 3&4 - CT Control Upgrade	34	29	\$ 1,105,310	Dollars	12CP-PROD	30.73%	\$ 339,632
51	Lytal	Environmental Compliance	35	8	\$ 2,487,164	Dollars	12CP-PROD	30.73%	\$ 764,238
52	Lytal	Jones Unit 0 - NOX Controls Enhancement	35	14	\$ 1,673,356	Dollars	12CP-PROD	30.73%	\$ 514,177
53	Lytal	Maddox Unit 1 and Cunningham Unit 3 CEMs Foxboro Systems	36	2	\$ 396,205	Dollars	12CP-PROD	30.73%	\$ 121,743
54	Lytal	Harrington Unit 0 - Install CEMs Compressor	36	10	\$ 182,261	Dollars	12CP-PROD	30.73%	\$ 56,004
55	Lytal	New Generation	36	23	\$ 860,417,248	Dollars	ENERGY	32.81%	\$ 282,345,161
56	Lytal	Sagamore Generating Facility - Other Production	36	24	\$ 804,157,822	Dollars	ENERGY	32.81%	\$ 263,883,681
57	Lytal	Sagamore Generating Facility - Transmission Serving Generation and Substation	37	2	\$ 35,806,103	Dollars	ENERGY	32.81%	\$ 11,749,741
58	Lytal	Sagamore Generating Facility - Transmission Serving Generation and Substation	37	9	\$ 12,441,815	Dollars	ENERGY	32.81%	\$ 4,082,770
59	Lytal	Amount included in rate base for Sagamore	38	13	\$ 858,376,190	Dollars	ENERGY	32.81%	\$ 281,675,390

(1) Steam Production and Other Production plant is allocated based on 12CP-PROD (30.73%), other than the Sagamore Wind Project and Hale Wind Project, which are allocated based on ENERGY (32.81%). Transmission plant is allocated based on 12CP-TRAN (24.24%) other than the Sagamore Wind Project and Hale Wind Project, which are allocated based on ENERGY (32.81%). General plant is allocated based on LABXAG (30.06%).

Southwestern Public Service Company
Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	(G)	
Line No.	Asset Class	Witness	Project Category	WBS Level 2	Project Description (WBS Level 2 Description)	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) Total Company	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) NM Retail
1	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.094	NIC3C-CT Structure Unit3	\$ 4,232,762	\$ 1,300,613
2	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.131	CHC2C Rpl Boiler Tube	3,961,586	1,217,288
3	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.421	HAR2C Gen Stator Rewind	2,923,890	898,432
4	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX4C-Rewind X4 Gen Stat	2,458,540	755,443
5	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.346	HAR2C-H2 Rpl Foxboro FBMs	1,814,085	557,419
6	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.433	TOL1C-Rpl RH Loops	1,516,956	466,119
7	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.104	TOL0C-Rpl IRR Ties PH 5 of 5	900,495	276,698
8	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.221	TOL1C-Rpr MillD GearBx & Jml	799,148	245,556
9	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.226	TOL2C-Rpl Mill E GearBx & Jour	764,420	234,886
10	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL1C-Rpl Mill C Shaft	722,887	222,124
11	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.187	PLX4C-Generator Rewedge	718,361	220,733
12	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.406	HAR2C-Rpl Steam Cooled Spacer Tubes	639,585	196,527
13	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.187	HAR2C-H2 Rpl #5 LP FWH	556,164	170,894
14	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.186	HAR2C-H2 Rpl #6 LP FWH	555,714	170,756
15	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.392	HAR2C-H2 Rpl Burners	522,817	160,647
16	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.345	HAR3C-Mill B Major Overhaul	514,400	158,061
17	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001529.095	MAD0C-Rpl Overhead Crane - NEW	475,677	146,163
18	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.217	TOL0C-Rail Ballast & Alignment	446,278	137,129
19	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.263	JON0C-Rpl Oil Circ Breaker JK10-210	412,627	126,789
20	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.124	NIC3C-Rpl Condenser Inlet Circ Pipe	395,220	121,440
21	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.128	NIC3C-Rpl CW Risers at CT	339,149	104,211
22	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.472	HAR2C-Rpl EHC Pump Sys.	323,405	99,374
23	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.413	TOL0C-Rpl TK09 oil circuit breaker	305,101	93,749
24	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.470	HAR2C-Rpl CT Riser Inlet Vlys	297,460	91,401
25	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JON0C-Inst In-Line BoostPmp	291,722	89,638
26	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C Rpl L4 Turb Blades	274,216	84,259
27	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.471	HAR2C-Rpl CT MCCs on F-Bus	268,787	82,591
28	Steam Production	Lytal	Environmental Compliance	A.0001550.235	HAR2C-H2 Rebag Partial 2020	250,224	76,887
29	Steam Production	Lytal	Environmental Compliance	A.0001545.104	CHC2C-Upp CEMs Foxboro Sys	240,737	73,972
30	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl GSU 230kV Bushings	217,597	66,862
31	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl ID Fan Disc Dampers	216,948	66,662
32	Steam Production	Lytal	Environmental Compliance	A.0001560.500	NIC0C Rpl Sprinkler Pivot S7	207,605	63,792
33	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.407	HAR2C-Inst Maint Switch on MV Bkrs	193,366	59,416
34	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.133	NIC3C-Rpl FWH Lvl Transmitters	192,858	59,260
35	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.500	CHC2C BFP Element	188,158	57,816
36	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.200	PLX4C-X4 East BFP element rebuild	167,057	51,332
37	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.420	TOL1C-A B xfmr X winding bushings	165,255	50,778
38	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.260	CHC0C-Arc flash relay, 480 buss G	130,066	39,966
39	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001529.083	MAD0C-Rpl Waterwells 2020	129,762	39,872
40	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC2C Rpl HS Air Comp	126,902	38,994
41	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.286	JON2C-Inst Onlin Vib Mntn Sys	124,799	38,347
42	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C-Rebuild 2C SBAC Blower	122,375	37,602
43	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.388	HAR2C-Rpl Gen Hydrogen Purity Monit	121,082	37,205
44	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.089	CHC0C-Rep Water Wells 2020	119,055	36,582

Southwestern Public Service Company
Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	(G)	
Line No.	Asset Class	Witness	Project Category	WBS Level 2	Project Description (WBS Level 2 Description)	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) Total Company	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) NIM Retail
45	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC3C S Circ Wtr Pmp Mtr Rwnd	119,049	36,581
46	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.131	NIC3C-Rpl MS Vent Valve	118,759	36,491
47	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.302	JONIC-Rpl #9 Fan Shroud	115,377	35,452
48	Steam Production	Lytal	Environmental Compliance	A.0001550.208	HAR3C-H3 Rebag Partial 2019	113,851	34,983
49	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.132	NIC3C-N3 Rpl UPS Inverter	111,655	34,308
50	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001590.004	GMSOC-ICCP Replacement-BlackHawk	107,913	33,159
51	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C-Rpl Gov Vlv Rexa Drive	104,485	32,105
52	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.414	TOL0C-Startup A-B Transformer DGA	104,072	31,979
53	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.299	TOL0C-ICCP Replacement-Tolk	102,052	31,358
54	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.015	JON0C-ICCP Replacement-Jones RR	100,018	30,733
55	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.080	HAR0C-H0 RR Drainage Imprpt Ph2	96,610	29,686
56	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.597	TOL1C-Rpl Coal Pipe & Elbows	95,302	29,284
57	Steam Production	Lytal	Environmental Compliance	A.0001545.500	CHC0C Rpl Septic Tank	89,413	27,474
58	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.405	HAR2C-Install XFMR DGA	88,008	27,042
59	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C-Rpl MS Drain Piping	83,682	25,713
60	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Instl Sootblwr Blk Vlys	81,254	24,967
61	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.125	NIC3C-Rpl Downcomer Blowdown Vlv	81,053	24,905
62	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR3C W BCP Motor Rewind	78,605	24,153
63	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl Mercury Analyzer	76,431	23,485
64	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR3C Rpl Mercury Analyzer	74,869	23,005
65	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.273	JON0C-Steam Heater Rpl-21034	72,126	22,162
66	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl HP Heater Drain to DA	67,864	20,853
67	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C-Rpl Econ Check Valves	66,251	20,357
68	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.270	HAR2C-Rpl Drag Chain 2020	66,144	20,324
69	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C-Rpl S BFP Recirc Valve	64,954	19,959
70	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JON0C PwrTex OneOK Gas Chromatograp	61,685	18,954
71	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC3C-Rpl Gas Valves	61,628	18,936
72	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.043	TOL1C-Rpl Burner Assemblies	59,413	18,256
73	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR3C-Rbd E Flyash Vac Pump	58,520	17,982
74	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JON0C RR Gas Chromatograph	56,513	17,365
75	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.500	CHC0C-Rpl Backflow Preventer	55,682	17,110
76	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC2C Rpl NE Air Duct Expansion Joi	55,521	17,060
77	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.469	HAR2C-Inst Online Vib Mntir Sys	55,331	17,002
78	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.205	PLX0C-Replace RO pump drives	54,197	16,653
79	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.272	CHC2C-Rpl StartUp XFMR CA-4 Diff Rly	53,965	16,582
80	Steam Production	Lytal	Environmental Compliance	A.0001550.395	HAR2C-East Vac Pump Overhaul	49,827	15,310
81	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.464	HAR1C-Inst Online Vib Mntir Sys	49,785	15,298
82	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.296	TOL2C-Rpl Main Pwr Transformer	49,706	15,273
83	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.262	CHC2C-Arc flash relay, 480 buss E	49,178	15,111
84	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX0C Centrifuge on Mobile Skid	48,854	15,011
85	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001529.500	MAD1 RPL_BFP Recirc Vlys	48,652	14,949
86	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C- CT Rewire 9S, 9N, 10N	48,231	14,820
87	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C ID Fan Damper Actuator	48,057	14,767
88	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.500	CHC2C Rpl CT Stairs with Ladder	47,644	14,640

Southwestern Public Service Company
Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	(G)	
Line No.	Asset Class	Witness	Project Category	WBS Level 2	Project Description (WBS Level 2 Description)	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) Total Company	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) NIM Retail
89	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001529.087	MAD1C-Rpl StrUp XFMR CA-4 Diff Rly	45,221	13,895
90	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C-Rpl CT Riser Valves	45,119	13,864
91	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl TDBFP Discharge Pipe	44,775	13,758
92	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.263	CHC2C-Are flash relay, CT 480 buss	43,407	13,338
93	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.031	TOL0C-TolkX Water Well Ph 8	42,934	13,192
94	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.266	JON0C-RO EDI Filter Rpl-20273	42,429	13,037
95	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.261	CHC2C-Are flash relay, 480 buss A	42,087	12,932
96	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.130	NIC3C-Rpl BFP Drive Actuators	41,049	12,613
97	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C Rpl Hr #4 Ext Exp Jt	41,046	12,612
98	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.500	CHC2C-Rpl RH Spray Block Viv	38,915	11,958
99	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.189	PLX4C-Inst Online Vib Mntnr Sys	38,499	11,830
100	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.140	NIC3C-Rpl Gas Firing Valve	36,998	11,368
101	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JON1C Rpl Cell 7 Gearbox	36,090	11,089
102	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX1C Rpl Battery Charger	36,069	11,083
103	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC3C Install Stairs to APH	35,651	10,955
104	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.500	CHC0 Rpl N Blowdown Pump	34,835	10,704
105	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL1C Rpl Drum Vent Vivs	33,909	10,419
106	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL0C-Gas Line Replacement	32,959	10,127
107	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL2C Rpl E Rev Gan Fan Damper	32,688	10,044
108	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.212	TOL0C-Rpl Water Well Pmp 2019	32,053	9,849
109	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C Rpl Gen Diff Relays	31,502	9,680
110	Steam Production	Lytal	Environmental Compliance	A.0001529.086	MAD0C-Rpl Septic System	30,674	9,425
111	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.500	CHC2C Rpl CT Gearboxes	29,343	9,016
112	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL1C-Rpl MillIF>MainVrt Shaft	29,163	8,961
113	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.257	HAR1C-Rpl SBAC 1A Vib Mon Sys	28,343	8,709
114	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC1C-Rpl MS Vent & Drn Vivs	27,245	8,372
115	Steam Production	Lytal	Environmental Compliance	A.0001555.088	TOL1C-Rpl Baghouse Bags 2018	27,098	8,326
116	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC2C Rpl Cond Out Exp Joints	25,590	7,863
117	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.206	PLX0C-Replace Lab Chiller	25,049	7,697
118	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl O2 Probes E2 and E7	24,656	7,576
119	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX1C-Rpl SH Vent RmtViv Operator	24,312	7,470
120	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Inst Diss O2 Analyzer	23,415	7,195
121	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Inst MBFP Wtr in Oil	23,285	7,155
122	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.138	NIC3C-Install FD Fan VFD AC	22,582	6,939
123	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl 2A Mill Duct Exp Jnt	21,874	6,721
124	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.146	NIC1C-Rpl Battery Charger -24014	21,298	6,624
125	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl Ext BIK Viv Actuator	21,558	6,544
126	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	TOL2C-Intermitt Blowdown Viv	21,163	6,503
127	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C Install Catron Conductivity D	20,316	6,243
128	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Install Catron Conductivity D	19,338	5,942
129	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL1C Rpl SUFW Viv Internals	19,328	5,939
130	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR3C Install Catron Conductivity D	18,937	5,819
131	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.164	PLX4C-Upg DCS Opr Sin and CP-19956	18,743	5,759
132	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C-Rpl FWH8 Shell Side PRV	17,160	5,273

Southwestern Public Service Company
Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	(G)	
Line No.	Asset Class	Witness	Project Category	WBS Level 2	Project Description (WBS Level 2 Description)	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) Total Company	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) NIM Retail
133	Steam Production	Lytal	Environmental Compliance	A.0001555.500	TOLIC Rpl Ash Silo Unloader Chute	16,962	5,212
134	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR0C-Rpl No3 Inj Well DV Actr	15,966	4,906
135	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR0C BD Recovery Backfill Mod	15,392	4,729
136	Steam Production	Lytal	Environmental Compliance	A.0001586.500	JONOC Rpl Waster Water Pond Motor	15,362	4,720
137	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C-Rpl HP Hlr Drains	15,255	4,688
138	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C Inst Diss O2 Analyzer	15,176	4,663
139	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C Rpl Big Blowdown Vlvs	14,903	4,579
140	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.373	HAR0C-Rpl Fire Hydrants & Valves	14,775	4,540
141	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JONOC - RO A 1st Pass Pump	14,722	4,524
142	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl FWH 3 Steam Separator	14,459	4,443
143	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C-Rpl FWH7 Shell Side PRV	14,048	4,317
144	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl C Circ Suction Gear	13,816	4,245
145	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl E6 O2 Probe	12,879	3,957
146	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOLIC Rpl Cnt Ax Circ Suc Vlv	12,759	3,921
147	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C 3A Hlr Drains Control Vlv	12,272	3,771
148	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL2C Rpl No3 Ext Valve Actuator	12,250	3,764
149	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC2C Rpl CT Makeup Valve	11,778	3,619
150	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C Rpl E6 O2 Probe	11,344	3,486
151	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOLIC CT Cell 17 Motor	10,835	3,329
152	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C-Rpl FWH2 shell Side PRV	10,806	3,320
153	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOLIC-Rpl Burner TH Actuator	10,647	3,271
154	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C-Rpl Steam Driven BFP	9,983	3,067
155	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C Rpl Acid Tank Lvl Xntr	9,684	2,976
156	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOLOC Rpl E Blr Treatment Supply Pm	9,154	2,813
157	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX0C Rpl RO Pump Shaft Assembly	8,783	2,699
158	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR3C Rpl Deluge Vlvs Cntrl Pnl	8,716	2,678
159	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOLIC Rpl SH Link Vents	8,696	2,672
160	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl Deluge Vlvs Cntrl Pnl	8,646	2,657
161	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C Rpl Deluge Vlvs Cntrl Pnl	8,646	2,657
162	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR3C Rpl No33 Econ Hopper Vlv	8,474	2,604
163	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOLOC Rpl W Blr Treatment Supply Pm	8,012	2,462
164	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Blowdown Block and Throttle V	7,729	2,375
165	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL1 EH High Pressure Block Valve	7,520	2,311
166	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001560.500	NIC2C Rpl Steam Drum Vent Valves	7,488	2,301
167	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JONIC Rpl Gland Stm Seal & Hood Spr	7,363	2,262
168	Steam Production	Lytal	Environmental Compliance	A.0001550.500	HAR0C Rpl Pond 17 Lvl Xntr	6,743	2,072
169	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JONIC Rpl Cooling Tower Lvl Transmi	6,522	2,004
170	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C Rpl W Reheat Drain Vlv Actuat	5,253	1,614
171	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX4C Rpl W SH Spray Blk Vlv	5,058	1,554
172	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX4 Rpl Hlr 1 Wtr Side Prv	4,971	1,527
173	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOLOC-Rpl Fire Pump Recirc Valve	4,643	1,427
174	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C Rpl Small Blowdown Throttle V	4,573	1,405
175	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C MBFP Oil Pmp Mtr Rwnd	4,573	1,405
176	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C CT 14 Fan Motor Rewind	4,244	1,304

Southwestern Public Service Company
Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	(G)	
Line No.	Asset Class	Witness	Project Category	WBS Level 2	Project Description (WBS Level 2 Description)	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) Total Company	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) NIM Retail
177	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JON0 W Evap RO VFD	3,933	1,209
178	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.500	CHC0C Rpl RO Booster Pump	3,852	1,184
179	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C-C Circ Pmp Mtr Var Xfmr	3,694	1,135
180	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR3C-S Circ Pmp Mtr Var Xfmr	3,681	1,131
181	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JON1C Rpl Boiler Blowdown Throttle	3,035	932
182	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.394	HAR3C-Overhaul Stack Elevator	2,853	877
183	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL0C Rpl Aux Boiler Feed Pump	2,460	756
184	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.363	TOL1C- Rpl rev gas expansion joints	2,226	684
185	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.254	TOL1C-Rpl SSC Chain 2018	2,110	648
186	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL2C Rpl CT Cell 23 Motor	2,086	641
187	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.269	JON2C-SH Header Sealbox Rpl-21240	2,070	636
188	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.071	TOL0C-W SBAC Overhaul 2018	1,731	532
189	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX0C-Replace Water Wells	1,651	507
190	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.162	PLX4C-Rpl XK-04 Oil Ckt Btkr-20817	1,384	425
191	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR0C Rpl Welding Ship East OH DR	1,336	410
192	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JON01 HT SH Vent Valves	1,260	387
193	Steam Production	Lytal	Environmental Compliance	A.0001560.099	NIC3C-N3 CEM's Upgrade	910	280
194	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR2C CT Cell 15 Mir Rwnd	507	156
195	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001586.500	JON2C-Rwd Normal Src Xfmr	468	144
196	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.060	TOL0C-Rpl Water Well Pmp 2018	461	142
197	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX4C-Rpl Boiler Ignitor Horns	281	86
198	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR1C-Rpl Generator Breaker FK10	8	3
199	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.242	HAR0C-Purch Hydrogn Generator	4	1
200	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.196	PLX4C-Replace drum level indicator	(52)	(16)
201	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.213	TOL1C-Rpl Baghouse Bags 2019	(151)	(47)
202	Steam Production	Lytal	Environmental Compliance	A.0001550.462	HAR0C-Remove UG Fuel Tanks	(186)	(57)
203	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.500	PLX0C-Rpl CT Gearbox	(543)	(167)
204	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.500	HAR3C Rpl HRH Oil Trip Vlvs	(1,509)	(464)
205	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.154	PLX0C-Rpl Gen Bkr Failure Relay-210	(4,036)	(1,240)
206	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001555.500	TOL1C-A Rpl Vac Pump	(4,893)	(1,503)
207	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001550.308	HAR2C-H2 Upgrd DCS Opr stn	(5,574)	(1,713)
208	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001545.075	CHC0C-Rpl Water Well Valves	(17,468)	(5,368)
209	Steam Production	Lytal	Reliability & Performance Enhancement	A.0001534.063	PLX0C-Boiler Road Paving	(27,988)	(8,600)
210	Steam Production Total					\$ 35,417,662	\$ 10,882,886
211	Other Production	Lytal	Reliability & Performance Enhancement	A.0001545.129	CHC4C-Rewind Generator	\$ 8,151,542	\$ 2,504,747
212	Other Production	Lytal	New Generation	A.0001577.001	SPS Wind -Hale County	2,330,340	764,699
213	Other Production	Lytal	New Generation	A.0001577.002	Hale-Land & Land Rights	821,994	269,737
214	Other Production	Lytal	Reliability & Performance Enhancement	A.0001586.308	JON4C-Exhaust Stack Silencer Baffle	693,252	213,017
215	Other Production	Lytal	Reliability & Performance Enhancement	A.0001529.082	MAD3C-Rpl U940 Gen Breaker	316,709	97,316
216	Other Production	Lytal	Reliability & Performance Enhancement	A.0001545.123	CHC3C-Rewind Generator	262,212	80,571
217	Other Production	Lytal	Environmental Compliance	A.0001545.112	CHC4C-Upg CEMs Foxboro Sys	250,839	77,076
218	Other Production	Lytal	Reliability & Performance Enhancement	A.0001545.501	CHC3C Generator Bellows Mod	128,034	39,341
219	Other Production	Lytal	New Generation	A.0001563.015	Sagamore-Land & Land Rights	77,031	25,278

Southwestern Public Service Company
Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	(G)	
Line No.	Asset Class	Witness	Project Category	WBS Level 2	Project Description (WBS Level 2 Description)	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) Total Company	Additions to Plant-in-Service (October 1, 2019 - September 30, 2020) NM Retail
220	Other Production	Lytal	Reliability & Performance Enhancement	A.0001545.111	CHC3C-Rpl Station Batt	73,456	22,571
221	Other Production	Lytal	Reliability & Performance Enhancement	A.0001545.109	CHC3C-Rpl Station Battery	66,172	20,333
222	Other Production	Lytal	Reliability & Performance Enhancement	A.0001545.127	CHC3C-Arc flash relay 480 buss	55,741	17,128
223	Other Production	Lytal	Reliability & Performance Enhancement	A.0001545.126	CHC3C-Arc flash relay 480 buss	50,074	15,387
224	Other Production	Lytal	Reliability & Performance Enhancement	A.0001529.501	MAD2C Rpl MP XFMR Diff Relay	39,270	12,067
225	Other Production	Lytal	Reliability & Performance Enhancement	A.0001554.501	QUA0C-Rpl Inst Comp Air Dryer	17,235	5,296
226	Other Production	Lytal	Reliability & Performance Enhancement	A.0001545.501	CHC3C-Rpl Main Gas Valve	14,945	4,592
227	Other Production	Lytal	Reliability & Performance Enhancement	A.0001554.501	QUA1C-Rpl Starting Diesel Rad	4,022	1,236
228	Other Production	Lytal	Reliability & Performance Enhancement	A.0001529.066	MAD3C-Rpl M3 Fire Suppression-21344	648	199
229	Other Production	Lytal	Reliability & Performance Enhancement	A.0001639.001	CHC3C-Major-Upg all hot path	3	1
230	Other Production Total					\$ 13,353,518	\$ 4,170,591
231	Electric Transmission	Lytal	New Generation	A.0001402.009	K21 Deaf Smith Plant X Upgrade	2,881,186	945,459
232	Electric Transmission	Lytal	New Generation	A.0001402.011	K42 Tolk Tuco Upgrade	1,006,815	330,385
233	Electric Transmission	Lytal	New Generation	A.0001402.007	K91 Newhart Plant X Upgrade	856,859	281,178
234	Electric Transmission	Lytal	New Generation	A.0001402.006	J15 Crossroads Tolk Upgrade TX	385,359	126,455
235	Electric Transmission	Lytal	New Generation	A.0001402.013	J14 Eddy Co Crossroads Upgrade NM	194,244	63,741
236	Electric Transmission	Lytal	New Generation	A.0001577.004	Hale-Xmsn Servng Generation	167,878	55,089
237	Electric Transmission	Lytal	New Generation	A.0001577.005	Hale-Sub Servng Generation	77,034	25,279
238	Electric Transmission	Lytal	New Generation	A.0001563.016	Sagamore-Collector Sub North Land	77,031	25,278
239	Electric Transmission	Lytal	New Generation	A.0001563.017	Sagamore-Collector Sub South Land	77,031	25,278
240	Electric Transmission	Lytal	New Generation	A.0001402.015	Tolk J15 Reterm Line	159	52
241	Electric Transmission Total					\$ 5,723,596	\$ 1,878,193
242	Electric General	Lytal	Reliability & Performance Enhancement	A.0003000.674	MAD0C-Purchase Cap Tools	106,052	31,882
243	Electric General	Lytal	Reliability & Performance Enhancement	A.0006056.227	GSMOC Purchase Vehicles	100,085	30,088
244	Electric General	Lytal	Reliability & Performance Enhancement	A.0003000.668	HAR0C-Purch Plant Tools	65,093	19,569
245	Electric General	Lytal	Reliability & Performance Enhancement	A.0003000.684	TOL0C - Purch Misc Tools	64,691	19,448
246	Electric General	Lytal	Reliability & Performance Enhancement	A.0003000.675	NIC0C-Purch Plant Tools	38,120	11,460
247	Electric General	Lytal	Reliability & Performance Enhancement	A.0003000.673	JON0C-Capital Tools	36,393	10,941
248	Electric General	Lytal	Reliability & Performance Enhancement	A.0003000.663	CHC0C-Cunningham Tools	13,028	3,916
249	Electric General Total					\$ 423,462	\$ 127,303
250	Grand Total					\$ 54,918,238	\$ 17,058,972

Southwestern Public Service Company

Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	
Line No.	Asset Class	Witness	Project Category	Project Description	Additions to Plant-in-Service (October 1, 2020 - February 28, 2021) Total Company	Additions to Plant-in-Service (October 1, 2020 - February 28, 2021) NM Retail
1	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2C-Prch & Install New GSU XFMR	3,873,343 \$	1,190,173 \$
2	Steam Production	Lytal	Reliability & Performance Enhancement	JON0C-Effluent Water Optimization	3,856,980 \$	1,185,145 \$
3	Steam Production	Lytal	Environmental Compliance	JON0C NOX Controls Enhancement	1,673,356 \$	514,177 \$
4	Steam Production	Lytal	Reliability & Performance Enhancement	JON1C-Rewind Exciter Rotor	1,508,930 \$	463,653 \$
5	Steam Production	Lytal	Reliability & Performance Enhancement	MAD1C-Rpl SH Term Tubes	1,119,851 \$	344,100 \$
6	Steam Production	Lytal	Reliability & Performance Enhancement	PLX3C Rpl East Waterwall Tubes	827,516 \$	254,273 \$
7	Steam Production	Lytal	Reliability & Performance Enhancement	PLX4 Rpl GSU Xfmr	740,536 \$	227,547 \$
8	Steam Production	Lytal	Reliability & Performance Enhancement	PLX0C-Floating pump w piping for pi	718,277 \$	220,707 \$
9	Steam Production	Lytal	Reliability & Performance Enhancement	HAR0C-Baseament Winterization	711,746 \$	218,700 \$
10	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2C-Rbld T2 Mill B Gearbox	710,059 \$	218,182 \$
11	Steam Production	Lytal	Reliability & Performance Enhancement	MAD1C-Rpl #2 HP FWH	654,136 \$	200,998 \$
12	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2C-T2 Burners 2020	653,178 \$	200,704 \$
13	Steam Production	Lytal	Reliability & Performance Enhancement	HAR Small Routine	635,116 \$	195,154 \$
14	Steam Production	Lytal	Reliability & Performance Enhancement	MAD1C-Upg DCS Opr Stn-19969	524,538 \$	161,176 \$
15	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2C-Rpl TK32 oil circuit breaker	523,090 \$	160,731 \$
16	Steam Production	Lytal	Reliability & Performance Enhancement	TOL Small Routine	517,842 \$	159,119 \$
17	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2C-Rpr MillIF GearBx & Journ	387,424 \$	119,045 \$
18	Steam Production	Lytal	Reliability & Performance Enhancement	TOL1C-Rpl TK02 oil circuit breaker	384,001 \$	117,993 \$
19	Steam Production	Lytal	Reliability & Performance Enhancement	PLX1 Turbine Stm Shield	362,550 \$	111,402 \$
20	Steam Production	Lytal	Reliability & Performance Enhancement	JON Small Routine	359,951 \$	110,603 \$
21	Steam Production	Lytal	Reliability & Performance Enhancement	PLX Small Routine	348,688 \$	107,142 \$
22	Steam Production	Lytal	Reliability & Performance Enhancement	TOL0C-Rpl Water Treatment Bldg	336,643 \$	103,441 \$
23	Steam Production	Lytal	Reliability & Performance Enhancement	CHC2 North BFP Element	307,599 \$	94,517 \$
24	Steam Production	Lytal	Reliability & Performance Enhancement	NIC Small Routine	304,085 \$	93,437 \$
25	Steam Production	Lytal	Reliability & Performance Enhancement	TOL0C Rpl Gas Line at PLX	295,503 \$	90,800 \$
26	Steam Production	Lytal	Reliability & Performance Enhancement	HAR1 Cooling Tower Storm Repairs	290,741 \$	89,337 \$
27	Steam Production	Lytal	Reliability & Performance Enhancement	NIC1C-Rpl U1 Volt Reg	271,143 \$	83,315 \$
28	Steam Production	Lytal	Reliability & Performance Enhancement	TOL0C-Inst Secondary RO Feed Supply	265,914 \$	81,708 \$
29	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2 MDBFP Rpl Element	262,728 \$	80,729 \$
30	Steam Production	Lytal	Reliability & Performance Enhancement	TOL02 Upgrade TV & IV	261,695 \$	80,412 \$
31	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2C-Replace SSC Chain	260,408 \$	80,016 \$
32	Steam Production	Lytal	Reliability & Performance Enhancement	TOL1C-Rpl UPS Inverters	259,799 \$	79,829 \$
33	Steam Production	Lytal	Environmental Compliance	MAD1C-Upg CEMs Foxboro Sys	225,905 \$	69,414 \$
34	Steam Production	Lytal	Reliability & Performance Enhancement	MAD Small Routine	222,521 \$	68,375 \$
35	Steam Production	Lytal	Reliability & Performance Enhancement	HAR2C S Main Circuit Shaft	220,922 \$	67,883 \$
36	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2C-Rpl UPS Inverters	220,537 \$	67,765 \$
37	Steam Production	Lytal	Reliability & Performance Enhancement	HAR1C - SUBFP Mir Rwnd	212,614 \$	65,330 \$
38	Steam Production	Lytal	Reliability & Performance Enhancement	TOL2C-Rpl Diesel Gen Controls	202,564 \$	62,242 \$
39	Steam Production	Lytal	Reliability & Performance Enhancement	CHC0C-Rpl Fuel Gas Press Cntrl Vlv	192,900 \$	59,273 \$

Southwestern Public Service Company

Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	
Line No.	Asset Class	Witness	Project Category	Project Description	Additions to Plant-in-Service (October 1, 2020 - February 28, 2021) Total Company	Additions to Plant-in-Service (October 1, 2020 - February 28, 2021) NM Retail
40	Steam Production	Lytal	Environmental Compliance	HAR0C-Install CEMS Compressor	182,261 \$	56,004 \$
41	Steam Production	Lytal	Reliability & Performance Enhancement	TOL1-Refurbish ctr boiler circ pump	175,598 \$	53,956 \$
42	Steam Production	Lytal	Reliability & Performance Enhancement	JON01 - SH Header Sealbox Rpl	174,017 \$	53,471 \$
43	Steam Production	Lytal	Reliability & Performance Enhancement	NIC3C-Rpl Boiler Bldg Elevator	160,210 \$	49,228 \$
44	Steam Production	Lytal	Reliability & Performance Enhancement	TOL0C-Rpl Water Well Pmp 2020	159,651 \$	49,057 \$
45	Steam Production	Lytal	Reliability & Performance Enhancement	CHC Small Routine	154,773 \$	47,558 \$
46	Steam Production	Lytal	Reliability & Performance Enhancement	NIC0C Rpl RO 1st & 2nd Pass Pump & Motor	153,628 \$	47,206 \$
47	Steam Production	Lytal	Environmental Compliance	JON0C-Replace Section 13 Pivot	145,229 \$	44,625 \$
48	Steam Production	Lytal	Reliability & Performance Enhancement	CHC0C-Rpr Water Well Mir 2019	134,165 \$	41,225 \$
49	Steam Production	Lytal	Reliability & Performance Enhancement	TOL0C- Install Gas Chromatograph	122,665 \$	37,692 \$
50	Steam Production	Lytal	Reliability & Performance Enhancement	PLX0 Inverter Replacement	115,208 \$	35,400 \$
51	Steam Production	Lytal	Environmental Compliance	HAR Small Routine - Environmental	90,112 \$	27,689 \$
52	Steam Production	Lytal	Reliability & Performance Enhancement	CHC Emergent Fund -Steam prod	73,428 \$	22,562 \$
53	Steam Production	Lytal	Reliability & Performance Enhancement	NIC Emergent Fund -Steam prod	54,917 \$	16,875 \$
54	Steam Production	Lytal	Reliability & Performance Enhancement	GMS Small Routine	695 \$	213 \$
55	Steam Production Total				\$ 27,601,888	\$ 8,481,311
56	Other Production	Lytal	New Generation	SPS Wind - Sagamore	804,157,822 \$	263,883,681 \$
57	Other Production	Lytal	Reliability & Performance Enhancement	JON3C Jones 3&4 Hot Gas Path Replac	12,075,514 \$	3,710,477 \$
58	Other Production	Lytal	New Generation	SPS Wind -Hale County	5,859,984 \$	1,922,949 \$
59	Other Production	Lytal	Reliability & Performance Enhancement	CHC4C-Rpl Combustor Components -238	2,419,370 \$	743,407 \$
60	Other Production	Lytal	Reliability & Performance Enhancement	CHC34C CT Control Upgrade	1,105,310 \$	339,632 \$
61	Other Production	Lytal	Reliability & Performance Enhancement	JON03-Gen Pole Crossover	342,809 \$	105,336 \$
62	Other Production	Lytal	Reliability & Performance Enhancement	JON3-J3 Aerodynamic Upgrade	214,512 \$	65,914 \$
63	Other Production	Lytal	Environmental Compliance	CHC3C-Upg CEMs Foxboro Sys	170,300 \$	52,329 \$
64	Other Production	Lytal	New Generation	Sagamore-Land & Land Rights	166,969 \$	54,791 \$
65	Other Production	Lytal	Reliability & Performance Enhancement	JON3 Rpl Evap Media	160,802 \$	49,410 \$
66	Other Production	Lytal	Reliability & Performance Enhancement	CHC4C-Inst Onln Vib Mntsr Sys	103,336 \$	31,752 \$
67	Other Production	Lytal	Reliability & Performance Enhancement	JON Small Routine	57,546 \$	17,682 \$
68	Other Production	Lytal	Reliability & Performance Enhancement	Hale - Small Routine	21,250 \$	6,973 \$
69	Other Production	Lytal	Reliability & Performance Enhancement	Sagamore Emergent Fund	3,013 \$	989 \$
70	Other Production	Lytal	Reliability & Performance Enhancement	GMS Small Routine	2,786 \$	856 \$
71	Other Production	Lytal	Reliability & Performance Enhancement	CHC Small Routine	(72) \$	(22) \$
72	Other Production Total				\$ 826,861,250	\$ 270,986,154
73	Electric Transmission	Lytal	New Generation	Sagamore Collector Sub	26,606,048 \$	8,730,751 \$
74	Electric Transmission	Lytal	Reliability & Performance Enhancement	TOL1C-Synchronous Condenser	10,421,155 \$	2,526,457 \$
75	Electric Transmission	Lytal	Reliability & Performance Enhancement	TOL2C-Synchronous Condenser	10,211,809 \$	2,475,704 \$
76	Electric Transmission	Lytal	New Generation	Sagamore TSG	9,200,055 \$	3,018,990 \$

Southwestern Public Service Company

Energy Supply Capital Additions to Plant in Service
October 1, 2019 through September 30, 2020

(A)	(B)	(C)	(D)	(E)	(F)	
Line No.	Asset Class	Witness	Project Category	Project Description	Additions to Plant-in-Service (October 1, 2020 - February 28, 2021) Total Company	Additions to Plant-in-Service (October 1, 2020 - February 28, 2021) NM Retail
77	Electric Transmission	Lytal	New Generation	Sagamore Wind Network Upgrades	8,663,255 \$	2,842,840
78	Electric Transmission	Lytal	New Generation	Sagamore Crossroads	3,778,559 \$	1,239,931
79	Electric Transmission	Lytal	New Generation	Hale	1,984,556 \$	651,230
80	Electric Transmission Total				\$ 70,865,437	\$ 21,485,902
81	Electric General	Lytal	Reliability & Performance Enhancement	GMS Purchase Vehicles	384,552 \$	115,605
82	Electric General	Lytal	Reliability & Performance Enhancement	GMS Lab Instruments	169,320 \$	50,901
83	Electric General	Lytal	Reliability & Performance Enhancement	HAR Small Routine	74,312 \$	22,340
84	Electric General	Lytal	Reliability & Performance Enhancement	JON Small Routine	47,696 \$	14,339
85	Electric General	Lytal	Reliability & Performance Enhancement	NIC Small Routine	31,409 \$	9,442
86	Electric General	Lytal	Reliability & Performance Enhancement	PLX Small Routine	27,097 \$	8,146
87	Electric General	Lytal	Reliability & Performance Enhancement	CHC Small Routine	17,311 \$	5,204
88	Electric General	Lytal	Reliability & Performance Enhancement	GMS Small Routine	9,610 \$	2,889
89	Electric General	Lytal	Reliability & Performance Enhancement	MAD Small Routine	9,088 \$	2,732
90	Electric General	Lytal	Reliability & Performance Enhancement	TOL Small Routine	6,041 \$	1,816
91	Electric General Total				\$ 776,435	\$ 233,415
92	Grand Total				\$ 926,105,009	\$ 301,186,781

APPENDIX E TO GIA

Commercial Operation Date

December 31, 2020

Tessie Kentner
Managing Attorney
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223-4936

Manager, Transmission Business Relations
Xcel Energy Services Inc.
414 Nicollet Mall
Minneapolis, MN 55401
612-330-6773 or 1-800-328-8226 ext. 0

Re: Southwestern Public Service Company (GEN-2016-123, -124, and -125)
Generating Facility

Dear Ms. Kentner and Mr. Moeller:

On December 30, 2020, Southwestern Public Service Company ("SPS") has completed Trial Operation of the Sagamore Wind generating facility. This letter confirms that Southwestern Public Service Company commenced Commercial Operation of the Sagamore Wind Generating Facility, effective as of **December 31, 2020**. Capitalized terms used and not defined in this letter have the meanings set forth in the Generator Interconnection Agreement among Southwest Power Pool, Inc., Southwestern Public Service Company (Interconnection Customer) and Southwestern Public Service Company (Transmission Owner) dated as of March 3, 2020.

Thank you.



Joe Taylor
Manager, Transmission Access
Xcel Energy Services Inc.
1800 Larimer Street, Suite 1000
Denver, CO 80202
Phone: (303) 571-7462
Email: joseph.c.taylor@xcelenergy.com

Execution Version

PURCHASE AND SALE AGREEMENT

by, between and among

INVENERGY WIND DEVELOPMENT NORTH AMERICA LLC

as Seller,

SAGAMORE WIND ENERGY LLC,

as the Company,

and

SOUTHWESTERN PUBLIC SERVICE COMPANY

as Buyer

dated as of March 9, 2017

Sagamore Wind Project

Table of Contents

	Page
Article 1 DEFINITIONS AND CONSTRUCTION	1
Section 1.1 Definitions.....	1
Section 1.2 Rules of Construction	15
Article 2 PURCHASE AND SALE AND CLOSING.....	16
Section 2.1 Purchase and Sale	16
Section 2.2 Purchase Price; Closing Payment; Assumption of Liabilities	16
Section 2.3 Closing	19
Section 2.4 Closing Deliveries by Seller to Buyer	19
Section 2.5 Closing Deliveries by Buyer to Seller	19
Section 2.6 Conditions to Closing	19
Section 2.7 Termination of Agreement.....	23
Section 2.8 Exclusivity	26
Article 3 REPRESENTATIONS AND WARRANTIES OF SELLER.....	26
Section 3.1 Organization.....	26
Section 3.2 Authority; Enforceability	27
Section 3.3 No Conflicts; Consents and Approvals.....	27
Section 3.4 Legal Proceedings	27
Section 3.5 Compliance with Laws	27
Section 3.6 Brokers	27
Section 3.7 Prior Acquisitions and Development Agreements.....	28
Article 4 REPRESENTATIONS AND WARRANTIES OF THE COMPANY AND SELLER	28
Section 4.1 Organization.....	28
Section 4.2 Authority; Enforceability	28
Section 4.3 No Conflicts; Consents and Approvals.....	29
Section 4.4 Capitalization	29
Section 4.5 Business; Assets.....	30
Section 4.6 Bank Accounts	31
Section 4.7 Subsidiaries	31
Section 4.8 Legal Proceedings	31
Section 4.9 Compliance with Laws	31
Section 4.10 Assets and Liabilities; No Undisclosed Liabilities	31
Section 4.11 Taxes	31
Section 4.12 Regulatory Status	33
Section 4.13 Contracts	33
Section 4.14 Real Property	34
Section 4.15 Permits	35
Section 4.16 Environmental Matters.....	36
Section 4.17 Intellectual Property.....	37
Section 4.18 Brokers.....	37
Section 4.19 Employees and Labor Matters	37

Table of Contents
(continued)

	Page
Section 4.20 Employee Benefits	38
Section 4.21 Wind Data	38
Section 4.22 Insurance	38
Section 4.23 No Other Agreements to Sell Purchased Assets	38
Section 4.24 Sufficient Funds	38
Section 4.25 Books and Records	38
Article 5 REPRESENTATIONS AND WARRANTIES OF BUYER.....	38
Section 5.1 Organization.....	39
Section 5.2 Authority; Enforceability	39
Section 5.3 No Conflicts	39
Section 5.4 Legal Proceedings.....	39
Section 5.5 Brokers	40
Section 5.6 Financial Resources	40
Section 5.7 Acquisition as Investment.....	40
Section 5.8 Compliance with Laws	40
Article 6 COVENANTS	40
Section 6.1 Books and Records	40
Section 6.2 Transfer Taxes	41
Section 6.3 Tax Matters	41
Section 6.4 Conduct of the Company Prior to Closing.....	41
Section 6.5 Real Property Purchase Option.....	43
Section 6.6 Development Work.....	43
Section 6.7 Asset Transfer	47
Section 6.8 Access to Information.....	48
Section 6.9 Efforts; Consents; Regulatory and Required Seller Approval.....	48
Section 6.10 Notification of Closing	50
Section 6.11 Public Announcements	50
Section 6.12 Transfer of Permits	50
Section 6.13 Further Assurances.....	50
Section 6.14 Schedules	51
Section 6.15 Build Out Restrictions.....	51
Article 7 INDEMNIFICATION, LIMITATIONS OF LIABILITY AND WAIVERS.....	51
Section 7.1 Survival	51
Section 7.2 Indemnification by Seller.....	51
Section 7.3 Indemnification by Buyer	52
Section 7.4 Limitations on Liability	52
Section 7.5 Procedures for Third Party Claims	54
Section 7.6 Indemnification Procedures	55
Section 7.7 Payments of Indemnity Amounts Payable by Buyer	57
Section 7.8 Payments of Indemnity Amounts Payable by Seller.....	57
Section 7.9 Exclusive Remedy	57

Table of Contents
(continued)

	Page
Article 8 MISCELLANEOUS	57
Section 8.1 Notices	57
Section 8.2 Entire Agreement	59
Section 8.3 Expenses	59
Section 8.4 Disclosure	59
Section 8.5 Waiver.....	60
Section 8.6 Amendment.....	60
Section 8.7 No Third Party Beneficiary.....	60
Section 8.8 Assignment; Binding Effect.....	60
Section 8.9 Headings	61
Section 8.10 Invalid Provisions	61
Section 8.11 Counterparts; Facsimile	61
Section 8.12 Governing Law; Venue; and Jurisdiction	61
Section 8.13 Waiver of Remedies; Legal Fees	62
Section 8.14 Specific Performance	63
Section 8.15 Reinstatement.....	63

EXHIBITS

Exhibit A	Form of Company Assignment Agreement
Exhibit B	Form of Lease
Exhibit C-1	Form of Lease Amendment (Leases)
Exhibit C-2	Form of Lease Amendment (Easements)
Exhibit C-3	Form of Lease Amendment (Sufficient Leases)
Exhibit D	Geotechnical Testing Requirements
Exhibit E	Form of Parent Guaranty

SCHEDULES

1.1-K	Knowledge
1.1-PL	Permitted Liens
2.6(b)(vi)	Liens to be released
2.6(b)(ix)	Required Consents
2.6(b)(xv)	Sufficient Leases
2.6(d)(i)	Title Commitment and Survey Requirements
4.5(d)	Reports
4.6	Bank Accounts
4.10	Undisclosed Liabilities
4.11	Taxes
4.13(a)	Purchased Contracts
4.13(b)	Support Obligations
4.13(g)	Shared Contracts
4.14	Real Property
4.15	Permits
4.16	Environmental Matters
4.21	Wind Data
4.22	Insurance
6.6(b)	Certain Development Work
6.6(a)(iii)	Project Boundary
6.6(a)(iii)(2)	Option Boundary

PURCHASE AND SALE AGREEMENT

This agreement, dated as of March 9, 2017 (this “*Agreement*”), is made by, between and among Invenergy Wind Development North America LLC, a Delaware limited liability company (“*Seller*”), Sagamore Wind Energy LLC, a Delaware limited liability company (the “*Company*”), and Southwestern Public Service Company, a New Mexico corporation (“*Buyer*”).

WITNESSETH:

WHEREAS, the Company is developing the approximately 448 megawatt target nameplate capacity (the “*Expected Nameplate Capacity*”) wind farm known as the Sagamore Wind Project located in Roosevelt County, New Mexico, which project for purposes of this Agreement consists solely of having the Site Construction Ready for wind turbine generators (the “*Project*”);

WHEREAS, the Company is a direct, wholly-owned subsidiary of Seller; and

WHEREAS, Seller desires to sell to Buyer, and Buyer desires to purchase from Seller, the Shares (as defined below) on the Closing Date (as defined below) on the terms and subject to the conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the premises and the mutual representations, warranties, covenants and agreements in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

ARTICLE 1

DEFINITIONS AND CONSTRUCTION

Section 1.1 Definitions. As used in this Agreement, the following capitalized terms have the meanings set forth below:

“*1933 Act*” means the Securities Act of 1933, as amended.

“*Action*” means any legal, administrative, arbitral, mediation or other alternative dispute resolution procedure or other action, proceeding, claim, assessment, audit, inquiry or similar investigation before any court, arbitrator or other Governmental Authority.

“*Affiliate*” means, with respect to any Person, any other Person that directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with such Person. For purposes of this definition, “control” of a Person means the power, direct or indirect, to direct or cause the direction of the management and policies of such Person whether through ownership of voting securities or ownership interests, by Contract or otherwise.

“*Agreement*” is defined in the introduction to this Agreement.

“*Ancillary Agreements*” means the Company Assignment Agreement and the other documents and agreements to be delivered pursuant to this Agreement.

“*Assets*” of any Person means all assets and properties of every kind, nature, character and description (whether real, personal or mixed, whether tangible or intangible and wherever situated), including the related goodwill, which assets and properties are operated, owned or leased by such Person.

“*Assumed Liabilities*” means:

(a) the Permitted Liens;

(b) those obligations of the Company accruing or arising, or covenants or agreements of the Company to be performed (other than indemnification obligations for matters accruing or arising prior to the Closing Date), from and after the Closing Date, including any such obligations under the Land Contracts, Permits, Permit applications, and other Contracts to which the Company is a party at the time of the Closing (including any liability for Taxes for such Land Contracts, Permits, Permit applications, and other Contracts); and

(c) any Liability arising from and after the Closing Date with respect to the ownership or operation of the Project, other than Losses for which Buyer is entitled to indemnification pursuant to Section 7.2(a), Section 7.2(b) or Section 7.2(c);

provided that, without in any way broadening the scope of Assumed Liabilities as described in the foregoing provisions of this definition, Assumed Liabilities shall not include:

(i) any Liability for Taxes of the Company or Seller to the extent attributable to any Pre-Closing Tax Period;

(ii) any Liability of the Company or Seller for costs and expenses incurred for the purpose of executing and performing this Agreement and the transactions contemplated hereby; or

(iii) any Liability under the Land Contracts, Permits, Permit applications or Contracts to which the Company is a party at Closing to the extent such Liability, but for breach or default by Seller or the Company or a waiver or extension given to or by Seller or the Company, would or should have been paid, performed or otherwise discharged on or prior to the Closing Date or to the extent such Liability arises out of any such breach or default, waiver or extension given to or by Seller or the Company.

“*Bankruptcy Event*” shall be deemed to occur, with respect to any Person, if (a) that Person shall commence any case, proceeding or other voluntary action seeking to have an order for relief entered with respect to it, or seeking to adjudicate it bankrupt or insolvent, or seeking liquidation, arrangement, adjustment, winding-up, reorganization, dissolution, composition under the Bankruptcy Law or other relief with respect to it or its debts; (b) such Person shall apply for, or consent or acquiesce to, the appointment of, a receiver, administrator, administrative receiver, liquidator, sequestrator, trustee or other official with similar powers for itself or any substantial

part of its assets; (c) such Person shall make a general assignment for the benefit of its creditors; (d) an involuntary case shall be commenced seeking liquidation or reorganization of such Person under the Bankruptcy Law, or seeking issuance of a warrant of attachment, execution or distraint, or any similar proceedings shall be commenced against such Person under any other applicable law and (i) such Person consents to the institution of the involuntary case against it, (ii) the petition commencing the involuntary case is not timely controverted, (iii) the petition commencing the involuntary case is not dismissed within 60 days of its filing, (iv) an interim trustee is appointed to take possession of all or a portion of the property, and/or to operate all or any part of the business of such Person and such appointment is not vacated within 60 days, or (v) an order for relief shall have been issued or entered therein; or (e) a decree or order of a court having jurisdiction in the premises for the appointment of a receiver, administrator, administrative receiver, liquidator, sequestrator, trustee or other official having similar powers, over such Person or all or a part of its property shall have been entered; or (f) any other similar relief shall be granted against such Person under any applicable Bankruptcy Law, or such Person shall file a petition or consent or shall otherwise institute any similar proceeding under any other applicable law, or shall take any action in furtherance of, or indicating its consent to, approval of, or acquiescence in any of the acts set forth above in this definition; or (g) such Person shall generally not, or shall admit in writing its inability to, pay its debts as they become due.

“Bankruptcy Law” means Title 11, United States Code, and any other existing or future law (or any successor law or statute) of any jurisdiction, domestic (including state and federal) or foreign, relating to bankruptcy, insolvency, reorganization, conservatorship, moratorium or similar law for the relief of debtors.

“Beginning of Construction Guidance” means the guidance issued by the Internal Revenue Service in Notice 2013-29, as clarified by Notice 2013-60, Notice 2014-46, Notice 2015-25, Notice 2016-31 and Notice 2017-04.

“Benefit Plan” means “employee benefit plan,” as such term is defined in Section 3(3) of ERISA. Benefit Plans do not include any Multiemployer Plans or any Benefit Plans maintained by any ERISA Affiliate.

“Books and Records” means any and all data; reports; studies; external, non-attorney-privileged correspondence; maps; surveys; and other business records necessary or useful to the development of the Project that are generated or obtained by Seller or the Company.

“Business” means the development of the Project by the Company and Seller, including the Development Work.

“Business Day” means a day other than Saturday, Sunday or any day on which banks located in the State of New Mexico are authorized or obligated to close.

“Buyer” is defined in the introduction to this Agreement.

“Buyer Group” is defined in Section 7.2.

“Claim” means any demand, claim, action, investigation, legal proceeding (whether at law or in equity) or arbitration.

“**Closing**” means the closing of the transactions contemplated by this Agreement, as provided for in Section 2.3.

“**Closing Date**” means the date on which Closing occurs.

“**Closing Permits**” is defined in Section 4.15(b).

“**Closing Purchase Price**” is defined in Section 2.2(a).

“**Code**” means the Internal Revenue Code of 1986.

“**Company**” is defined in the introduction to this Agreement.

“**Company Assignment Agreement**” means an assignment and transfer of the Shares, substantially in the form annexed as Exhibit A.

“**Confidentiality Agreement**” means the Mutual Confidentiality Agreement, dated September 22, 2016 between Seller and Buyer.

“**Consent**” means a consent, approval, authorization, waiver, filing, notice, registration, declaration or similar action of, with or by any Person.

“**Construction Ready**” means (a) all of the Critical Development Work shall have been completed by Seller pursuant to Section 6.6 to the reasonable satisfaction of Buyer and (b) the representations and warranties set forth in Section 4.5(c) shall be true and correct in all respects.

“**Contract**” means any legally binding contract, lease, license, evidence of Indebtedness, mortgage, indenture, purchase order, binding bid, letter of credit, security agreement or other legally binding arrangement, whether oral or written, but excludes Permits.

“**Contracting Parties**” is defined in Section 8.13.

“**Critical Development Work**” is defined in Section 6.6.

“**Data Site**” means the electronic documentation site established in connection with the transactions contemplated by this Agreement.

“**Default**” means, with respect to any Person, any circumstance, event or condition that would constitute, with or without notice or the passage of time or both, a violation, breach, default, conflict with, or give rise to any right of termination, modification, cancellation, prepayment, suspension, limitation, revocation, purchase, re-purchase or acceleration.

“**Development Costs**” means third party development costs and expenses incurred following the date of this Agreement and prior to the Closing Date in connection with the development of the Project, including accounting, appraisal, consulting, engineering, legal, tax and other professional fees and expenses associated with the development of the Project, including the Development Work (but excluding the negotiation and closing of this transaction), costs incurred under Contracts of the Company and/or Project, including for credit support under any Contracts

of the Project, payments to equipment vendors and payments made in connection with acquiring Real Property Interests, Permits and other Assets. Development Costs shall not include any cost of money or Seller's or its Affiliates' internal overhead costs related to the Project.

“Designated Representations” means the representations and warranties contained in Section 3.1 (Organization), Section 3.2 (Authority; Enforceability), Section 4.1 (Organization), Section 4.2 (Authority; Enforceability), Section 4.3(c) and (d) (Conflicts), Section 4.4 (Capitalization), Section 4.7 (Subsidiaries), Section 4.20 (Employee Benefits), Section 5.1 (Organization) and Section 5.2 (Authority; Enforceability).

“Development Work” is defined in Section 6.6.

“DISIS” means the Definitive Interconnection System Impact Study to be performed by SPP, or a consultant acceptable to SPP, identifying the definitive scope and estimated cost of any upgrades that may be required with respect to the interconnection of the Project.

“Dispute Notice” is defined in Section 7.6(b).

“Environmental Claim” means any Claim or Loss arising out of or related to Hazardous Materials, environmental or workplace contamination or pollution, or any violation or alleged violation of Environmental Law.

“Environmental Law” means the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 et seq.; the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq.; the Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq.; the Clean Air Act, 42 U.S.C. § 7401 et seq.; the Toxic Substances Control Act, 15 U.S.C. §§ 2601 through 2629; the Oil Pollution Act, 33 U.S.C. § 2701 et seq.; the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. § 11001 et seq.; the Bald and Golden Eagle Protection Act (16 U.S.C. §§ 668–668d); the Migratory Bird Treaty Act (16 U.S.C. §§ 703–712); the Safe Drinking Water Act, 42 U.S.C. §§ 300f through 300j; the Occupational Safety and Health Act, 29 U.S.C. § 651 et seq.; the Hazardous Materials Transportation Act, 49 U.S.C. § 5101 et seq.; and all other Laws currently in effect (including implementing regulations promulgated pursuant thereto) of any Governmental Authority having jurisdiction over the assets in question addressing pollution control or protection of Protected Species, the environment, wildlife, plants, natural resources, or human health.

“Equity Interests” means capital stock, partnership, membership or trust interests, shares or units (whether general or limited), and any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distribution of assets of, the issuing entity.

“Equity Securities” means (i) Equity Interests, (ii) subscriptions, calls, warrants, options or commitments of any kind or character relating to, or entitling any Person to acquire, any Equity Interests and (iii) securities convertible into or exercisable or exchangeable for Equity Interests.

“ERISA” means the Employee Retirement Income Security Act of 1974.

“ERISA Affiliate” means any entity, trade or business that is a member of a group described in Section 414(b) or (c) of the Code or Section 4001(b)(1) of ERISA that includes Seller,

or that is a member of the same “controlled group” as Seller pursuant to Section 4001(a)(14) of ERISA; provided, however, that the Company will not be considered to be an ERISA Affiliate of Seller.

“**Excluded Liabilities**” is defined in Section 2.2(d).

“**Exclusivity Period**” is defined in Section 2.8.

“**Expansion**” is defined in Section 2.2(a)(i).

“**Expected Nameplate Capacity**” is defined in the recitals to this Agreement.

“**Final Order**” means a final order of a court of competent jurisdiction, (i) from which there is no right of appeal to a higher court or (ii) all applicable time periods during which an appeal may be made have expired.

“**FPA**” means the Federal Power Act, as amended.

“**GAAP**” means generally accepted accounting principles in the United States of America.

“**Generator Interconnection Agreement**” means each generator interconnection agreement among the Company, SPP and the applicable transmission system owner for interconnection of the Project to such transmission system owner’s system.

“**Governmental Authority**” means any court, tribunal, arbitrator, authority, agency, commission, official or other instrumentality of the United States or any state, county, city or other political subdivision or similar governing entity, and including any governmental, quasi-governmental or non-governmental body administering, regulating or having general oversight over natural gas, electricity, power or other markets.

“**Hazardous Material**” means any substance, pollutant, contaminant, chemical, material or waste that is regulated, listed or identified under any Environmental Law, or which is deemed or may be deemed hazardous, dangerous, damaging or toxic to living things or the environment, and shall include, without limitation, any flammable, explosive, or radioactive materials; hazardous materials; radioactive wastes; hazardous wastes; hazardous or toxic substances or related materials; polychlorinated biphenyls; petroleum products, fractions and by-products thereof; asbestos and asbestos-containing materials; medical waste, solid waste, and any excavated soil, debris, or groundwater that is contaminated with such materials.

“**Implementation**” or “**Implement**” means the ownership, development, construction, financing, operation and/or maintenance of any Subsequent Wind Farm.

“**Indebtedness**” means any of the following: (a) any indebtedness for borrowed money; (b) any obligations evidenced by bonds, debentures, notes or other similar instruments; (c) any obligations to pay the deferred purchase price of property or services, except trade accounts payable and other current liabilities arising in the ordinary course of business; (d) any obligations as lessee under capitalized leases; (e) any obligations, contingent or otherwise, under acceptance, letters of credit or similar facilities; and (f) any guaranty of any of the foregoing.

“Indemnified Party” means a Person entitled to be indemnified by another Person pursuant to the terms of this Agreement.

“Indemnifying Party” means a Person required to indemnify another Person pursuant to the terms of this Agreement.

“Indemnity Amount Payable” means any Indemnity Claim Amount which has become an Indemnity Amount Payable in accordance with Article 7, plus interest on such Indemnity Claim Amount at the Interest Rate from the date that is 30 days after it becomes an Indemnity Amount Payable.

“Indemnity Cap” means an amount equal to forty percent (40%) of the aggregate amount of the Purchase Price.

“Indemnity Claim” means any claim made for indemnification in accordance with Article 7.

“Indemnity Claim Amount” means the amount of Losses claimed in any Notice of Claim, which amount, if not finally determined, may be a good faith estimate of the Losses that may be subject to indemnification pursuant to this Agreement.

“Initial Payment” is defined in Section 2.2(b).

“Intellectual Property” means the following intellectual property rights, both statutory and common law rights, if applicable, to the extent relating to the Project: (a) copyrights, registrations and applications for registration thereof, (b) trademarks, service marks, trade names, slogans, domain names, logos, trade dress, and registrations and applications for registrations thereof, (c) patents, as well as any reissued and reexamined patents and extensions corresponding to the patents, and any patent applications, as well as any related continuation, continuation in part and divisional applications and patents issuing therefrom, (d) trade secrets and confidential information, including ideas, designs, concepts, compilations of information, methods, techniques, procedures, processes and other know-how, whether or not patentable and (e) all studies, assessments, data, reports, records and determinations.

“Interconnection Costs” means all costs and expenses in the aggregate incurred after the date hereof in connection with the DISIS or pursuant to the Generator Interconnection Agreement (including without limitation the posting of security in connection with any of the foregoing). Interconnection Costs shall not include costs of, or incurred in respect of, interconnection study agreements.

“Interest Rate” means the higher of (i) a rate of interest per annum equal to the prime rate (as published in the Wall Street Journal) as in effect from time to time plus fifty (50) basis points and (ii) a rate of interest per annum equal to four percent (4%).

“Knowledge” means, when used in a particular representation in this Agreement with respect to Seller, the actual knowledge of the individuals listed on Schedule 1.1-K together with such knowledge as such individuals should have obtained in the ordinary course of their duties.

“Land Contracts” means the Project Leases and all separate options, easements and licenses (other than the Project Leases) executed for purposes of providing the Company or, with respect to the Project, Seller with rights in the nature of an option, easement or license in real property, as amended, modified and/or supplemented to date, individually or collectively as the context requires, in each case, to the extent, and only to the extent, that any of the foregoing cover any real property included within the Project Area.

“Laws” means all laws, statutes, rules, regulations, ordinances, orders, decrees, court decisions, and other pronouncements having the effect of law of any Governmental Authority.

“Lease Amendment” means an amendment to a Project Lease substantially in the form attached hereto as Exhibit C-1 or C-3, as applicable, for Project Leases that contain a leasehold interest in real property or C-2 for Project Leases that contain an easement or right of way interest in real property, as applicable, or such other form that is acceptable to Buyer in its reasonable discretion.

“Leases” means all leases, subleases, easements, right to occupy or use and other arrangements with respect to real property, including, in each case, all amendments, modifications and supplements thereto and waivers and Consents thereunder.

“Liability” means all debts, liabilities, obligations, Contracts and commitments, whether known or unknown, asserted or unasserted, fixed, absolute or contingent, matured or unmatured, accrued or unaccrued, liquidated or unliquidated, due or to become due, whenever or however arising (including, whether arising out of any Contract or tort based on negligence, strict liability or otherwise).

“Lien” means, with respect to any property or other assets of a Person, any lien, charge, claim, community property interest, pledge, mortgage, hypothecation, condition, equitable interest, option, security agreement, deed of trust, encumbrance, easement, encroachment, license, sublicense, right of first refusal, right of first offer, or other restriction of any kind, including any restrictions on use, voting, transfer receipt of income or exercise of any other attribute of ownership.

“Loss” means any and all actual losses, liabilities, amounts paid in settlement, damages, fines, penalties, costs, charges, Taxes, obligations, demands, fees, interest, and expenses (including court costs and reasonable fees of attorneys, accountants and other experts in connection with any Claim).

“Material Adverse Effect” means an event, change, occurrence, circumstance, development or effect, which, individually or when taken together with the effect of all other events or circumstances has had or could reasonably be expected to have a material adverse effect on the business, assets, properties, liabilities, condition (financial or otherwise) or results of operations of the Project or the Company; provided, however, that the following will not be considered when determining whether a Material Adverse Effect has occurred: any change, event, effect or occurrence (or changes, events, effects or occurrences taken together) resulting from (a) any change generally affecting the international, national or regional electric generating, transmission or distribution industry; (b) any change generally affecting the international, national

or regional wholesale or retail markets for electric power; (c) any change generally affecting the wind-generated energy business generally, except to the extent such effect has a materially disproportionate effect on the Company as compared to other similarly situated wind development projects, (d) any change in general regulatory or political conditions, including any engagements of hostilities, acts of war or terrorist activities or changes imposed by a Governmental Authority associated with additional security; (e) any change in any Laws (except as provided in the last sentence of this definition), GAAP or industry standards; (f) any change in the financial condition or results of operation of the Company caused solely by the sale of the Company to Buyer from Seller; (g) any change in the financial, banking, or securities markets (including any suspension of trading in, or limitation on prices for, securities on the New York Stock Exchange, American Stock Exchange, or Nasdaq Stock Market) or any change in the general national or regional economic or financial conditions; (h) any actions required to be taken pursuant to or in accordance with this Agreement; or (i) the announcement or pendency of the transactions contemplated hereby. For the avoidance of doubt, any change in the business, financial condition or results of operations of Buyer, or any of its Affiliates or any change in any business transaction between Buyer or any of its Affiliates will not be considered when determining whether a Material Adverse Effect has occurred. Notwithstanding anything herein to the contrary, a Material Adverse Effect shall be deemed to have occurred if a Tax Law Change has occurred.

“Multiemployer Plan” means any “multiemployer plan” within the meaning of Section 4001(a)(3) of ERISA previously or currently covering any employees.

“NMPRC” means the New Mexico Public Regulation Commission or any successor agency thereto.

“Nonparty Affiliates” is defined in Section 8.13.

“Notice of Claim” means a notice by one Party to the other of a claim for indemnification under and made in accordance with Article 7.

“Option” is defined in Section 2.2(a)(ii).

“Option Boundary” means the land boundary identified on Schedule 6.6(a)(iii)(2).

“Ordinary course of business” means, with respect to any Person, its ordinary course of business consistent with its past practice.

“Organizational Documents” means, with respect to any Person, the articles or certificate of incorporation or organization and by-laws, the limited partnership agreement, the partnership agreement or the limited liability company agreement, member control agreement, trust agreement, or other organizational documents of such Person, including (i) any shareholder, voting trust or similar Contract and (ii) any that are required to be registered or kept in the place of incorporation, organization or formation of such Person and which establish the legal personality or governance of such Person.

“Other Seller Entity” or **“Other Seller Entities”** means, with respect to Seller each Person that is (i) a direct or indirect Affiliate of Seller or (ii) directly or indirectly twenty percent (20%) or more owned by Seller, an Affiliate of Seller, or any combination of Seller or Affiliates of Seller,

assuming for purposes of this test that any and all options, warrants and other rights held directly or indirectly by Seller or any Affiliate of Seller and convertible or potentially convertible into an equity interest in such Person have been exercised or converted, as applicable.

“Prior Acquisition Agreement” means that certain Asset Purchase Agreement dated November 10, 2016 between Highway Wind, LLC and the Company and all side letters related thereto, in each case as amended, restated, supplemented or otherwise modified from time to time.

“Parcel” means up to three (3) proposed sites for the Real Property Purchase Options provided by Buyer in accordance with Section 6.5, and ranked by Buyer in order of priority.

“Parties” means collectively, Buyer and Seller.

“Permits” means all licenses, permits, certificates of authority, authorizations, approvals, registrations, franchises and similar consents and orders issued or granted by a Governmental Authority, including the Site Permit.

“Permitted Lien” means (a) any Lien for Taxes not yet due and payable; (b) any Lien that, individually or in the aggregate, (i) is of a nature commonly existing with respect to properties of a similar character and (ii) does not interfere in any material respect with the Company’s ability to locate, interconnect, erect, construct and operate, on the Site, a Sufficient Project; (c) the terms and conditions of the Purchased Contracts and the Permits listed on Schedule 4.15(i); (d) any Lien that is (or will be) released on or prior to Closing; (e) restrictions on transfer of the Equity Interests of the Company under any applicable securities Law or the Organizational Documents of the Company; (f) (i) as of any date prior to the Closing Date, any Lien identified in any Title Commitment delivered to Buyer, and (ii) as of the Closing Date and any date thereafter, any Lien identified in any Title Commitment reasonably satisfactory to Buyer in accordance with Section 2.6(d), (g) any other Lien created or permitted with the written consent of Buyer in its sole discretion, and (h) the matters identified on Schedule 1.1-PL.

“Person” means any natural person, corporation, general partnership, limited partnership, limited liability company, proprietorship, other business organization, trust, union, association or Governmental Authority.

“Pre-Closing Asset Transfer” is defined in Section 6.7.

“Pre-Closing Period” is defined in Section 6.3(a).

“Pre-Closing Tax Period” means (i) all Tax periods ending on or before the Closing Date and (ii) the portion of any Straddle Period ending on the Closing Date.

“Proforma Title Policy” means a pro forma American Land Title Association (ALTA) 2006 Owner’s Policy of Title Insurance, committing to insure the Real Property Interests in the amount of the fair market value of the Project or other amount specified by Buyer and issued by the Title Company, subject only to the Permitted Liens and otherwise in form and substance satisfactory to Buyer and providing for full extended coverage over all general title exceptions contained in such policy and the following special endorsements: owner’s comprehensive, zoning, survey, access, contiguity, non-imputation, tax parcel, subdivision, deletion of mandatory

arbitration, location, environmental, utility facility, development of minerals, successor-in-interest and Sears endorsement and all applicable ALTA 36 Series energy project-specific endorsements and any other endorsements reasonably requested by Buyer and such additional affirmative coverage as Buyer may reasonably request, in each case, that is available in the State of New Mexico.

“Project” is defined in the recitals to this Agreement.

“Project Area” shall mean the area of land consisting of Real Property Interests within the Project Boundary as set forth in the map delivered by Seller to Buyer pursuant to and in accordance with Section 6.6(a)(xx).

“Project Boundary” shall mean the land boundary identified on Schedule 6.6(a)(iii), as such map may be updated from time to time in accordance with this Agreement.

“Project Leases” means all Leases of real property within the Project Area, including but not limited to (a) wind leases or easements executed in favor of the Company or Seller for purposes of creating a leasehold and/or easement interest in such real property; (b) easements for collection cable, crane path and access road routes executed in favor of the Company or Seller; and (c) electrical transmission line easement or access easement or right-of-way in favor of the Company or Seller.

“Project Area Trigger Event” means that Buyer has concluded, acting reasonably and in good faith, that (and notified Seller in writing that) the Project Area delivered pursuant to Section 6.6(a)(xx) has resulted in, or will result in: (i) an increase by more than thirteen percent (13%) of the length of Buyer’s collection system for the Project as measured in lineal feet, (ii) an increase by more than fifteen percent (15%) of the length of Buyer’s roads for the Project as measured in lineal feet, (iii) a reduction of more than three-quarters percent (0.75%) of the Project’s net capacity factor, or (iv) an increase by more than two and one-half percent (2.5%) of the levelized cost of energy in respect of the Project; provided that no Project Area Trigger Event shall exist pursuant to clause (i), (ii) or (iii) above so long as, based on the net impact of all changes, the levelized cost of energy in respect of the Project does not increase; and provided further that Seller may in good faith dispute the existence of any Project Area Trigger Event.

“Protected Species” means all species and their associated habitat protected by the Endangered Species Act, 16 U.S.C. § 1531 et seq., the Migratory Bird Treaty Act 16 U.S.C § 703 et seq., the Bald and Golden Eagle Protection Act 16 U.S.C § 668 et seq., and applicable state and local counterparts, and their implementing regulations and guidance documents.

“PUCT” means the Public Utility Commission of Texas or any successor agency thereto.

“PUHCA” means the Public Utility Holding Company Act of 2005, as amended.

“Purchase Price” is defined in Section 2.2(a)(i).

“Purchased Assets” is defined in Section 4.5(d).

“Purchased Contracts” is defined in Section 4.13(a).

“Real Property Interests” means the real property interests created under the Land Contracts and, if applicable, the Real Property Purchase Options.

“Real Property Purchase Options” is defined in Section 6.5.

“Reduced Nameplate Capacity” is defined in Section 2.2(a)(ii).

“Release” means any release, spill, emission, leaking, pumping, injection, deposit, pouring, emptying, leaching, dumping, disposal or discharge of any Hazardous Materials into the environment or workplace, and otherwise as defined in any Environmental Law.

“Reports” means the reports and studies identified on Schedule 4.5(d).

“Representatives” means, as to any Person, its officers, directors, partners, members, and employees, counsel, accountants, financial advisors and consultants.

“Required Consents” is defined in Section 2.6(b)(ix).

“Schedules” means the disclosure schedules to this Agreement delivered pursuant to Section 6.14.

“Seller” is defined in the introduction to this Agreement.

“Seller Group” is defined in Section 7.3.

“Shared Contracts” is defined in Section 4.13(g).

“Shares” means 100% of the Equity Interests in the Company.

“Site” means the site on which the Sagamore Wind Project will be constructed in Roosevelt County, New Mexico with (subject to Xcel’s exercise of the Option) at least the Expected Nameplate Capacity, which Site, as of the Closing Date, consists of the Real Property Interests.

“Site Permit” means approval of the Project site location by the NMPRC pursuant to NMSA 1978, S. 62-9-3.

“SPP” means the Southwest Power Pool, Inc., or its successors.

“State Regulatory Approval” means the following approvals, if requested by Buyer pursuant to this Agreement, from the following Governmental Authorities on the same terms and conditions requested by Buyer (including in each case subject to any supplement or other modifications to any such request as contemplated by Section 6.9(b)) and any additional or modified terms and conditions reasonably satisfactory to Buyer: (i) the written approval of the NMPRC and the PUCT for Buyer, or Affiliate of Buyer, to acquire (e.g., purchase), own, construct, operate, and maintain the Project, and, in the initial proceedings requesting those approvals, for ratemaking principles and treatment, to be applied in future ratemaking proceedings, to be established providing for the Buyer or its Affiliate to recover the full costs of the Project through Buyer’s base rates and/or rate riders, including (a) any costs associated with a return on any

potential deferred tax asset that is created through accelerated depreciation and/or production tax credits and (b) any costs for the period between the date the Project begins commercial operation and the date that these costs of the Project are included in Buyer's base rates and/or rate riders; and (ii) in the initial proceedings requesting the approvals described in (i), the NMPRC and the PUCT to provide approval of any affiliated transaction approvals requested by Buyer that are directly related to the development, construction, operation, maintenance, or ownership of the Project.

“Straddle Period” means a taxable period beginning before and ending after the Closing Date.

“Subsequent Purchase Price” is defined in Section 2.2(a)(i).

“Subsequent Wind Farm” means any wind farm of which any wind turbine is located or proposed to be located within five (5) miles of any wind turbine included in, or proposed to be included in, the Project.

“Sufficient Lease Amendment” means, with respect to a Project Lease to which Exhibit C-1 is applicable, all of the amendments therein except the amendments in numbered paragraphs 3 and 11 therein are included in the executed Lease Amendment, and with respect to a Project Lease to which Exhibit C-2 is applicable, all of the amendments therein except the amendments in numbered paragraphs 3, 9, 11 and 12 therein are included in the executed Lease Amendment.

“Sufficient Project” means (x) a total of two hundred twenty four (224) 2.0-megawatt wind turbines with an aggregate nameplate capacity of not less than the Expected Nameplate Capacity in a reasonably contiguous manner or (y) if Buyer exercises the Option, a total of one hundred forty nine (149) 2.0-megawatt wind turbines with an aggregate nameplate capacity of not less than the Reduced Nameplate Capacity in a reasonably contiguous manner, a number of alternate sites equal to the sum of (x) 5 for each 200 megawatts plus (y) for any remainder of megawatts exceeding the nearest achieved multiple of 200 megawatts, the product of (a) 5 multiplied by (b) the quotient of such remainder divided by 200 (but such product shall always be rounded up to the next whole number) for wind turbines that are reasonably contiguous to such planned turbine sites, in each case, consistent with and in accordance with all Laws, the Site Permit and prudent wind industry practices, and the ability to locate each of the following on the Real Property Interests in no particular manner: substations, collection circuits, an operations and maintenance building, transmission lines (that can service the Project), and other windpower-related facilities, in each case, consistent with and in accordance with all Laws, the Site Permit and prudent wind industry practices; provided that, in any event, a Sufficient Project shall not exist if the Project Area delivered pursuant to Section 6.6(a)(xx) causes a Project Area Trigger Event.

“Survey” means a survey of the real property covered by the Land Contracts certified to Buyer and the Title Company, in form and substance reasonably acceptable to Buyer, sufficient for the Title Company to provide survey coverage in any title policy issued in accordance with the Proforma Title Policy, and in compliance with the “2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys” jointly established and adopted by the American Land Title Association and the National Society of Professional Surveyors effective February 23, 2016 showing and including optional items 3, 4, 6(b), 7(a), 7(c), 8, 11, 13, 14, 16, 17, 18 and 19 and

disclosing the location of all improvements, plottable easements, encroachments, roadways, utility lines, set back lines and other matters shown customarily on such windpark surveys, and showing access affirmatively to public streets and roads, and certified by a surveyor licensed in the State of New Mexico reasonably satisfactory to the Title Company and Buyer.

“Support Obligations” means, collectively, each guaranty, letter of credit, indemnity, performance or surety bond or similar credit support arrangement issued by or for the account of Seller or any of its respective Affiliates, solely in relation to the Project.

“Tax” or **“Taxes”** means any federal, state, local or foreign income, gross receipts, ad valorem, sales and use, employment, social security, disability, occupation, property, severance, value added, transfer, capital stock, excise, withholding, premium, occupation or other taxes, levies or other like assessments, customs, duties, imposts, charges surcharges or fees imposed by or on behalf of any Governmental Authority, including any interest, penalty thereon or addition thereto.

“Tax Authority” means, with respect to any Tax, the governmental entity or political subdivision thereof that imposes such Tax, and the agency (if any) charged with the collection of such Tax for such entity or subdivision.

“Tax Law Change” means:

(a) a bill has been passed by either house of Congress and, in either case, is reasonably likely to be enacted into law (taking into account for this purpose any direct, written opposition issued, published, announced or otherwise publicly disseminated by the other house of Congress or the Executive Branch);

(b) a bill has been reported by the House Ways and Means Committee or Senate Finance Committee and, in either case, is reasonably likely to be enacted into law (taking into account for this purpose any direct, written opposition issued, published, announced or otherwise publicly disseminated by the other house of Congress or the Executive Branch);

(c) any change in or amendment to the Code or other federal income tax law;

(d) the issuance of proposed, temporary, or final Treasury Regulations;

(e) any change in the interpretation of the Code or Treasury Regulations by a controlling decision of the United States Tax Court, United States District Court, United States Court of Appeals or United States Supreme Court; or

(f) any binding guidance, notice, announcement or regulation issued by the Treasury, IRS or any other Governmental Authority that applies to taxpayers generally;

in the case of each of clause (a) through (f) after the date hereof that (x) directly affects the availability or projected amount of, or valuation by Buyer as of the date hereof of, production tax credits or other tax benefits or credits, and (y) Buyer has determined, in its good faith judgment after consultation with tax counsel, will have a material adverse effect on the Project, the Company or Buyer’s base case economic expectations in respect of the Project or the Company, or the levelized cost of energy in respect of the Project.

“**Tax Representations**” means the representations and warranties contained in Section 4.11 (Taxes).

“**Tax Return**” means any report, form, claim for refund, return, statement or other information (including any amendments) required to be supplied to any Tax Authority with respect to Taxes, including information returns, any amendments thereof or schedule or attachment thereto

“**Third Party Claim**” is defined in Section 7.5(a).

“**Threshold**” is defined in Section 7.4(c).

“**Title Commitment**” means an American Land Title Association (ALTA) 2006 Commitment for Title Insurance to be prepared by the Title Company for each parcel of real property covered by the Land Contracts and, if applicable, the Real Property Purchase Options, showing all Liens disclosed in the official records of Roosevelt County, New Mexico and that sets out the real estate legal description and the record title holder and also describes all mortgages, judgments, tax liens and other liens, Taxes, estates, life estates and other reservations by will or conveyance, all Liens of record as disclosed in the official records of Roosevelt County, New Mexico (including easements and government regulations), and other proceedings affecting title (together with a legible copy of all such underlying documents, including all maps and plats).

“**Title Company**” means Chicago Title Insurance Company or such other title company as agreed to by the Parties.

“**Transfer Taxes**” means all transfer, sales, use, goods and services, value added, documentary, stamp duty, gross receipts, excise, transfer and conveyance Taxes and other similar Taxes, duties, fees or charges.

“**Treasury Regulations**” means the regulations promulgated under the Code, by the Treasury, as such regulations may be amended from time to time. All references herein to specific sections of the regulations shall be deemed also to refer to any corresponding provisions of succeeding regulations, and any reference to temporary regulations shall be deemed also to refer to any corresponding provisions of final regulations.

“**Update**” is defined in Section 6.14.

“**Wind Data**” means any and all wind speed data and other relevant wind characteristics data included, or included by reference, on Schedule 4.21 of this Agreement, or in the possession or control of Seller or any of its Affiliates in respect to the Project, along with all supporting documentation.

Section 1.2 Rules of Construction.

(a) All article, section, subsection, schedule and exhibit references used in this Agreement are to articles, sections, subsections, schedules and exhibits to this Agreement unless otherwise specified. The exhibits and schedules attached to this Agreement constitute a part of this Agreement and are incorporated in this Agreement for all purposes.

(b) If a term is defined as one part of speech (such as a noun), it will have a corresponding meaning when used as another part of speech (such as a verb). Unless the context of this Agreement clearly requires otherwise, words importing the masculine gender will include the feminine and neutral genders and vice versa. The words “includes” or “including” will mean “including without limitation,” the words “hereof,” “hereby,” “herein,” “hereunder” and similar terms in this Agreement will refer to this Agreement as a whole and not any particular Section or article in which such words appear. The terms “will” and “shall” have the same meaning. Any reference to a Law includes any amendment thereof or any successor thereto and any rules and regulations promulgated thereunder. Any reference to a Contract will be to that Contract as it may have been amended, modified, supplemented or restated prior to the date hereof. Currency amounts referenced in this Agreement are in U.S. Dollars.

(c) Whenever this Agreement refers to a number of days, such number will refer to calendar days unless Business Days are specified. Whenever any action must be taken hereunder on or by a day that is not a Business Day, then such action may be validly taken on or by the next day that is a Business Day. For determining any period of time, “from” means “including and after,” “to” means “to but excluding” and “through” means “through and including.”

(d) Each Party acknowledges that it and its attorneys have been given an equal opportunity to negotiate the terms and conditions of this Agreement and that any rule of construction to the effect that ambiguities are to be resolved against the drafting Party or any similar rule operating against the drafter of an agreement will not be applicable to the construction or interpretation of this Agreement.

(e) All accounting terms used herein and not expressly defined herein will have the respective meanings given such terms under GAAP.

(f) Whenever this Agreement states that any document has been “made available,” unless otherwise expressly provided herein, that means the document was available in the Data Site prior to the date such statement is effective (or otherwise delivered to Buyer or any of its Affiliates prior to the date such statement is effective).

ARTICLE 2

PURCHASE AND SALE AND CLOSING

Section 2.1 Purchase and Sale. On the terms and subject to the conditions set forth in this Agreement, on the Closing Date, Buyer shall purchase from Seller, and Seller shall sell to Buyer, all of the Shares held by Seller free and clear of all Liens (other than those restrictions on transfer arising under securities laws generally).

Section 2.2 Purchase Price; Closing Payment; Assumption of Liabilities.

(a) The purchase price for the purchase and sale described in Section 2.1 shall be an amount equal to sixty-five thousand dollars (\$65,000) per megawatt of nameplate capacity of the Project (*e.g.*, \$29,120,000 if the aggregate nameplate capacity is equal to

the Expected Nameplate Capacity or \$19,370,000 if the aggregate nameplate capacity is equal to the Reduced Nameplate Capacity) (the “**Closing Purchase Price**”).

(i) Unless Buyer has previously exercised the Option, at any time prior to May 1, 2017, Seller may provide written notice (together, if necessary, with an updated Project Boundary map) to Buyer that the expected nameplate capacity of the Project exceeds the Expected Nameplate Capacity (but in no case in an amount to exceed 522 megawatts in the aggregate) pursuant to a determination mutually agreed by Seller and Buyer of such expected nameplate capacity, which in any case shall be consistent with the definition of Sufficient Project (the “**Expansion**”). Subject to Buyer’s agreement with and, if applicable, the Parties’ finalization of the new Project Boundary map submitted by Seller pursuant to the preceding sentence, Buyer may accept or reject in writing the Expansion in its reasonable discretion and, if it accepts the Expansion, shall, subject to Section 2.2(a)(ii), pay to Seller, in addition to the Closing Purchase Price, an amount equal to sixty-five thousand dollars (\$65,000) per megawatt of nameplate capacity for each megawatt above the Expected Nameplate Capacity, up to a maximum of 74 megawatts. Buyer shall pay sixty-five thousand dollars (\$65,000) per megawatt of nameplate capacity for any megawatt (x) above the number of megawatts ultimately used as the basis for determining the Closing Purchase Price plus the Expansion purchase price and (y) that is constructed on the Real Property Interests as long as the commercial operation date of such additional megawatt occurs prior to the earlier of (A) the date that is three (3) years following the commercial operation date of the Project and (B) the date that either Buyer or any of its Affiliates ceases to own the Purchased Assets (the “**Subsequent Purchase Price**” and together with the Closing Purchase Price and the Expansion purchase price, the “**Purchase Price**”). Notwithstanding anything to the contrary contained herein, the Purchase Price shall not include any reimbursement from Buyer to Seller of any Interconnection Costs or unused study costs pursuant to Section 6.6(a)(i). In the event Buyer accepts the Expansion, the new map of the Project Boundary agreed to by the Parties in accordance with the foregoing (if applicable) shall be attached hereto as, and replace the then existing, Schedule 6.6(a)(iii) and shall be the Project Boundary hereunder.

(ii) Notwithstanding anything herein to the contrary, if Buyer has the right to terminate this Agreement pursuant to Section 2.7(a)(x), Buyer may, in lieu of such termination and in Buyer’s sole discretion (the “**Option**”), reduce the nameplate capacity (including after an Expansion has been accepted by Buyer) of the Project to 298 megawatts (the “**Reduced Nameplate Capacity**”) by providing to Seller written notice of its exercise of such Option. If Buyer exercises the Option, Seller shall demonstrate to Buyer’s reasonable satisfaction that the net capacity factor of the Project with the Reduced Nameplate Capacity is at least as high as the net capacity factor of the Project would have been with the Expected Nameplate Capacity, and such demonstration shall be deemed to be a condition to the satisfaction of Section 2.6(b)(xiii). If Buyer does not exercise the Option within ten (10) Business Days after Buyer’s right to terminate this Agreement pursuant to Section 2.7(a)(x), Buyer shall be deemed to have irrevocably waived its right to exercise the Option in respect of such termination event (but without prejudice to its right to exercise the Option in respect of a subsequent termination event under Section 2.7(a)(x)). In the event Buyer elects the Option, the Option Boundary shall be attached

hereto as, and replace the then existing, Schedule 6.6(a)(iii) and shall be the Project Boundary hereunder.

(b) Buyer shall pay to Seller by wire transfer of immediately available funds (to such account or accounts as Seller will have notified Buyer of no later than two (2) Business Days prior to the date of such payment) an amount equal to three million dollars (\$3,000,000) (the “**Initial Payment**”) payable as follows (i) one million five hundred thousand dollars (\$1,500,000) on the date that is five (5) Business Days after the date hereof, and (ii) unless this Agreement has been terminated, one million five hundred thousand dollars (\$1,500,000) on September 30, 2017. If this Agreement is terminated prior to the Closing Date pursuant to:

(A) Section 2.7(a)(ii)(A) or Section 2.7(a)(xii), then Seller shall, within five (5) Business Days of such termination, pay to Buyer by wire transfer of immediately available funds an amount equal to the Initial Payment paid to Seller; or

(B) Section 2.7(a)(iv), Section 2.7(a)(v), Section 2.7(a)(vi), Section 2.7(a)(vii), Section 2.7(a)(viii), Section 2.7(a)(ix) or Section 2.7(a)(x), then Seller shall, within five (5) Business Days of such termination, pay to Buyer by wire transfer of immediately available funds an amount equal to the Initial Payment paid to Seller less the sum of (x) \$750,000 and (y) any Development Costs actually incurred by Seller following the date hereof (in no case shall such sum be less than \$0.00).

Concurrent with the signing of this Agreement, Invenergy Wind Global LLC (“**Seller Guarantor**”) has provided a guaranty to Buyer in the form attached as Exhibit E hereto guaranteeing Seller’s repayment of the Initial Payment to Buyer if required pursuant to this Section 2.2(b).

(c) At the Closing, Buyer shall pay to Seller by wire transfer of immediately available funds (to such account or accounts as Seller will have notified Buyer of no later than two (2) Business Days prior to the Closing Date) an amount equal to the Closing Purchase Price, less the Initial Payment. Buyer shall pay to Seller any Subsequent Purchase Price within five (5) Business Days of the commercial operation date of the megawatt(s) of nameplate capacity giving rise to such Subsequent Purchase Price.

(d) Except for Assumed Liabilities and other Taxes that are not yet due and payable (without limiting Seller’s indemnification obligations pursuant to Section 7.2(e)) as of the Closing Date, the Company shall not be obligated to pay, perform or otherwise discharge or be responsible or liable with respect to, (a) any Liabilities relating to the Project or any present or former developer, owner or operator of the Project incurred prior to the Closing Date (including any Liability with respect to the Prior Acquisition Agreement), whether or not associated with, or arising from, any of the Purchased Assets, and whether fixed, contingent or otherwise, known or unknown, or (b) any other Liabilities whenever incurred described in clauses (i) – (iii) of the definition of Assumed Liabilities (collectively, the “**Excluded Liabilities**”).

Section 2.3 Closing. The Closing will take place at the offices of Orrick, Herrington & Sutcliffe LLP, 1301 McKinney Street, Suite 4100, Houston, Texas, or by remote electronic exchange of documents (by facsimile, .pdf, e-mail, or other form of electronic communication) on the later to occur of (a) three (3) Business Days after the date that all of the conditions to the Closing set forth in Section 2.6 (other than those conditions which, by their terms, are to be satisfied or waived at the Closing, but subject to the satisfaction or waiver of such conditions) shall have been satisfied or waived by the Party entitled to waive the same, and shall be effective at the actual time of Closing, or (b) at such other time, place and date as the Parties may agree in writing. All actions listed in Section 2.4 or 2.5 that occur on the Closing Date will be deemed to occur simultaneously at the Closing. The Closing will be deemed to be effective as of 11:59:59 p.m. Central Time on the Closing Date.

Section 2.4 Closing Deliveries by Seller to Buyer. At the Closing, Seller shall deliver to Buyer:

- (a) an executed counterpart by Seller of the Company Assignment Agreement;
- (b) a certification of non-foreign status in the form prescribed by Treasury Regulation Section 1.1445-2(b) with respect to Seller;
- (c) written resignations of all officers and members of the board of managers of the Company;
- (d) an executed counterpart by Seller of each other Ancillary Agreement to be executed and delivered at the Closing to which Seller is a party;
- (e) a copy or copies of all agreements or other documents duly executed by Seller or any of its Affiliates and the Company necessary to effect the assignment to and assumption by the Company of the Purchased Assets;
- (f) the Closing deliverables described in Section 2.6(b) below; and
- (g) copies of the Required Consents.

Section 2.5 Closing Deliveries by Buyer to Seller. At the Closing, Buyer shall deliver to Seller the following:

- (a) an executed counterpart by Buyer of the Company Assignment Agreement;
- (b) the Closing deliverables described in Section 2.6(c) below; and
- (c) an executed counterpart by Buyer of each other Ancillary Agreement to be executed and delivered at the Closing to which Buyer is a party.

Section 2.6 Conditions to Closing.

(a) The obligations of the Parties to effect the Closing are subject to the satisfaction prior to the Closing of the following conditions:

(i) No Governmental Authority shall have instituted any Actions to restrain, prohibit or otherwise challenge the legality or validity of the transactions contemplated herein that has not been dismissed or otherwise resolved in a manner that does not materially adversely affect such transactions, and no Final Order shall be in effect that restrains or prohibits the consummation of such transactions.

(ii) The State Regulatory Approval and the Closing Permits (including the Site Permit) shall have been obtained and are in full force and effect and not subject to appeal.

(b) The obligation of Buyer to effect the Closing is subject to the satisfaction at or before Closing of all of the following conditions, any one or more of which may be waived by Buyer in writing, in Buyer's sole discretion:

(i) each of the Designated Representations and the Tax Representations will be true and correct in all respects, and each of the other representations and warranties of Seller contained in this Agreement shall be true and correct in all material respects (other than such representations and warranties qualified by materiality or Material Adverse Effect, which shall be true and correct in all respects), in each case on and as of the Closing Date as though made on and as of the Closing Date;

(ii) Seller shall have performed, and complied with, in all material respects all covenants and agreements required by this Agreement to be performed, and complied with, by Seller on or before the Closing Date;

(iii) Seller shall have delivered to Buyer a certificate from a duly authorized officer of Seller, dated the Closing Date and executed by such officer, in a form reasonably acceptable to Buyer, certifying the items in Section 2.6(b)(i) and Section 2.6(b)(ii);

(iv) Seller shall have delivered (or caused to be delivered) to Buyer, the Closing deliverables described in Section 2.4 above;

(v) Seller shall have delivered to Buyer a current Certificate of Good Standing as to the Company;

(vi) Seller shall have delivered to Buyer copies acceptable to Buyer of documentation releasing all Liens set forth on Schedule 2.6(b)(vi) from the Company and/or Project Assets other than Permitted Liens;

(vii) Seller shall have delivered a copy, certified by the Secretary of Seller and the Company, of resolutions of Seller and the Company authorizing and approving the transactions contemplated hereby;

(viii) no Material Adverse Effect shall have occurred since the date of this Agreement;

(ix) Seller shall have obtained all Consents required in connection with the transactions contemplated by this Agreement that are listed on Schedule 2.6(b)(ix) (the “**Required Consents**”);

(x) Seller shall have decommissioned and removed all meteorological towers from the Site, in compliance in all material respects with all applicable Contracts (including Land Contracts), applicable Laws, the Site Permit and prudent wind industry practices;

(xi) (a) the Pre-Closing Asset Transfer, if any, shall have been completed by Seller pursuant to Section 6.7, including obtaining all consents required to consummate the Pre-Closing Asset Transfer, (b) the Company shall not have sold, transferred or otherwise disposed of any Purchased Assets, except as otherwise permitted by this Agreement, and (c) the Purchased Assets shall not be subject to any Liens other than Permitted Liens;

(xii) Seller shall have complied with the obligations set forth in Section 2.6(d) in all respects;

(xiii) the Project shall be Construction Ready;

(xiv) Seller shall have delivered to Buyer a fully executed estoppel and release agreement from Highway Wind, LLC in a form reasonably acceptable to Buyer and pursuant to which the counterparty(ies) thereto (i) certify that all amounts payable to such counterparty under the Prior Acquisition Agreement have been paid in full, (ii) certify that the Company is not in breach or default of the Prior Acquisition Agreement, (iii) make representations and warranties that are standard for a document of this type, and (iv) irrevocably and unconditionally release and forever discharge Buyer, the Company and all of Buyer’s Related Parties from any and liabilities, obligations, causes of action, costs and expenses arising under any theory of contract, tort, breach of duty, strict liability, contribution, unjust enrichment, or any other theory of liability of any jurisdiction, whether known or Unknown Claims (as such concept is contemplated in Section 6.15(c)) and of any nature whatsoever (including negligence or gross negligence but excluding Fraud), and regardless of when the same arose or arises under or in respect of the Prior Acquisition Agreement, the Company or the Project; and

(xv) Seller shall have delivered to Buyer a fully executed Sufficient Lease Amendment from each Person that is party to any Project Lease for which the matters included in the forms of the amendments attached hereto as Exhibit C-1 or C-2, as applicable, apply; provided, that notwithstanding the foregoing, no Lease Amendment shall be required under this Agreement for any of the Project Leases listed on Part 1 of Schedule 2.6(b)(xv) or executed Project Leases in the form of Exhibit B; except that that Seller agrees to use commercially reasonable efforts to attempt to obtain and deliver to Buyer a Lease Amendment (a) in the forms of the amendments attached hereto as Exhibit

C-1 or C-2, as applicable, containing all of the amendments included therein; and (b) in the form of the amendment attached hereto as Exhibit C-3 for the Project Leases listed on Part 1 of Schedule 2.6(b)(xv) if any of such Project Leases listed on Part 1 of Schedule 2.6(b)(xv) require a curative amendment as described in Section 2.6(d) of this Agreement.

(c) The obligation of Seller to effect the Closing is subject to the satisfaction at or before Closing of all of the following conditions, any one or more of which may be waived by Seller in writing, in Seller's sole discretion:

(i) each of the representations and warranties of Buyer contained in this Agreement shall be true and correct in all material respects (other than such representations and warranties qualified by materiality, which shall be true and correct in all respects), in each case on and as of the Closing Date as though made on and as of the Closing Date;

(ii) Buyer shall have performed, and complied with, in all material respects all covenants and agreements required by this Agreement to be performed, and complied with, by Buyer on or before the Closing Date;

(iii) Buyer shall have delivered to Seller a certificate from a duly authorized officer of Buyer, dated the Closing Date and executed by such officer, in a form reasonably acceptable to Seller, certifying the items in Section 2.6(c)(i) and Section 2.6(c)(ii);

(iv) Buyer shall have delivered (or caused to be delivered) to Seller, the Closing deliverables described in Section 2.5 above; and

(v) Buyer shall have paid the Closing Purchase Price (less the Initial Payment) in full to Seller.

(d) Title Commitment; Survey; Title Policy.

(i) As soon as reasonably possible after the date hereof, Seller shall deliver, or cause to be delivered, to Buyer the Title Commitment and the Survey. The Title Commitment and Survey shall be prepared and revised from time to time in accordance with the procedures and requirements set forth on Schedule 2.6(d)(i). Seller and Buyer agree to use good faith efforts to endeavor to deliver, review, respond and take actions with respect to obtaining a final Title Commitment and Survey consistent with their respective responsibilities as set forth on the timeline and procedures set forth on Schedule 2.6(d)(i); provided, however, that failure of Seller or Buyer to perform any responsibility set forth on Schedule 2.6(d)(i) by the date provided thereon shall not result in a default by either Party under this Agreement. Upon Seller's receipt of a reasonably complete and comprehensive Title Commitment and Survey covering the Real Property Interests, Seller shall use commercially reasonable efforts to deliver to Buyer within sixty (60) days thereafter a schedule of Seller's proposed curative actions to the state of title reflected by the Title Commitment and Survey as determined by Seller would be required in accordance with prudent wind industry practices for a Construction Ready Site. Buyer shall use commercially reasonable efforts to raise matters to which Buyer objects within sixty (60) days after the date on which Seller has delivered its proposed curative actions.

(ii) Seller shall use commercially reasonable efforts to cause completion of all proposed curative actions on Seller's schedule delivered to Buyer pursuant to Section 2.6(d)(i) above and the cure of Buyer's objections in a manner acceptable to Buyer on or before the Closing. Buyer shall have the right to raise any objection with respect to any new matters not previously reflected or referenced on or reasonably ascertainable from the Title Commitment or Survey, or other revisions thereto, including cure of objections, upon Buyer receiving each revised Title Commitment and/or revised Survey from time to time provided by Seller.

(iii) On or before the Closing, the Title Commitment and the Survey shall be reasonably satisfactory to Buyer in form and substance, including, without limitation, addressing matters required to comply with Section 2.6(d)(iv) below. For the avoidance of doubt, any matter reflected or referenced on the Title Commitment (including any exception documents) or the Survey not constituting a Permitted Lien under clauses (a), (b), (c), (d), (e), (g), and (h) of the definition of Permitted Lien and objected to by Buyer shall be an item that is not reasonably satisfactory to Buyer and Seller shall cause the cure of the same in a manner reasonably acceptable to Buyer on or before the Closing Date, and any matter reflected or referenced on the Title Commitment (including any exception documents) or the Survey constituting a Permitted Lien under clauses (a), (b), (c), (d), (e), (g), and (h) of the definition of Permitted Lien shall be an item that is reasonably satisfactory to Buyer and Seller shall not be required to cause the cure of the same.

(iv) At Closing, Seller shall cause the Title Company to deliver the Proforma Title Policy, and deliver to the Title Company such items as are reasonably necessary for the delivery an American Land Title Association (ALTA) 2006 Owner's Policy of Title Insurance in the form of the Proforma Title Policy, including, without limitation, affidavits necessary for the Title Company to delete any standard exceptions (including, without limitation, the so-called "gap" exception), but not including any premiums with respect to such American Land Title Association (ALTA) 2006 Owner's Policy of Title Insurance, which shall be Buyer's obligation hereunder. Seller shall pay for the Survey and the Title Commitment (and any amendments, updates and supplements thereto) and all recording charges and expenses incurred in connection with recording any Land Contract (or amendments or memoranda thereof) and any curative documents necessary to satisfy the requirements of this Section 2.6(d).

Section 2.7 Termination of Agreement.

- (a) This Agreement may be terminated before Closing as follows:
- (i) by mutual written consent of the Parties;
 - (ii) (A) by Buyer if Seller or Seller Guarantor suffers a Bankruptcy Event, and (B) by Seller if Buyer suffers a Bankruptcy Event;
 - (iii) by either Seller or Buyer if the Closing shall not have occurred on or prior to June 30, 2018 for any reason whatsoever except to the extent the Closing shall

have been delayed by a material breach of this Agreement by the Party seeking to terminate the Agreement;

(iv) by Buyer if the State Regulatory Approval has not been obtained on or prior to March 31, 2018 provided that Buyer shall not have any right to terminate this Agreement pursuant to this clause (iv) after such date;

(v) by Buyer if the Site Permit does not contain terms and conditions reasonably satisfactory to Buyer, which termination right must be exercised by Buyer on or prior to the date that is 5 Business Days following receipt of the final Site Permit and Buyer shall not have any right to terminate this Agreement pursuant to this clause (vi) after such date;

(vi) by Buyer, if any condition in Section 2.6(a) or Section 2.6(b) becomes incapable of fulfillment at the Closing;

(vii) by Buyer, if a fact, matter, condition, event or circumstance first disclosed in an Update from Seller has had or could reasonably be expected to have a Material Adverse Effect; provided, that (i) Buyer has given Seller at least sixty (60) days' prior notice of the intent to terminate and Seller has not cured such Material Adverse Effect during such sixty (60) day period, and (ii) such event or occurrence was not caused by Buyer;

(viii) by Seller, if any condition in Section 2.6(a) or Section 2.6(c) becomes incapable of fulfillment at the Closing;

(ix) by Seller, if a fact, matter, condition, event or circumstance first disclosed in an Update from Buyer has had or could reasonably be expected to have a Material Adverse Effect; provided, that (i) Seller has given Buyer at least sixty (60) days' prior notice of the intent to terminate and Buyer has not cured such Material Adverse Effect during such sixty (60) day period, and (ii) such event or occurrence was not caused by Seller;

(x) by Buyer, upon written notice to Seller of such termination and the lapse of the period for Seller to give a notice under clause (y) of the proviso below, if the Interconnection Costs as reflected in the aggregate in the:

(A) last final DISISs pertaining to the Project exceed an aggregate amount equal to a rate of eighty-five dollars (\$85) per kilowatt multiplied by the expected capacity for the Project as contemplated in the final DISISs or final form Generation Interconnection Agreement, as applicable; or

(B) the final forms of the Generator Interconnection Agreement exceed (A) an aggregate amount equal to a rate of eighty-five dollars (\$85) per kilowatt multiplied by the expected capacity for the Project as contemplated in the final forms of Generation Interconnection Agreement or (B) the cost thereof as estimated in

the last final DISISs but only to the extent the per kilowatt rate in the last final DISISs exceeds eighty-five dollars (\$85) per kilowatt, whichever is the greater amount;

provided, that:

(x) any notice of termination by Buyer under this Section 2.7(a)(x) shall be given, if at all, on or before ten (10) Business Days after Buyer's receipt of the last final DISISs (for a termination under clause (A) above), or on or before ten (10) Business Days after Buyer's receipt of the final forms of the Generator Interconnection Agreement (for a termination under clause (B) above), and if the termination notice is not given by the applicable date Buyer shall be deemed to have irrevocably waived its right to terminate this Agreement under clause (A) or (B) above, as applicable; and

(y) if Buyer gives a termination notice under clause (A) or (B) above, Seller shall have the right, but not the obligation, to notify Buyer, within ten (10) Business Days after receipt of Buyer's termination notice, that Seller agrees to bear 100% of that portion of the Interconnection Costs that are in excess of (1) an aggregate amount equal to a rate of eighty-five dollars (\$85) per kilowatt multiplied by the expected capacity for the Project as contemplated in the final DSISs or final form Generation Interconnection Agreement, as applicable, in the case of a termination under clause (A) above or (2) the amount described in clause (B) above, in the case of a termination under clause (B) above, and if Seller gives such notice Buyer's termination notice shall be deemed withdrawn, Buyer's right to terminate this Agreement under clause (A) or (B), as applicable, shall be deemed irrevocably waived and this Agreement shall not terminate;

(xi) [reserved];

(xii) by Buyer if Seller is in material breach or violation of any provision of this Agreement; provided, that Buyer (i) has given Seller at least sixty (60) days' prior notice of the violation or breach and Seller has not cured such violation or breach in all material respects during such sixty (60) day period, and (ii) has not waived such condition in writing; or

(xiii) by Seller if Buyer is in material breach or violation of any provision of this Agreement; provided, that Seller (i) has given Buyer at least sixty (60) days' prior notice of the violation or breach and Buyer has not cured such violation or breach in all material respects during such sixty (60) day period, and (ii) has not waived such condition in writing.

(b) Notwithstanding any term in this Section 2.7, a Party will not have the right to terminate this Agreement if the failure to satisfy any condition to the Closing or consummate the transactions contemplated in this Agreement resulted from the material breach by such Party of any of its representations, warranties, covenants or agreements herein, or if such Party is otherwise in material breach of this Agreement.

(c) In the event of the termination of this Agreement as provided in this Section 2.7, this Agreement shall be of no further force or effect and there shall be no Liability to any Party hereunder in connection with this Agreement or the transactions contemplated by this Agreement; provided, however that nothing herein, including Section 2.2(b), shall relieve any Party from liability or damages resulting from any breach of this Agreement prior to the effective date of termination; provided, further that the obligations of the parties set forth in this Section 2.7(c), Article 8 (including, in each case, the definitions of the terms set forth in Section 1.1) and the Confidentiality Agreement shall survive any such termination and shall be enforceable hereunder.

Section 2.8 Exclusivity. From and after the date of execution and until Closing or this Agreement is otherwise terminated in accordance with its terms (“**Exclusivity Period**”), Seller and Buyer shall work exclusively with each other in good faith to consummate the transactions contemplated by this Agreement. During the Exclusivity Period, Seller shall not, and will cause its Representatives and Affiliates not to, directly or indirectly, initiate, solicit or respond to the submission of, or enter into any negotiations in respect of, any indication of interest, proposal or offer from any Person relating to any (a) merger or consolidation with or into, (b) except as otherwise expressly permitted by this Agreement, acquisition or purchase of any material Asset of, or any equity or debt interest in, (c) except as otherwise expressly permitted by this Agreement, lease or disposition of any material Asset of or relating to, or (d) similar transaction, business combination or investment involving any portion of, the Company, the Business, the Project or the Shares (any of the transactions described in clauses (a) through (d), a “**Third Party Acquisition**”). For the avoidance of doubt, a Third Party Acquisition shall include any response to a request for proposal, bid or similar request from any Person (including Buyer and its Affiliates) involving any aspect of the Business, the Project or the Shares. Immediately upon execution of this Agreement, Seller shall, and shall cause its Representatives and Affiliates to, discontinue any and all existing discussions or negotiations with any Person other than Buyer and its Affiliates and Representatives regarding a Third Party Acquisition.

ARTICLE 3

REPRESENTATIONS AND WARRANTIES OF SELLER

Seller hereby represents and warrants to Buyer that each and all of the following representations and warranties set forth in this Article 3 (as modified by the applicable section of the Schedules, subject to Section 6.14) are true and correct as of the date of this Agreement and as of the Closing Date (except for such representations and warranties that speak as of a specific date, in which case such representations and warranties are true and correct as of such date):

Section 3.1 Organization. Seller is a limited liability company validly existing and in good standing under the Laws of the State of Delaware. Seller is duly qualified or licensed to do business in each other jurisdiction where the actions to be performed by it under this Agreement make such qualification or licensing necessary, except in those jurisdictions where the failure to be so qualified or licensed would not have a material adverse effect on Seller’s ability to perform its obligations under this Agreement.

Section 3.2 Authority; Enforceability. Seller has all requisite limited liability company power and authority to execute and deliver this Agreement and the Ancillary Agreements to which Seller is a party, to perform its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Seller of this Agreement and the Ancillary Agreements to which Seller is a party, and the performance by Seller of its obligations hereunder and thereunder, have been duly and validly authorized by all necessary limited liability company action. This Agreement has been, and each Ancillary Agreement to which Seller is a party has been, duly and validly executed and delivered by Seller and constitutes the legal, valid and binding obligation of Seller enforceable against Seller in accordance with its terms, except as the same may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, arrangement, moratorium or other similar Laws relating to or affecting the rights of creditors generally, or by general equitable principles.

Section 3.3 No Conflicts; Consents and Approvals. The execution and delivery by Seller of this Agreement and the Ancillary Agreements to which Seller is a party and the performance by Seller of its obligations under this Agreement and the Ancillary Agreements to which Seller is a party do not:

(a) result in a violation of or a breach of any of the terms, conditions or provisions of the Organizational Documents of Seller;

(b) result in a Default or require Consent (that is required as of any date this representation is made and has not been obtained or made as of such date) under any Contract to which Seller or the Company is a party or by which any Assets of Seller or the Company are bound;

(c) (i) result in a violation or breach of any term or provision of any Law, Permit or order applicable to Seller or the Company, (ii) require any Consent (that is required as of any date this representation is made and has not been obtained or made as of such date) of any Governmental Authority under any applicable Law, or (iii) result in the creation or imposition of any Lien on Seller or the Company or the Assets of any of the foregoing.

Section 3.4 Legal Proceedings. Seller has not been served with notice of any Claim, no Claim is pending and, to Seller's Knowledge, none is threatened in writing against Seller or the Company, which seeks a writ, judgment, order, injunction or decree restraining, enjoining or otherwise prohibiting or making illegal any of the transactions contemplated under this Agreement or any Ancillary Agreements to which Seller or the Company is a party.

Section 3.5 Compliance with Laws. Seller currently is in compliance in all material respects with all Laws and orders of all Governmental Authorities applicable to it or the Purchased Assets.

Section 3.6 Brokers. Seller does not have any liability or obligation to pay fees or commissions to any broker, finder or agent with respect to the transactions contemplated by this Agreement for which Buyer or the Company could become liable or obligated.

Section 3.7 Prior Acquisitions and Development Agreements.

(a) As of the Closing Date, there are no amounts due or that may become due and owing by Seller, Buyer, or the Company in connection with any prior development or acquisition agreement or related transaction with respect to the Company's development of the Project or acquisition of the Project or the Company or with respect to Seller's acquisition of the Project of the Company; and

(b) there are no build-out restrictions, restrictions on competition, change in control restrictions, direct or indirect equity ownership transfer restrictions, rights of first refusal, rights of first offer, or other similar rights that bind Seller in respect of the Company or the Project, the Company or any of the Company's current or future direct or indirect owners.

ARTICLE 4

REPRESENTATIONS AND WARRANTIES OF THE COMPANY AND SELLER

Seller and Company hereby, jointly and severally, represent and warrant to Buyer that each and all of the following representations and warranties set forth in this Article 4 (as modified by the applicable section of the Schedules, subject to Section 6.14) are true and correct as of the date of this Agreement and as of the Closing Date (except for such representations and warranties that speak as of a specific date, in which case such representations and warranties are true and correct as of such date):

Section 4.1 Organization. The Company is a limited liability company validly existing and in good standing under the Laws of the State of Delaware, and has all requisite limited liability company power and authority to conduct its business as it is now being conducted and to own, lease and operate its Assets. The Company is duly qualified or licensed to do business and is in good standing in each jurisdiction in which the ownership or operation of its Assets make such qualification or licensing necessary, except in those jurisdictions where the failure to be so duly qualified or licensed would not have a Material Adverse Effect. Seller has made available to Buyer all of the Organizational Documents of the Company as in effect on the date of this Agreement.

Section 4.2 Authority; Enforceability. The Company has all requisite limited liability company power and authority to execute and deliver this Agreement and the Ancillary Agreements to which the Company is a party, to perform its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by the Company of this Agreement and the Ancillary Agreements to which the Company is a party, and the performance by the Company of its obligations hereunder and thereunder, have been duly and validly authorized by all necessary limited liability company action. This Agreement has been, and each Ancillary Agreement to which the Company is a party has been, duly and validly executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except as the same may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance,

arrangement, moratorium or other similar Laws relating to or affecting the rights of creditors generally, or by general equitable principles.

Section 4.3 No Conflicts; Consents and Approvals. The execution and delivery by Seller or the Company of this Agreement and the Ancillary Agreements to which Seller or the Company is a party, the performance by Seller or the Company of its obligations hereunder and thereunder and the consummation of the transactions contemplated hereby and thereby and the taking of any action contemplated to be taken by Seller or Company hereunder or thereunder (including the Pre-Closing Asset Transfer) do not:

(a) result in a violation or breach of any of the terms, conditions or provisions of the Organizational Documents of the Company;

(b) (i) result in a violation or breach of any term or provision of any Law, Permit or order applicable to the Company or any of the Purchased Assets; (ii) require the Consent (that is required as of any date this representation is made and has not been obtained or made as of such date) of any Governmental Authority under any applicable Law; or (iii) cause a Default, or require the Consent (that is required as of any date this representation is made and has not been obtained or made as of such date) of any Person, under any Purchased Contract, Land Contract or Permit;

(c) result in the imposition or creation of any Lien other than Permitted Liens, on any Asset of the Company or the Business; or

(d) result in the imposition or creation of any Lien on the Equity Interests of the Company.

Section 4.4 Capitalization.

(a) Seller is the direct owner, holder of record, and beneficial owner of, and has good and marketable title to, the Shares free and clear of all Liens and restrictions on transfer other than those arising pursuant to or as described in this Agreement, the Organizational Documents of the Company, or applicable securities Laws.

(b) The Shares are duly authorized, validly issued, fully paid and non-assessable, were issued in compliance with all applicable Laws, and were not issued in violation of, and are not subject to, any preemptive rights or any other agreement, arrangement or commitment to which Seller or the Company is party.

(c) Except for the Shares, there are no outstanding Equity Securities of the Company. The Company has not granted to any Person any agreement or option, or any right or privilege capable of becoming an agreement or option, for the purchase, subscription, allotment or issue of any unissued interests, units or other securities (including convertible securities, warrants or convertible obligations of any nature) of the Company. None of the Equity Securities of the Company are subject to any voting trust, member or partnership agreement or voting agreement or other agreement, right, instrument or understanding with respect to any purchase, sale, issuance, transfer,

repurchase, redemption or voting of any Equity Securities of the Company, other than the Organizational Documents of the Company.

Section 4.5 Business; Assets

(a) The Business is the only business that has even been or is currently carried on by the Company.

(b) The Company has good, valid and marketable title to, or rights by Contract or other agreement to use, all of its Assets free and clear of all Liens (except for Permitted Liens).

(c) As of the Closing, the Company will own or have rights by Contract to use all Assets and Permits necessary to locate, interconnect, erect and construct, on the Site, a Sufficient Project (other than ministerial Permits that are not necessary prior to Closing), including the Project Leases and Land Contracts sufficient for ingress and egress to and from a public right of way to allow for such activities.

(d) As of the Closing, Seller or its Affiliates will have assigned, conveyed and transferred to the Company all of Seller's and such Affiliates' right, title and interest in and to all of the following Assets owned by Seller or its Affiliates or in which Seller or its Affiliate has any interest whatsoever free and clear of all Liens, other than Permitted Liens (collectively, the "**Purchased Assets**"), to the extent related to the Project:

- (i) the Wind Data;
- (ii) the Purchased Contracts, including the Land Contracts;
- (iii) all rights of Seller and Seller's Affiliates, related in any material respect to the Company or the Project, and all rights of the Company to interconnection queue positions and interconnection studies and reports;
- (iv) the Permit applications and Permits;
- (v) the Intellectual Property Rights;
- (vi) the material Books and Records;
- (vii) the Reports;
- (viii) any material Project layouts prepared by or on behalf of Seller or its Affiliates;
- (ix) the Survey; and
- (x) ESRI GIS shape files of the project map with leased lands, setback and exclusion boundaries, met tower locations, collection line layout, any associated

transmission line route(s) and proposed turbine, operations and maintenance building and substation locations; and

(xi) any other Assets owned by Seller or its Affiliates or in which Seller or its Affiliates has any interest whatsoever that are material to the Project.

(e) Except for the Prior Acquisition Agreement, the Purchased Assets are the only Assets that are owned or have ever been owned by the Company.

Section 4.6 Bank Accounts. Schedule 4.6 sets forth a list of the names and locations of banks, trust companies and other financial institutions at which the Company maintains accounts of any nature or safe deposit boxes and the names of all persons authorized to draw thereon, make withdrawals therefrom or have access thereto.

Section 4.7 Subsidiaries. The Company does not have any Subsidiaries or own Equity Securities in any Person.

Section 4.8 Legal Proceedings. No Claim is pending against, and to Seller's Knowledge, none has been threatened in writing (a) against the Company, (b) affecting the Company, the Purchased Assets or the Business or (c) seeking a writ, judgment, order, injunction or decree restraining, enjoining or otherwise prohibiting or making illegal any of the transactions contemplated by this Agreement.

Section 4.9 Compliance with Laws. Each of the Company and, with respect to the Project, Seller currently is in compliance in all material respects with all Laws and orders of all Governmental Authorities applicable to it, the Business and the Purchased Assets, and neither Seller nor the Company has received any notification indicating any violation of such Laws and orders. The representations and warranties contained in this Section do not apply to Tax matters (which are governed exclusively by Section 4.11), regulatory matters (which are governed exclusively by Section 4.12), Permits (which are governed exclusively by Section 4.15), environmental matters (which are governed exclusively by Section 4.16), Intellectual Property matters (which are governed exclusively by Section 4.17), employment matters (which are governed exclusively by Section 4.19), or employee benefit matters (which are governed exclusively by Section 4.20).

Section 4.10 Assets and Liabilities; No Undisclosed Liabilities. Except for (i) Liabilities set forth on Schedule 4.10 or (ii) Assumed Liabilities and other Taxes that are not yet due and payable, the Company has no Liabilities as of the Closing Date.

Section 4.11 Taxes:

Except as set forth on Schedule 4.11:

(a) The Company is and has been since formation treated for federal income tax purposes as a disregarded entity.

(b) The Company has timely filed all Tax Returns, if any, required to be filed with Tax Authorities, and all Taxes required to be paid or withheld by the Company have been timely paid or withheld as required by Law.

(c) Seller is not currently the beneficiary of or subject to any extension of time within which to file any Tax Returns or for the assessment or collection of any Tax with respect to the Company or the Project. The Company has not waived any statute of limitations in respect of Taxes or agreed to any extension of time with respect to a Tax assessment or deficiency.

(d) Seller has made available to Buyer true and complete copies of all Tax Returns, if any, of the Company or otherwise related to the Project, and no Tax Returns of the Company have been audited or are currently the subject of audit.

(e) No Tax Returns with respect to the Company have been audited or examined by any Tax authority. There are no ongoing or pending or threatened in writing Tax audits, examinations, claims, assessments or proposed deficiencies against the Company.

(f) No Tax authority in a jurisdiction where the Company does not file a Tax Return has made a claim or assertion in writing, or threatened in writing, that the Company or Project is or may be subject to Tax by such jurisdiction.

(g) The Company is not a party to a tax allocation or tax sharing agreement or tax indemnity or similar arrangement.

(h) The Project has not benefited from any government grants, tax-exempt financing, subsidized energy financing or other federal tax credits within the meaning of section 45(b)(3) of the Code.

(i) The Company has not entered into a closing agreement pursuant to Section 7121 of the Code (or any similar provision of state, local or foreign law).

(j) The Company has not engaged in any “reportable transaction” as defined in Treasury Regulation Section 1.6011-4(b) or any transaction under a similar provision of state, local or foreign Tax law.

(k) No private letter ruling or other ruling has been requested or received from any Tax authority with respect to the Company or the Project.

(l) The Company has no liability for the Taxes of any Person (i) under Treasury Regulation Section 1.1502-6 (or any similar provision of state, local or foreign law), (ii) as a transferee or successor, or (iii) by Contract.

(m) No power of attorney is currently in effect on behalf of the Company with respect to any Taxes.

(n) Neither the Seller nor the Company (or any Affiliate thereof) has taken any action that would cause any of the assets of the Company to be subject to the alternative depreciation system within the meaning of Code Section 168(g) or to be treated as tax-exempt use property within the meaning of Code Section 168(h), nor are any of the assets of the Company so considered.

(o) Neither the Seller, the Company nor to Seller's Knowledge any Person has elected to claim the production tax credit under Section 45 of the Code or the energy investment tax credit pursuant to Section 48 of the Code with respect to the Project. Neither the Seller, the Company nor to Seller's Knowledge any Person has applied for a grant with respect to the Project, or any portion thereof, from the U.S. Treasury Department under Section 1603 of Division B of the American Recovery and Reinvestment Act of 2009, as amended, and no such grant has been received with respect to the Project.

(p) Construction of the Project did not begin before January 1, 2016, within the meaning of the Beginning of Construction Guidance.

(q) No power sales contract of the Company is described in Code Section 45(e)(7).

Section 4.12 Regulatory Status. To Seller's Knowledge, neither Seller nor the Company is subject to regulation as a "public utility" under the FPA, a "public-utility company" as defined under PUHCA, an "electric utility" as defined in Section 31.002(6) of the Texas Public Utility Regulatory Act, a "public utility" as defined in Section 62-3-39G) of the New Mexico Statutes, or any other state statutes, regulations or other legal authority defining regulated public utilities under New Mexico or Texas law, in each case, taking into account the current state of development activities by the Company and Seller as of the date of this Agreement. The Company is not a "holding company" as defined under PUHCA. Seller either is not a holding company as defined under PUHCA or is a holding company that is entitled to the exemptions and waivers set forth at 18 C.F.R. § 366.3(a). The representations and warranties in this Section 4.12 and Section 4.5(c) are Seller's sole representations and warranties regarding energy regulatory matters, except for Permits (which are governed by Section 4.15).

Section 4.13 Contracts.

(a) Schedule 4.13(a) sets forth a list of the Contracts to which the Company is a party or by which its Assets are bound or to which Seller or any Seller Affiliate is a party to the extent related primarily to the Business (collectively, the "**Purchased Contracts**"); provided, the Prior Acquisition Agreement shall be paid in full on or before the Closing Date as reflected in the estoppel and release agreement required by Section 2.6(b)(xiv) and shall not constitute a Purchased Contract for purposes of this Agreement.

(b) Schedule 4.13(b) sets forth a list of the Support Obligations.

(c) Seller has made available to Buyer true, correct and complete copies of all Purchased Contracts and Support Obligations, including all material amendments, waivers or modifications thereto.

(d) Each of the Purchased Contracts and the Support Obligations is in full force and effect and constitutes a legal, valid and binding obligation of the Company or, prior to the Closing, Seller or any Seller Affiliate, as applicable, and, to Seller's Knowledge, of the other parties thereto.

(e) Neither the Company nor Seller or any Seller Affiliate is in breach or default under any Purchased Contract or Support Obligation and, to Seller's Knowledge, no other party to any of the Purchased Contracts or Support Obligations is in breach or default thereunder. No event has occurred that (with or without notice, lapse of time or both) could reasonably be expected to constitute a material default by the Company or Seller or any Seller Affiliate, as applicable, under any such Purchased Contract or Support Obligation. Neither the Company nor Seller or any Seller Affiliate has received any written notice or, to Seller's Knowledge, oral notice, from any counterparties in connection with any of the Purchased Contracts or Support Obligations of (i) any material breach or default under any Purchased Contract or Support Obligation, (ii) the fact that any such party will terminate, not renew, cancel or substantially decrease its business with the Company, or (iii) any claim for damages or indemnification with respect to the products or performance of services pursuant to any Purchased Contract.

(f) The consummation of the transactions contemplated by this Agreement will not require the consent or approval of any party to a Purchased Contract or Support Obligation except as specifically set forth on Schedule 2.6(b)(ix).

(g) Schedule 4.13(g) sets forth a list of the Contracts (other than Purchased Contracts) to which Seller or an Affiliate of Seller is a party that (i) are not primarily related to the Business and (ii) are necessary to enable the Project to be located and constructed on the Site (collectively the "*Shared Contracts*").

Section 4.14 Real Property.

(a) Schedule 4.14 sets forth a list of all Land Contracts.

(b) Seller has made available to Buyer copies of all Land Contracts, and, as of the Closing Date, those copies are complete and accurate in all respects.

(c) The Company does not own any real property in fee. Other than the Real Property Interests, the Company holds no other rights or interests in real property.

(d) The Company and Seller hold, and as of the Closing Date the Company will exclusively hold, good and marketable title to the Real Property Interests free and clear of all Liens, adverse claims and other matters adversely affecting the Company's title to such Real Property Interests (other than Permitted Liens).

(e) Each Land Contract (i) is a legal, valid and binding agreement of the Company or, prior to the Closing, Seller, as applicable, (ii) is in full force and effect and (iii) is enforceable, and will continue to be legal, valid and binding and enforceable on identical terms immediately following the consummation of the transactions contemplated hereby, against Seller or the Company, as applicable, and to Seller's Knowledge, each other

party thereto. Seller or the Company has paid, or caused to be paid, all amounts currently due and payable with respect to each Land Contract.

(f) There exists no breach or default under any Land Contract by the Company, Seller or, to Seller's Knowledge, any other Person that is a party thereto.

(g) (i) As of the Closing Date, there are no pending, threatened, appropriation, condemnation or like proceedings relating to any real property encumbered by the Land Contracts, the Project or any portion thereof or the sale of electricity therefrom; (ii) none of Seller, the Company or any Affiliate thereof have received any written notice from a Governmental Authority of any violation of any applicable zoning law, regulation or rule or other Law relating to or affecting any of such real property; and (iii) neither the Company nor Seller has granted any options or rights of first offer or first refusal to purchase or lease such real property, or any portion thereof or interest therein. As of the Closing Date, the zoning and any public or private land use restrictions for the real property which is the subject of the Land Contracts permits the location, interconnection, erection and construction, on the Site, of a Sufficient Project. To Seller's Knowledge, there is no action pending before any Governmental Authority to change the applicable zoning or building ordinances or any other Law affecting the Land Contracts that could reasonably be expected to have an adverse effect on the Project.

(h) Except for the amounts payable by the Company as of and following the Closing Date as set forth in the Land Contracts, there are no other rents, royalties, fees or other amounts payable or receivable by the Company in connection with the Land Contracts.

(i) Neither Seller nor the Company have (i) made, ordered and/or contracted for any construction, repairs, alterations or improvements to be made on or to any real property encumbered by the Land Contracts, or (ii) ordered materials or supplies for any real property encumbered by the Land Contracts, which in either case have not been paid for in full and there are no outstanding or disputed claims for any such work or item.

(j) Neither the Company nor Seller has assigned, transferred, conveyed, mortgaged, deeded in trust or encumbered any of the Real Property Interests (except as part of the Pre-Closing Asset Transfer) and all such Real Property Interests are free and clear of all Liens other than Permitted Liens.

(k) As of the Closing Date, the Real Property Interests will constitute all land rights necessary to locate, interconnect, erect, construct, and operate on the Site, a Sufficient Project.

Section 4.15 Permits.

(a) Schedule 4.15 sets forth all (i) Permits held by the Company or Seller in connection with the Project, (ii) applications for Permits which have been filed by the Company or Seller in connection with the Project, and (iii) to Seller's Knowledge, to the extent not listed in response to (i) or (ii), Permits that will be required for the further development and construction of the Project in accordance with the Site Permit.

(b) The Company and Seller own or otherwise hold, and as of the Closing Date the Company will exclusively own or otherwise hold (and is in compliance in all material respects with), or, if not yet required, has applied for or will apply for, all Permits necessary to locate, interconnect, erect and construct, on the Site, a Sufficient Project (other than ministerial Permits that are not necessary prior to Closing) (each such Permit, a “**Closing Permit**”), and, each such Closing Permit is valid and in full force and effect, in each case, taking into account the development stage activities of the Project.

(c) Each of the Company and Seller has performed in all material respects and is in compliance in all material respects with the Permits and applications for Permits set forth on Schedule 4.15(i) and (ii), as applicable, and to the Seller’s Knowledge, all other parties to such Permits have performed in all material respects and are in compliance in all material respects with the Permits. No event has occurred that (with or without notice, lapse of time or both) could reasonably be expected to constitute a material default by the Company or Seller under any such Permit or, to Seller’s Knowledge, prevent the issuance of any Permit listed on Schedule 4.15(ii) or (iii).

(d) The consummation of the transactions contemplated by this Agreement will not affect the legality, validity, binding nature, enforceability or force and effect of any Permit listed on Schedule 4.15(i).

(e) The representations and warranties in this Section 4.15 are Seller’s sole representations and warranties regarding Permits except for those Permits set forth on Schedule 4.15(i) required by Environmental Laws, which are governed exclusively by Section 4.16.

Section 4.16 Environmental Matters.

(a) Except as set forth on Schedule 4.16:

(i) the Company, and with respect to the Business, Seller, are, and since their formation have been, in compliance in all material respects with applicable Environmental Laws, and the Company and Seller have no Liabilities under Environmental Laws related to the Purchased Assets;

(ii) the Company and Seller have obtained, maintained and complied with all Permits necessary under any applicable Environmental Law for the development and construction of the Project, each of which Permits is set forth on Schedule 4.15(i), and such Permits are in full force and effect and not subject to appeal (except pursuant to applicable Law);

(iii) neither the Company nor, with respect to the Project, Seller has been served with written notice of any Environmental Claims that are currently outstanding, and no Environmental Claims are pending or, to Seller’s Knowledge, threatened, against the Company or, with respect to the Project, Seller by any Governmental Authority under any Environmental Laws;

(iv) to Seller's Knowledge, there are no facts, circumstances, conditions or occurrences relating to the Purchased Assets that would be expected to form the basis of a claim by any Governmental Authority under any Environmental Law against Seller or its affiliates;

(v) to Seller's Knowledge, no portion of the Site contains or has ever contained any underground storage tank, surface impoundment or similar device used for the management of wastewater, or other waste management unit dedicated to the disposal, treatment, or long-term storage (greater than thirty (30) days) of waste materials;

(vi) there is no site to which the Company or, with respect to the Project, Seller has transported or arranged for the transport of Hazardous Materials associated with the Company or the Project which, to Seller's Knowledge, is the subject of any environmental action that would result in an Environmental Claim; and

(vii) there has been no Release of any Hazardous Material at or from the Project in connection with the Company's or Seller's operations at the Project that would result in an Environmental Claim.

(b) The representations and warranties set forth in this Section are Seller's sole and exclusive representations and warranties concerning environmental matters, including Environmental Laws, Claims and Permits.

Section 4.17 Intellectual Property.

(a) The Company and Seller own, or have the license or right to use for the Business all Intellectual Property currently used in the Business, and as of the Closing Date the Company will exclusively own, or have the license or right to use for the Business all Intellectual Property currently used in the Business.

(b) Neither the Company nor Seller has received from any third party a claim in writing that it is infringing in any material respect the Intellectual Property of such third party.

(c) To Seller's Knowledge, the utilization of the Purchased Assets does not infringe upon or violate the intellectual property rights of any other Person.

(d) The representations and warranties set forth in this Section 4.17 are Seller's sole and exclusive representations and warranties concerning Intellectual Property matters.

Section 4.18 Brokers. The Company does not have any liability or obligation to pay fees or commissions to any broker, finder or agent with respect to the transactions contemplated by this Agreement.

Section 4.19 Employees and Labor Matters. The Company has never had any employees.

Section 4.20 Employee Benefits. The Company has never sponsored, maintained or contributed to any Benefit Plan.

Section 4.21 Wind Data. Seller has delivered to Buyer true, correct and complete copies of all books and records containing any Wind Data. The Wind Data were collected at the locations and during the times set forth in such documents. To Seller's Knowledge, the Wind Data is true, accurate and correct in all material respects. Seller has not omitted or failed to provide to Buyer any Wind Data measured and recorded at the Site on or before the dates specified on Schedule 4.21 by or on behalf of Seller or any of its Affiliates, to the extent that the same are in Seller's or its Affiliates' possession or under Seller's or its Affiliates' control. To Seller's Knowledge, except for the Wind Data, there are no other wind speed data or other relevant wind characteristics data that have been prepared in respect of the Project.

Section 4.22 Insurance. Schedule 4.22 sets forth all policies of fire, liability and other forms of insurance insuring the Company and the Purchased Assets. Such policies are in full force and effect, all premiums with respect thereto covering all periods up to and including the date as of which this representation is being made that are required to have been paid as of such date have been paid (other than retroactive premiums which may be payable with respect to comprehensive general liability insurance policies), and no written notice of cancellation or termination has been received by the owner or holder of any such policy with respect to any such policy which was not replaced on substantially similar terms prior to the date of such cancellation. No pending claims by or for the benefit of the Company exist under any such policies of insurance covering the Company.

Section 4.23 No Other Agreements to Sell Purchased Assets. Neither the Company nor Seller has any legal obligation to, or non-binding agreement in principle with, any other person to sell or effect a sale of all, or any portion of, the Company or the Purchased Assets.

Section 4.24 Sufficient Funds. Seller has and at all times prior to Closing will continuously have sufficient funds available or committed sources for sufficient funds to perform its obligations with respect to the Project as contemplated by this Agreement.

Section 4.25 Books and Records. All Books and Records of the Company have been maintained in material accordance with applicable Law.

ARTICLE 5

REPRESENTATIONS AND WARRANTIES OF BUYER

Buyer hereby represents and warrants to Seller that each and all of the following representations and warranties set forth in this Article 5 are true and correct as of the date of this Agreement and as of the Closing Date (except for such representations and warranties that speak as of a specific date, in which case such representations and warranties are true and correct as of such date):

Section 5.1 Organization. Buyer is a corporation, validly existing and in good standing under the Laws of the State of New Mexico. Buyer is duly qualified or licensed to do business in each other jurisdiction where the actions to be performed by it under this Agreement makes such qualification or licensing necessary, except in those jurisdictions where the failure to be so qualified or licensed would not have a material adverse effect on its ability to perform such actions.

Section 5.2 Authority; Enforceability. Buyer has all requisite corporate power and authority to enter into this Agreement and the Ancillary Agreements to which Buyer is a party, to perform its obligations hereunder and thereunder and to consummate the transactions contemplated hereby and thereby. The execution and delivery by Buyer of this Agreement and the Ancillary Agreements to which Buyer is a party and the performance by Buyer of its obligations under this Agreement and the Ancillary Agreements to which Buyer is a party have been duly and validly authorized by all necessary action on behalf of Buyer. This Agreement and each Ancillary Agreement to which Buyer is a party has been duly and validly executed and delivered by Buyer and constitutes the legal, valid and binding obligation of Buyer enforceable against Buyer in accordance with its terms except as the same may be limited by bankruptcy, insolvency, reorganization, fraudulent conveyance, arrangement, moratorium or other similar Laws relating to or affecting the rights of creditors generally or by general equitable principles.

Section 5.3 No Conflicts. The execution and delivery by Buyer of this Agreement and the Ancillary Agreements to which Buyer is a party do not, and the performance by Buyer of its obligations hereunder and thereunder and the consummation of the transactions contemplated hereby and thereby will not:

- (a) result in a violation of or a breach of any of the terms, conditions or provisions of the Organizational Documents of Buyer;
- (b) result in a Default under any material Contract to which Buyer is a party, except for any such Default which would not, in the aggregate, have a material adverse effect on Buyer's ability to perform its obligations under this Agreement or any Ancillary Agreements to which Buyer is or will be a party; or
- (c) (i) violate or breach any term or provision of any Law, Permit or order applicable to Buyer or any of its Assets, except as would not have a material adverse effect on Buyer's ability to perform its obligations under this Agreement or any Ancillary Agreements to which Buyer is a party or (ii) require any material Consent of any Governmental Authority under any applicable Law, other than the State Regulatory Approval and such other Consents, which, if not made or obtained, would not have a material adverse effect on Buyer's ability to perform its obligations under this Agreement or any Ancillary Agreements to which Buyer is a party.

Section 5.4 Legal Proceedings. Buyer has not been served with notice of any Claim, no Claim is pending and to Buyer's knowledge, none is threatened in writing, against Buyer which seeks a writ, judgment, order or decree restraining, enjoining or

otherwise prohibiting or making illegal any of the transactions contemplated under this Agreement or any Ancillary Agreements to which Buyer is a party.

Section 5.5 Brokers. Buyer does not have any liability or obligation to pay fees or commissions to any broker, finder or agent with respect to the transactions contemplated by this Agreement.

Section 5.6 Financial Resources. Buyer will have available at the Closing Date funds sufficient to pay the amounts payable by Buyer to Seller pursuant to Section 2.2.

Section 5.7 Acquisition as Investment. Buyer is acquiring the Shares for its own account as an investment without the present intent to sell, transfer or otherwise distribute the same to any other Person except any transfer to, or merger of the Company with, any Affiliate of Buyer. Buyer acknowledges that the Shares are not registered pursuant to the 1933 Act and that none of the Shares may be transferred, except pursuant to an applicable exception under the 1933 Act. Buyer is an “accredited investor” as defined under Rule 501 promulgated under the 1933 Act.

Section 5.8 Compliance with Laws. Buyer currently is in compliance in all material respects with all Laws and orders of all Governmental Authorities applicable to it, except as would not have a material adverse effect on Buyer’s ability to perform its obligations under this Agreement or any Ancillary Agreements to which Buyer is a party.

ARTICLE 6

COVENANTS

The Parties hereby covenant and agree as follows:

Section 6.1 Books and Records.

(a) From and after Closing, Buyer will preserve and keep the books and records of the Company and the Purchased Assets that relate to the period prior to the Closing Date (including all accounting records) for a period of seven (7) years from the Closing, or for any longer periods as may be required by any Governmental Authority or ongoing litigation. If Buyer wishes to destroy such records after such time period, it will give sixty (60) days’ prior written notice to Seller and Seller will have the right at its option and expense, upon prior written notice within such 60-day period, to take possession of the books and records within ninety (90) days after the date of Buyer’s notice to Seller. From and after Closing, Buyer, upon reasonable prior notice from Seller, will provide to Seller and its Representatives access to or copies of books and records of the Company to the extent relating to events that occurred prior to Closing and to the extent needed for a legitimate business purpose or to enforce rights under this Agreement provided that all such books and records shall be confidential and the information therein not used or disclosed except as required by law, for a legitimate business purpose, or to enforce rights under this Agreement.

(b) Seller will deliver the Books and Records of the Company in Seller's possession to Buyer as promptly as practicable following the Closing Date if such Books and Records are not present at the Company on the Closing Date. Seller may retain a copy of the Books and Records of the Company.

Section 6.2 Transfer Taxes. Buyer shall pay any Transfer Taxes in connection with this Agreement and the transactions contemplated hereby. Buyer shall be responsible for filing any Tax Return regarding any Transfer Taxes in connection with this Agreement and the transactions contemplated hereby and will do so within the time period required by Law and provide a copy of the return to the Seller. For the avoidance of doubt, Buyer will be solely responsible for any Transfer Taxes arising from any action to dissolve, terminate or restructure the Company or to convey, distribute or transfer any assets, properties or other rights to or from the Company after Closing.

Section 6.3 Tax Matters. Except as provided in Section 6.2 relating to Transfer Taxes:

(a) In the case of any Straddle Period, (i) franchise Taxes based solely on capital, ad valorem Taxes and property Taxes shall be apportioned between the portion of such Straddle Period ending on the Closing Date and the portion of such Straddle Period beginning after the Closing Date on a daily pro-rata basis, and (ii) all other Taxes shall be apportioned between the portion of such Straddle Period ending on the Closing Date and the portion of such Straddle Period beginning after the Closing Date on a closing of the books basis.

(b) Buyer and Seller shall furnish or cause to be furnished to each other, as promptly as practicable, such information and assistance relating to the Project and the Purchased Assets as is reasonably necessary for the preparation and filing of any Tax Return, claim for refund, or other filings relating to Tax matters, for the preparation for any Tax audit, for the preparation for any Tax protest and for the prosecution or defense of any suit or other proceeding relating to Tax matters.

(c) The Parties agree that prior to the Closing, neither Party will negotiate with any local taxing authority regarding tax rates or structures for the Project without the prior written reasonable consent of the other Party, and that if such consent to negotiate is provided, any such agreement regarding tax rates or structures entered into prior to the Closing is also subject to the prior written reasonable consent of the other Party.

Section 6.4 Conduct of the Company Prior to Closing. Except as contemplated, permitted or required by this Agreement, or as required by applicable Laws, between the date hereof and the Closing, Seller will cause the Company to conduct the Business and use commercially reasonable efforts to preserve all of its Assets in the ordinary course of business. Notwithstanding the preceding sentence, between the date hereof and the earlier to occur of the Closing and the termination of this Agreement, except as permitted or contemplated by the terms of this Agreement, without the prior written consent of Buyer (which consent shall not be unreasonably withheld, delayed or conditioned), the Company and, with respect to the Business, Seller shall not do any of the following:

(a) take any action which would materially interfere with or prevent the consummation of the transactions contemplated by this Agreement;

(b) amend the Organizational Documents of the Company;

(c) adopt a voluntary plan of complete or partial liquidation or dissolution;

(d) incur any obligations or Liabilities (through a Contract or otherwise) that would remain outstanding obligations or Liabilities of the Company following the Closing Date, other than with respect to any Lease Amendment or any Land Contracts executed after the date hereof which are substantially in the form of the applicable Land Contracts existing as of the date hereof and, with respect to Project Leases, which include the amendments set forth in the form of Lease Amendments attached as Exhibits C-1 and C-2, or such other form reasonably agreed by Buyer and Seller;

(e) declare, set aside or pay any dividends on or make any other distributions (whether in cash, stock, equity securities or property) in respect of any Equity Interests of the Company or split, combine or reclassify any such Equity Interests or issue or authorize the issuance of any other securities of the Company in respect of, in lieu of or in substitution for any Equity Interests;

(f) issue, deliver, sell, authorize, pledge or otherwise encumber any Equity Securities;

(g) acquire or agree to acquire by merging or consolidating with, or by purchasing any material equity or voting interest in or a material portion of the assets of, or by any other manner, any business or any Person or division thereof;

(h) sell, lease, license, encumber or otherwise dispose of any Purchased Assets (other than Permitted Liens) or enter into any written or oral agreement with a third party with respect to the distribution or sale of any Purchased Assets (other than the transfer of Purchased Assets from Seller to the Company);

(i) settle or agree to settle any material Action with any third party, including any Governmental Authority;

(j) make or effect any change in any accounting methods, principles or practices or any change in, or adoption of any new, tax accounting principle, method of tax accounting or tax election;

(k) make or change any election in respect of Taxes, adopt or change any accounting method in respect of Taxes, file any federal, state, or foreign income Tax Return or any other material Tax Return without the consent of Buyer prior to filing, file any amendment to a federal, state, or foreign income Tax Return or any other material Tax Return, enter into any Tax sharing or similar agreement or closing agreement, settle any claim or assessment in respect of Taxes, or consent to any extension or waiver of the limitation period applicable to any claim or assessment in respect of Taxes, or enter into intercompany transactions giving rise to deferred gain or loss of any kind, or take any other

similar action relating to the filing of any Tax Return or the payment of any Tax, if such election, adoption or other action would have the effect of increasing the Tax liability of the Company for any period ending after the Closing Date or decreasing any Tax attribute of the Company existing on the Closing Date;

(l) submit any rate schedules to Federal Energy Regulatory Commission or take any other actions that would result in the Company becoming a “public utility” within the meaning of Section 201(e) of the FPA or within the meaning of any applicable state statute; or

(m) enter into any Contract or other agreement to do any of the foregoing in this Section 6.4.

Section 6.5 Real Property Purchase Option. If requested by Buyer within 180 days following the date of this Agreement, Seller shall use its commercially reasonable efforts to cause the Company to obtain from the landowner(s) of the Parcel identified by Buyer as its first priority an option to purchase such Parcel, for an operating and maintenance facility and substation, at a price and on terms and conditions acceptable to Buyer (a “**Real Property Purchase Option**”). If Seller approaches such landowner(s) identified by Buyer and such landowner(s) refuses to sell or to agree to a price or other terms and conditions acceptable to Buyer, Seller shall, if directed by Buyer, and may at its election (but subject to Buyer’s written consent), use its commercially reasonable efforts to cause the Company to obtain a Real Property Purchase Option from the landowner(s) of the Parcel identified by Buyer as its second priority (if any). The foregoing shall correspondingly apply to any Parcel identified by Buyer as its third priority. The Parties acknowledge and agree that there may be, as a result of the foregoing, Real Property Purchase Option negotiations proceeding at one time with respect to more than one of the Parcels identified by Buyer. In no case shall the Company become party to more than one Real Property Purchase Option without the prior written consent of Buyer. If each Parcel landowner refuses to sell its Parcel or refuses to sell on terms and conditions that are acceptable to Buyer, Seller shall not be in breach of this Section 6.5.

Section 6.6 Development Work.

(a) To the extent not completed prior to the date of this Agreement, Seller and the Company shall, at the sole cost and expense of Seller, perform the following actions related to development of the Project (collectively, the “**Critical Development Work**”)

(i) pursue completion of, and fund, all studies and costs necessary for the project to obtain a Generator Interconnection Agreement for a Sufficient Project under the SPP process; provided, that Buyer shall, within 30 calendar days following the later to occur of the Closing Date and the execution and delivery by all parties thereto of such Generator Interconnection Agreement, reimburse to Seller all Interconnection Costs that have not already been funded by Buyer or reimbursed to Seller by Buyer; *provided*, that Buyer agrees that any unused study costs that are returned under the Generator Interconnection Agreement or in connection with the DISIS (including any deposits, fees or amounts returned by SPP) and that were funded by Seller and not previously reimbursed

to Seller, shall be for the account of Seller, and if any such returned amounts are received by Buyer or the Company, Buyer shall cause such amounts to be paid over to Seller);

(ii) implement a permitting and regulatory strategy with local, state and federal agencies;

(iii) negotiate and complete all Land Contracts and obtain all Real Property Interests necessary to locate, interconnect, erect, construct and operate on the Site a Sufficient Project, and any Land Contract executed after the date hereof shall be, if a lease, substantially in the form of the Lease attached as Exhibit B or, if another form of Real Property Interest, in such other form reasonably agreed by Buyer and Seller and, with respect to Project Leases, shall include the amendments set forth in the form of Lease Amendment attached as Exhibit C-1 or C-2, as applicable (except for the Project Leases listed in Part 1 of Schedule 2.6(b)(xv)), or such other form reasonably agreed by Buyer and Seller; provided, however, that if a Project Area Trigger Event exists or would occur based on any then proposed Project Area pursuant to the terms of Section 6.6(a)(xx), Buyer's and Seller's mutual agreement shall be required, acting reasonably and in good faith, of the Project Area that meets the requirements of Section 6.6(a)(xx);

(iv) subject to the proviso at the end of Section 6.5, use commercially reasonable efforts to secure the Real Property Purchase Options in accordance with Section 6.5, and Seller shall remain responsible for the payments for the purchase options in the real property covered by the Real Property Purchase Options, it being understood that Buyer shall pay any amounts required to exercise the options and acquire a fee simple interest in any real property subject to the Real Property Purchase Options;

(v) manage all pre-Closing negotiations between Seller or the Company and the landowners of the Site;

(vi) manage zoning and other permitting matters including obtaining all discretionary Permits necessary to initiate construction of the Project and to enable the Company to locate, interconnect, erect, construct and operate on the Site a Sufficient Project;

(vii) manage all title matters including, without limitation, identifying encumbrances in coordination with Buyer (including any federal or state holdings or easements), implementing curative measures and procurement of the Title Commitments, and obtaining the Survey, including performing such obligations set forth in Section 2.6(d);

(viii) prepare a critical issue analysis;

(ix) complete and/or obtain all Reports, provide to Buyer all data utilized in the preparation of any such Report in either Seller's or any of its Affiliates' possession, and use commercially reasonable efforts to provide to Buyer all such data in the possession of any third parties;

(x) collect and provide Wind Data;

- (xi) complete microwave path analysis;
- (xii) complete bald eagle, raptor nest, bat activity and avian surveys of the Site;
- (xiii) complete a Lesser Prairie Chicken field survey to be conducted in the Spring of 2017 that is no less stringent than the Western Association of Fish and Wildlife Agencies Lesser Prairie Chicken Range-Wide Conservation Plan (October 2013), Appendix H and in conjunction with input from federal and state wildlife agencies;
- (xiv) cause to be completed (i) ten (10) preliminary geotechnical borings per 200 megawatts for preliminary foundation and electrical collection design and discovery in accordance with mutually agreed specifications and (ii) final geotechnical borings for all micro-sited locations (final and alternate), collection substation, O&M Building, transmission line route(s) upon final approval by Buyer of the micro-sited locations, any subsequent bores beyond those provided in clauses (i) and (ii) shall be the cost and responsibility of Buyer. Geotechnical testing shall be completed per Buyer's requirements in accordance with Exhibit D attached hereto. Reports for the preliminary and final geotechnical testing shall be provided to Buyer within twenty (20) Business Days after the last field sample was taken;
- (xv) complete cultural and historical surveys, if required by any Governmental Authority;
- (xvi) complete a shadow flicker study, if required;
- (xvii) complete noise studies as required by any Permit;
- (xviii) complete a standard broadcast site review;
- (xix) complete native prairie habitat mapping and a review of United States Department of Agriculture Conservation Reserve Program with respect to those portions of the Site where the wind turbines, collection system, operations and maintenance building, project substations and roads relating to the Project are proposed to be located in each case as appearing on the preliminary site layout to be prepared and delivered by Seller no later than 270 days after the Execution Date (which preliminary site layout the Parties may mutually agree to modify based on Buyer's review, comment and constructability input (crane paths and building corridors) to the extent provided within 30 days of delivery of such preliminary site layout), and cause all affected parcels to be noted in the Survey;
- (xx) prepare, and deliver to Buyer no later than October 1, 2017, a proposed map depicting the Project Area for a Sufficient Project and the proposed turbine locations within the Project Area, which proposed map shall delineate all Real Property Interests which have presently been obtained, all Real Property Interests currently being pursued, and any land for which Real Property Interests are not expected to be required or obtained based on the current status of Development Work. If Buyer determines that the proposed Project Area would result in a Project Area Trigger Event, Buyer and Seller shall attempt to agree upon revisions to the proposed map of the Project Area in accordance with

the proviso at the end of Section 6.6(a)(iii). Seller shall prepare and deliver a revised map of the Project Area to Buyer reflecting revisions as may be mutually agreed upon in writing by Seller and Buyer to eliminate the Project Area Trigger Event and permit development of the Project in accordance therewith. Thereafter, Seller shall deliver to Buyer a revised map depicting the Project Area and the proposed turbine locations within the Project Area (including the revised status of the parcels of land within the Project Area as delineated on the initial or most recently proposed map) on the first day of each calendar month, and from time to time based on ongoing Development Work (but only after consultation with Buyer), following the delivery of the initial proposed map of the Project Area. If Buyer determines that any revised map of the Project Area delivered by Seller would result in a Project Area Trigger Event, Buyer and Seller shall attempt to agree upon revisions to the Project Area in accordance with the proviso at the end of Section 6.6(a)(iii) and Seller shall prepare and deliver a revised map of the Project Area to Buyer reflecting revisions as may be mutually agreed upon in writing by Seller and Buyer to eliminate the Project Area Trigger Event and permit development of the Project in accordance therewith. Seller shall complete, and deliver to Buyer not less than 30 days prior to Closing, a final map depicting the Project Area for a Sufficient Project and the turbine locations within the Project Area (including the revised status of the parcels of land within the Project Area as delineated on the initial or most recently proposed map) containing all revisions determined in accordance with the terms of this Section 6.6(a)(xx); provided, however if Seller is unable to deliver a Sufficient Project as a result of any matter not within the control of Seller, and such inability to perform was not due to Seller's negligence or breach of this Agreement, or Seller's failure to take commercially reasonable steps to remedy its inability to perform its obligations hereunder, Seller shall not be in breach of its obligations for a Sufficient Project under this Agreement and in such case in the event this Agreement is terminated solely as a result of such inability to deliver a Sufficient Project, Seller shall not be obligated to return to Buyer any portion of the Initial Payment other than an amount owed under Section 2.2(b)(B); provided further, however, that the terms of this Section 6.6(a)(xx) shall not be deemed a waiver of any of the conditions to the obligation of Buyer to effect the Closing pursuant to Section 2.6(b);

(xxi) complete the Project final site plan (including proposed turbine locations and geo-coordinates for all turbine locations considered and final selected sites with alternate site locations) with all proposed setbacks (occupied dwellings, roads, etc.); and

(xxii) perform the activities designated as Seller's responsibility on Schedule 6.6(b) attached hereto.

Notwithstanding anything to the contrary contained herein, Buyer shall be liable and responsible for all costs, expenses or other amounts pertaining to construction oversight and operation of the facility with respect to any development agreement, road use and repair agreement, public drainage agreement or similarly named agreement as negotiated between Seller and Roosevelt County, New Mexico and agreed to by Buyer with respect to the Project and no such costs, expenses or other amounts shall be deemed Development Costs hereunder or otherwise be the liability or responsibility of Seller; provided Seller shall be responsible for preparing, negotiating and obtaining such

agreements and for paying any upfront costs and expenses required to obtain such agreements.

(b) To the extent not completed prior to the date of this Agreement, Seller and the Company shall, until the Closing Date and at the sole cost and expense of Seller, use their commercially reasonable efforts to perform the following to the extent such actions are relevant to the development of the Project or reasonably requested by Buyer (collectively, and together with the Critical Development Work, the “**Development Work**”):

(i) support and, as requested, assist with all filings and other communications with the NMPRC and the PUCT, as applicable;

(ii) release non-preferred landowner parcels or parcels having title complications that are incurable or at the subject landowner’s request from the Project prior to initiating construction;

(iii) support landowner relations and communications for activities such as pre-construction landowner meetings;

(iv) manage all pre-construction negotiations between Seller or the Company and the landowners of the Site;

(v) assist Buyer with crossing agreements with existing utilities within the Project Site;

(vi) assist Buyer with public and turbine access roadway improvement assessments; and

(vii) assist with site layout, site optimization and micro siting in connection with turbines, collection system, substation, operations and maintenance building, access roads and re-permitting associated with any adjustments or modifications to the aforementioned.

(c) If the Development Work is not complete as of the Closing Date and Buyer agrees to waive the condition set forth in Section 2.6(b)(xiii) to the extent such Development Work is not complete then Buyer and Seller shall act in good faith to agree on terms for Seller and its Affiliates to act as consultants for the Development Work and the Project following the Closing Date.

Section 6.7 Asset Transfer. Prior to (which may be on the same day as) the Closing, Seller shall (a) assign, convey and transfer to the Company, free and clear of all Liens other than Permitted Liens, all of Seller’s right, title and interest in and to any Purchased Assets owned by Seller or in which Seller has any interest in and (b) cooperate with Buyer to allow Buyer to replicate and/or continue to receive the benefit of the Shared Contracts (the “**Pre-Closing Asset Transfer**”). All costs and expenses incurred in connection with such transfer shall be borne by Seller.

Section 6.8 Access to Information.

(a) Subject to the terms of the Confidentiality Agreement, from the date hereof until the earlier of (a) the Closing and (b) the termination of this Agreement in accordance with Section 2.7, upon reasonable notice, Seller will, and will cause the Company, to (i) afford Buyer and its authorized representatives reasonable access to the offices, properties (including the Site), representatives, Contracts, and Books and Records of the Company and the Project; (ii) furnish to Buyer and authorized representatives of Buyer such additional financial and operating data and other information regarding the Company and the Project (or copies thereof) as Buyer may from time to time reasonably request; (iii) furnish to Buyer and authorized representatives of Buyer any other information concerning or otherwise relating to the Assets, the Company and the Project as Buyer or its representatives may reasonably request including all work papers reasonably necessary to support Development Costs; provided that, in the case of clause (ii) or (iii), Buyer shall reimburse Seller for any third party costs and expenses incurred by Seller or its Affiliates in connection with such activities.

(b) Without limiting the generality of the foregoing, until the Closing Date, Seller agrees to furnish to Buyer the following reports and notices:

(i) within ten (10) Business Days after the end of each month prior to the Closing Date, Seller shall deliver to Buyer a report addressing the progress being made with respect to the Development Work (“*Monthly Report*”);

(ii) within ten (10) Business Days after any such report is submitted, a copy of any report required to be filed by Seller (or on behalf of Seller) with any Governmental Authority other than in the ordinary course of business; and

(iii) within ten (10) Business Days after Seller obtains Knowledge thereof, notice of any Environmental Claim by any Governmental Authority or any assertion of an Environmental Claim or material Claims by any other Person or Persons together with a copy of any correspondence relating thereto and a description of any steps Seller is taking and proposes to take with respect thereto.

(c) Seller agrees to schedule and participate in weekly conference calls with Buyer to provide status reports to Buyer of the progress of the Development Work and issues encountered that could impact the Project or development of the Project Area. Buyer and Seller shall each cause appropriate Representatives to participate in the weekly conference calls and shall cooperate with each other and provide information reasonably requested by the other regarding the status of ongoing Development Work and as reasonably required to enable each Party to monitor matters which could have an effect on or result in a Project Area Trigger Event.

Section 6.9 Efforts; Consents; Regulatory and Required Seller Approval.

(a) Each Party will use diligent and commercially reasonable efforts to (i) take, or cause to be taken, all appropriate action, and do, or cause to be done, all things necessary, proper or advisable under applicable Laws or otherwise to promptly consummate and make

effective the transactions contemplated by this Agreement and the Ancillary Agreements; (ii) obtain all authorizations, consents, orders and approvals of, and give all notices to and make all filings with, all Governmental Authorities and other third parties that may be or become necessary for the performance of its obligations under this Agreement and the Ancillary Agreements and the consummation of the transactions contemplated by this Agreement and the Ancillary Agreements, or that may be or become necessary, proper or advisable pursuant to any Permit or Purchased Contract to which the Company is bound or by which any of the Company's assets or properties are bound and (iii) satisfy all conditions to such Party's obligations under this Agreement and the Ancillary Agreements. Notwithstanding the foregoing or anything to the contrary set forth in this Agreement, in connection with obtaining such authorizations, consents, orders and approvals from Governmental Authorities or third parties, no Party will be required to make payments, commence legal or regulatory proceedings or agree to modifications of the terms and conditions of any agreements with third parties or Permits. Nothing in this Section 6.9 shall require any Party to (x) consent to any action or omission by the other Party or its Affiliates or (y) agree to amend or waive any provision of this Agreement. Each Party shall reasonably cooperate with the other Party in performing the obligations required by this Section 6.9(a), including the negotiation, execution, and assignment of Purchased Contracts and agreements related to the Project. Notwithstanding anything to the contrary contained in this Section 6.9, if the parties are in an adversarial relationship in litigation or arbitration, the furnishing of any documents or information in accordance herewith shall be solely subject to applicable rules relating to discovery and the remainder of this Section 6.9(a) shall not apply.

(b) With respect to State Regulatory Approval, Buyer will submit following the date hereof an application or a petition to the NMPRC and the PUCT requesting State Regulatory Approval. If Buyer obtains State Regulatory Approval as requested or with modifications that are acceptable to Buyer, and all other conditions precedent are satisfied or waived by the applicable Party, Buyer shall proceed to Closing subject to the terms and conditions of this Agreement; provided, that if a Tax Law Change occurs, including after Buyer has submitted an application or a petition to the NMPRC and the PUCT (and whether or not State Regulatory Approval not accounting for the impacts of any such Tax Law Change has previously been obtained), Buyer may, in its sole discretion, supplement or otherwise modify any such application or a petition to the NMPRC and the PUCT and meet and communicate with the NMPRC and the PUCT requesting State Regulatory Approval accounting for the impacts of any such Tax Law Change on the terms and conditions satisfactory to Buyer, and the inclusion of such terms and conditions shall be required before the State Regulatory Approval shall be considered to have been obtained for the purposes hereof (including Section 2.6 and 2.7). If State Regulatory Approval does not occur by the date described in Section 2.7(a)(iv), then Buyer shall have the right to terminate this Agreement as described in such Section.

(c) If requested by Buyer, Seller shall, at its own cost, reasonably cooperate and support Buyer's efforts to obtain such approvals from the NMPRC and the PUCT, including assisting in factual development of the filings, providing supportive testimony and written comments; provided, however, that Seller, the Company and their Affiliates will not communicate with the NMPRC staff or the PUCT staff regarding the Project or

regulatory approval process without Buyer's express consent, which consent may be withheld for any reason; provided further that such restriction shall not limit or prevent Seller, the Company or their Affiliates from communicating with the NMPRC regarding the Site Permit or any other Permit that may be issued by the NMPRC.

(d) Except as otherwise provided in this Agreement, the Parties will not take any action that is reasonably likely to have the effect of unreasonably delaying, impairing or impeding the receipt of any required authorizations, consents, orders or approvals.

Section 6.10 Notification of Closing. Within 60 days after the Closing Date, Buyer will provide evidence to Seller, in a format reasonably acceptable to Seller, that Buyer has provided notice to all applicable Governmental Authorities and all counterparties to the Contracts of the Company regarding the sale of the Company and the Assets of the Company to Buyer and the new addresses for notice purposes.

Section 6.11 Public Announcements. Subject to a Party's reasonable judgment that it is required by Law or by the rules of a national securities exchange to make such disclosure, neither Party shall issue any public announcement or other statement with respect to this Agreement or the transactions contemplated hereby without the prior consent of the other Party. Additionally, Seller and the Company hereby consent to the disclosure of confidential information regarding the Project and its current status in public filings and other filings with any Governmental Authority and informal communications with regulators or any Governmental Authority to be made by Buyer in connection with providing notice of or seeking approval of the transaction contemplated by this Agreement and in developing the Project; and hereby waive any confidentiality provisions relating thereto currently in effect. Notwithstanding the foregoing, following the Closing Date, Seller may list the Project, including status, location, capacity in megawatts, and commercial operation date (but not including the identity of Buyer), and may use photographs of the Project, in a manner consistent with Seller's listings of other wind projects that it has developed, on Seller's or its Affiliates' websites or Seller's or its Affiliates' other marketing materials, without the consent of Buyer.

Section 6.12 Transfer of Permits. Seller acknowledges that the Project is subject to various permits and requirements under New Mexico and Texas law, including permits authorizing the construction of the Project, and requirements for the recovery of costs incurred from the Project. In the event Buyer determines that it will, following the Closing, merge or consolidate Company with and into Buyer, Seller shall reasonably assist and cooperate with Buyer, at Buyer's request and Buyer's cost and expense, with respect to the transfer of all such existing Permits to Buyer and with respect to Buyer's satisfaction of its regulatory requirements in connection therewith.

Section 6.13 Further Assurances. Subject to the terms and conditions of this Agreement, at any time or from time to time after the Closing, at any Party's request and without further consideration, the other Party will execute and deliver to such Party such other instruments of sale, transfer, conveyance, assignment and confirmation, provide such materials and information and take such other actions as such Party may reasonably request in order to consummate the transactions contemplated by this Agreement.

Section 6.14 Schedules. Either Party may, from time to time prior to and up to the Closing Date, by written notice to the other Party, disclose any fact, matter, condition, event or circumstance that occurs following the date of this Agreement and that, individually or in the aggregate, renders such Party unable, without amending the Schedules, to satisfy its condition precedent under Section 2.6(b)(i) or Section 2.6(c)(i), as applicable (each, an “*Update*”) provided, that, such Updates must be delivered no later than the date that is ten (10) days prior to the Closing Date, other than with respect to any fact, matter, condition, event or circumstance that occurs after such date. In the event the receiving Party does not terminate this Agreement pursuant to Section 2.7 following delivery of an Update by the other Party, the disclosing Party shall be permitted to update the applicable Schedule(s) to properly reflect the fact, matter, condition, event or circumstance disclosed to the other Party in such Update, and all of the disclosing Party’s representations and warranties set forth in this Agreement made following the Update shall be subject to the Schedules attached hereto, as modified or amended by such an Update.

Section 6.15 Build Out Restrictions. Seller shall not Implement or cause to be Implemented, or permit any Other Seller Entity to Implement or cause to be Implemented, any Subsequent Wind Farm. Seller agrees that any future direct or indirect owner of the Company shall be a third-party beneficiary of this Section 6.15, with full rights to enforce the provisions hereof and exercise the attendant remedies available at law or in equity, including those contemplated in Section 8.14.

ARTICLE 7

INDEMNIFICATION, LIMITATIONS OF LIABILITY AND WAIVERS

Section 7.1 Survival. All representations, warranties, covenants and obligations in this Agreement will survive the Closing until the date that is twenty-four (24) months after the Closing Date, except that (a) each Designated Representation and Section 6.15 (Build Out Restriction) will each survive the Closing indefinitely, (b) each Tax Representation, and Section 7.2(e) will survive the Closing until the end of the applicable statute of limitations and (c) Section 7.2(d) and Section 7.3(e) will each survive the Closing until the date that is thirty-six (36) months after the Closing Date.

Section 7.2 Indemnification by Seller. Subject to Sections 7.1 and 7.4, Seller will indemnify Buyer and its Affiliates and Representatives (the “*Buyer Group*”) from and against all Losses arising, directly or indirectly, from or in connection with:

(a) any breach of any representation or warranty made in Article 3 or Article 4 of this Agreement other than Designated Representations, the Tax Representations and the representations and warranties contained in Section 4.14 (Real Property) and Section 4.24 (Sufficiency of Funds);

(b) any breach of any Designated Representation, Tax Representation or the representations and warranties contained in Section 4.11(p), Section 4.14 (Real Property) and Section 4.24 (Sufficiency of Funds);

(c) any breach of any covenant, agreement or other obligation of Seller contained in this Agreement;

(d) the retention of the Excluded Liabilities by Seller; and

(e) Taxes of the Company to the extent attributable to any Pre-Closing Tax Period.

Section 7.3 Indemnification by Buyer. Subject to Sections 7.1 and 7.4, Buyer will indemnify Seller and its Affiliates and Representatives (the “*Seller Group*”) from and against all Losses arising, directly or indirectly, from or in connection with:

(a) any breach of any representation or warranty made in Article 5 of this Agreement;

(b) any breach of any covenant, agreement or other obligation of Buyer contained in this Agreement;

(c) Buyer’s violation of any Laws or negligence or more culpable conduct in connection with Buyer’s ownership or operation of the Company on or after the Closing Date;

(d) any Transfer Taxes;

(e) any Assumed Liabilities; and

(f) Taxes of the Company to the extent attributable to any period following the Closing.

Section 7.4 Limitations on Liability. Notwithstanding any contrary provision in this Agreement:

(a) Time Bar on Claims. No Indemnified Party will be entitled to any recovery (including by way of off-set) from any Indemnifying Party unless a Notice of Claim has been given on or before the expiration of time period for survival set forth in Section 7.1.

(b) Insurance Recoveries. Losses for which any Indemnified Party will be reimbursed hereunder will be decreased by insurance proceeds or payments from any other responsible parties actually received by such Indemnified Party (after deducting costs and expenses incurred in connection with recovery of such proceeds) and will be increased to take account of any net tax cost incurred by the Indemnified Party in the year any indemnification payment for such Losses was received (or an earlier year) arising from the receipt of any such payment hereunder (grossed up for such increase) and will be decreased to take into account any net tax benefit realized by the Indemnified Party in the year the Losses were incurred or paid (or an earlier year) arising from the incurrence or payment of any such Losses.)

(c) Threshold. An Indemnified Party will be entitled to make a Claim for indemnification under Section 7.2(a) or 7.3(a) for any and all Claims once the aggregate amount of all Claims for indemnification by such Indemnified Party exceeds an amount equal to one percent (1%) of the final Purchase Price and such amount shall not act as a deductible (the “**Threshold**”); provided, that the Threshold will not apply to or otherwise be comprised of (i) any Losses relating to a breach by Seller of the Designated Representations, the Tax Representations or and the representations and warranties contained in Section 4.14 (Real Property) and Section 4.24 (Sufficiency of Funds) or (ii) any Losses relating to a breach by Buyer of the representations under Section 5.1 (Organization) and Section 5.2 (Authority; Enforceability).

(d) Tax Treatment. Any indemnity payment made pursuant to this Agreement will be treated as an adjustment to the Purchase Price for Tax purposes, unless (i) an audit or other administrative or judicial action with respect to the Indemnified Party causes any such payment not to constitute an adjustment to the Purchase Price for U.S. federal income tax purposes, (ii) otherwise determined by agreement of the parties hereto, or if there is no agreement, by an opinion of a nationally-recognized tax counsel selected by Buyer and reasonably acceptable to Seller that such amount is “more likely than not” includable as income of the recipient for income tax purposes, or (iii) otherwise required by Law. The amount of any indemnity payment not constituting an adjustment to the Purchase Price for U.S. federal income tax purposes in accordance with the immediately preceding sentence will be grossed up and paid on an after-tax basis (assuming the highest marginal federal, state and local income tax rates then applicable to corporations).

(e) Maximum Liability. Buyer and the other members of Buyer Group will not be entitled to recover from Seller for any Indemnity Claim under Section 7.2(a) of this Agreement any monetary amount in respect of Losses in excess of the Indemnity Cap in the aggregate for all Indemnity Claims. Seller and the other members of Seller Group will not be entitled to recover from Buyer for any Indemnity Claim under Section 7.3(a) of this Agreement any monetary amount in respect of Losses in excess of the Indemnity Cap in the aggregate for all Indemnity Claims. Claims with respect to a breach of Section 4.11(p) shall not be subject to the Indemnity Cap; provided, however, that in no event shall Seller be required to indemnify Buyer or any other members of the Buyer Group for Losses in connection with such breach in excess of the Purchase Price.

(f) No Contribution. Seller will not have any right of contribution, right of indemnity or other right or remedy against the Company in connection with any indemnification obligation or any other Liability to which Seller may become subject under or in connection with this Agreement.

(g) Qualifications. Notwithstanding anything in this Agreement to the contrary, for purposes of the indemnification obligations under this Article 7, the representations and warranties contained in this Agreement will be considered without regard to any “material,” “Material Adverse Effect” or similar non-monetary qualifications (other than Knowledge qualifications) contained therein for purposes of (i) determining the amount of any Losses and (ii) determining whether or not any breaches of such representations or warranties have occurred.

(h) Representations and Warranties. Notwithstanding any other provision of this Agreement, Buyer shall be entitled to be indemnified by Seller pursuant to Section 7.2(a) and Section 7.2(b) regardless of: (a) any due diligence done by Buyer and its representatives prior to the date hereof and (b) any knowledge or information known or available to Buyer prior to the date hereof from Seller or any other source.

Section 7.5 Procedures for Third Party Claims.

(a) Promptly after receipt by an Indemnified Party of notice of the commencement of any Action by a third party (a “**Third Party Claim**”) with respect to any matter for which indemnification is or may be owing pursuant to Section 7.2 or 7.3 hereof, the Indemnified Party will give notice thereof to the Indemnifying Party, provided, however, that the failure of the Indemnified Party to notify the Indemnifying Party will not relieve the Indemnifying Party of any of its obligations hereunder, except to the extent that the Indemnifying Party demonstrates that the defense of such Third Party Claim has been actually prejudiced by the Indemnified Party’s failure to give such notice.

(b) If any Action referred to in Section 7.5(a) is brought against an Indemnified Party or the Company and the Indemnified Party gives notice to the Indemnifying Party of the commencement of such Action, the Indemnifying Party will be entitled to participate in such Action, and (unless (x) the Indemnifying Party is also a party to such Action and the Indemnified Party determines in good faith that joint representation would be inappropriate upon the advice of outside counsel that a conflict of interest exists between the Indemnified Party and the Indemnifying Party with respect to such Action, or (y) the Indemnifying Party fails to provide reasonable assurance to the Indemnified Party of its financial capacity to defend such Action and provide indemnification with respect to such Action) may assume the defense of such Action with counsel reasonably satisfactory to the Indemnified Party and, after notice from the Indemnifying Party to the Indemnified Party of its election to assume the defense of such Action, the Indemnifying Party will not, as long as it diligently conducts such defense, be liable to the Indemnified Party under this Section 7.5 for any fees of other counsel with respect to the defense of such Action, in each case subsequently incurred by the Indemnified Party in connection with the defense of such Action.

(c) If the Indemnifying Party is entitled to and assumes the defense of an Action, no compromise or settlement of such claims or Action may be effected by the Indemnifying Party without the Indemnified Party’s written consent unless (A) there is no effect on or grounds for the basis of any other Claims that may be made against the Indemnified Party, (B) the sole relief provided is monetary damages that are paid in full by the Indemnifying Party and/or performance that is performed in full by the Indemnifying Party, and (C) the Indemnified Party will have no Liability with respect to any compromise or settlement of such claims or Action. Notwithstanding the assumption by the Indemnifying Party of the defense of any Claim or Action, the Indemnified Party will be permitted to join in such defense and to employ counsel at its own expense. Subject to Section 7.5(d), notwithstanding anything to the contrary contained in this Agreement, the Indemnified Party shall not compromise or settle any Third Party Claim or agree to extend

any applicable statute of limitations without the prior written approval of the Indemnifying Party (which consent shall not be unreasonably withheld, delayed or conditioned).

(d) Notwithstanding the foregoing, if there is a reasonable probability that an Action may result in the Indemnified Party or its Affiliates having to pay monetary Losses for which it would not be entitled to indemnification under this Agreement or having to perform specific performance, the Indemnified Party may, by notice to the Indemnifying Party, assume the exclusive right to defend, compromise or settle such Action, but the Indemnifying Party will not be bound by any compromise or settlement thereof effected without its written consent (which consent shall not be unreasonably withheld, delayed or conditioned) or any other result occurring after the Indemnifying Party reasonably requested a compromise or settlement that would have been fully performed by the Indemnifying Party but such request was rejected by the Indemnified Party.

(e) The Indemnifying Party and the Indemnified Party agree to provide each other with reasonable access during regular business hours to the properties, books and records and Representatives of the other, as reasonably necessary in connection with the preparation for an existing or anticipated Action involving a Third Party Claim and its obligations with respect thereto pursuant to this Article 7.

Section 7.6 Indemnification Procedures. The following procedures will apply to any claim for indemnification by Buyer Group or the Seller Group that does not involve a Third Party Claim:

(a) Notice of Claim. A Notice of Claim will be given as soon as practicable, but in no event later than sixty (60) days, after the Indemnified Party determines that it is or may be entitled to indemnification pursuant to this Agreement; provided, however, that failure to provide notice will not prejudice the Indemnified Party's right to indemnity, except to the extent the Indemnifying Party prejudiced by the Indemnified Party's failure to give such notice. Notice of Claim will be made as follows:

(i) in the case of any Indemnity Claim by any member of Buyer Group, by Buyer to Seller at the address and in the manner provided in Section 8.1 (Notices). Buyer will be the Indemnified Party with respect to Indemnity Claims pursuant to Section 7.2, and (except as provided in Section 7.5) no liability in respect of any such Indemnity Claim will be contested, settled, admitted, litigated or otherwise dealt with by or on behalf of Buyer Group for this purpose by any person other than Buyer or its designee; and

(ii) in the case of any Indemnity Claim by any member of the Seller Group against Buyer, by Seller to Buyer at the address and in the manner provided in Section 8.1 (Notices). Seller will be the Indemnified Party with respect to Indemnity Claims pursuant to Section 7.3, and (except as provided in Section 7.5) no liability in respect of any such Indemnity Claim will be contested, settled, admitted, litigated or otherwise dealt with by or on behalf of the Seller Group for this purpose by any person other than Seller or its designee.

(b) Dispute Notice. If the Indemnifying Party disputes (x) its obligation to indemnify the Indemnified Party in respect of any Indemnity Claim set forth in a Notice of Claim, or (y) the Indemnity Claim Amount set forth in a Notice of Claim, a dispute notice (“*Dispute Notice*”) will be given as soon as practicable, but in no event later than thirty (30) days, after the Notice of Claim is given, as follows:

(i) in the case of any Indemnity Claim by any member of Buyer Group against Seller, a Dispute Notice may be given only by Seller, and if given, will be sent by Seller to Buyer at the address and in the manner provided in Section 8.1 (Notices); and

(ii) in the case of any Indemnity Claim by any member of the Seller Group against Buyer, a Dispute Notice may be given only by Buyer, and if given, will be sent by Buyer to Seller at the address and in the manner provided in Section 8.1 (Notices).

(A) If no Dispute Notice is given within such thirty (30) day period, the validity of the claim for indemnification and the Indemnity Claim Amount, each as set forth in the Notice of Claim, will be deemed to be agreed, effective on the first (1st) day following such thirty (30) day period, and the Indemnity Claim Amount set forth in the Notice of Claim will immediately be an Indemnity Amount Payable of the relevant Indemnifying Party.

(B) If a Dispute Notice is given within such thirty (30) day period, then:

(1) The portion, if any, of the Indemnity Claim Amount which is not disputed in the Dispute Notice will immediately be an Indemnity Amount Payable of the relevant Indemnifying Party.

(2) Buyer and Seller will negotiate in good faith to settle the dispute, and the portion, if any, of the Indemnity Claim Amount which Buyer and Seller agree in writing is payable will immediately be an Indemnity Amount Payable of the relevant Indemnifying Party.

(3) If Buyer and Seller are unable to resolve any portion of the Indemnity Claim Amount within two (2) months following the date the Dispute Notice is given, either Buyer or Seller may initiate proceedings specified in Section 8.13 (Governing Law; Venue; and Jurisdiction) of this Agreement to obtain resolution of the dispute.

(4) If neither Buyer nor Seller initiates legal proceedings in respect of the dispute within twelve (12) months following the date the Dispute Notice is given, the portion of the Indemnity Claim Amount which is disputed will not be an Indemnity Amount Payable, and the Indemnified Party will have no further right, under this Agreement, to seek to recover such amount from the Indemnifying Party.

(5) If Buyer or Seller initiates legal proceedings within the twelve (12) month period specified in Section 7.6(b)(ii)(B)(4), the amount, if any, determined in a Final Order as payable by the Indemnifying Party will be

an Indemnity Amount Payable of the relevant Indemnifying Party as of the date of such Final Order.

Section 7.7 Payments of Indemnity Amounts Payable by Buyer. Subject to the limitations in Section 7.4, Buyer will pay to each relevant Indemnified Party any Indemnity Amount Payable by Buyer, by wire transfer of immediately available dollars (or as otherwise directed pursuant to any Final Order or as otherwise agreed by the Indemnified Party and the Indemnifying Party) to an account designated by Seller, promptly and in no event later than five (5) Business Days after such Indemnity Amount Payable is established in accordance with this Agreement.

Section 7.8 Payments of Indemnity Amounts Payable by Seller. Subject to the limitations in Section 7.4, any Indemnity Amount Payable by Seller to each relevant Indemnified Party will be paid by wire transfer of immediately available dollars (or as otherwise directed pursuant to any Final Order or as otherwise agreed by the Indemnified Party and the Indemnifying Party) to an account designated by Buyer, promptly and in no event later than five (5) Business Days after such Indemnity Amount Payable is established in accordance with this Agreement.

Section 7.9 Exclusive Remedy. Subject to Section 8.14, the indemnification obligations of the Parties contained in this Agreement shall, if the Closing Date occurs, be the sole and exclusive remedy of the Parties hereto and their Affiliates, successors and assigns with respect to any and all claims for Losses sustained or incurred arising out of or relating to any breach of representation, warranty, covenant or agreement contained in this Agreement, including any claims with respect to environmental, health and safety matters, including any such matters under any Environmental Laws. Subject to Section 8.14, each Party hereby expressly waives and disclaims, and agrees that it shall not assert, any right, remedy (including the remedy of rescission) or claim in respect of any such breach or Losses based on any cause or form of action whatsoever, except as and to the extent permitted in this Article 7. This provision shall not limit any available remedy of the Party seeking indemnification for any Losses resulting from, or related to the fraud or willful misconduct of another Party. Nothing in this Section is intended to constitute a waiver or limitation of any rights that either Party (or their respective Affiliates) may have to assert claims against third parties, including contractors performing any work in connection with the Project.

ARTICLE 8

MISCELLANEOUS

Section 8.1 Notices.

(a) Unless this Agreement specifically requires otherwise, any notice, demand or request provided for in this Agreement, or served, given or made in connection with it, will be in writing and will be deemed properly served, given or made if delivered in person or sent by facsimile or email (in the case of delivery by facsimile or email, solely if receipt is confirmed) or sent by registered or certified mail, postage prepaid, or by a nationally

recognized overnight courier service that provides a receipt of delivery, in each case, to the Parties at the addresses specified below:

If to Buyer, to:

Southwestern Public Service Company
414 Nicollet Mall, 401-04
Minneapolis, MN 55401-1927
Attention: George E. Tyson II, Senior Vice President, Corporate Development
Telephone: (612) 215-4627
Facsimile: (612) 215-4575
Email: george.tyson@xcelenergy.com

With a copy to:

Southwestern Public Service Company
414 Nicollet Mall, 401-09
Minneapolis, MN 55401-1927
Attention: Scott Wilensky, Executive Vice President and General Counsel
Telephone: (612) 330-5942
Facsimile: (612) 215-9025
Email: scott.wilensky@xcelenergy.com

And a copy to (which shall not constitute notice):

Orrick, Herrington & Sutcliffe LLP
Suite 4100
1301 McKinney Street
Houston, TX 77010
Attention: Dahl Thompson
Telephone: (713) 658-6611
Facsimile: (713) 658-6401
Email: Dahl.thompson@Orrick.com

If to Seller, to:

Invenergy Wind Development North America LLC
One South Wacker Drive, Suite 1800
Chicago, IL 60606
Attention: General Counsel
Telephone: (312) 224-1400
Email: GeneralCounsel@invenergyllc.com

(b) Notice given by personal delivery, mail or overnight courier pursuant to this Section 8.1 will be effective upon physical receipt. Notice given by facsimile or email pursuant to this Section 8.1 will be effective as of the date of confirmed delivery if

delivered before 5:00 p.m. Central Time on any Business Day or the next succeeding Business Day if confirmed delivery is after 5:00 p.m. Central Time on any Business Day or during any non-Business Day.

Section 8.2 Entire Agreement. Except for the Confidentiality Agreement, this Agreement and the Ancillary Agreements supersede all prior discussions and agreements between the Parties with respect to the subject matter hereof, and this Agreement, the Ancillary Agreements, the Confidentiality Agreement and the other documents delivered pursuant to this Agreement contain the sole and entire agreement between the Parties hereto with respect to the subject matter hereof. The Parties hereto have voluntarily agreed to define their rights, liabilities and obligations with respect to the subject matter hereof exclusively in contract pursuant to the express terms and provisions of this Agreement, the Ancillary Agreements, the Confidentiality Agreement and the other documents delivered pursuant to this Agreement; and the Parties hereto expressly disclaim that they are owed any duties or are entitled to any remedies not expressly set forth in this Agreement. Furthermore, the Parties each hereby acknowledge that this Agreement embodies the justifiable expectations of sophisticated parties derived from arm's-length negotiations; all Parties specifically acknowledge that no Party has any special relationship with another Party that would justify any expectation beyond that of an ordinary buyer and an ordinary seller in an arm's-length transaction. The sole and exclusive remedies for any breach of the terms and provisions of this Agreement (including any representations and warranties set forth herein, made in connection herewith or as an inducement to enter into this Agreement) or any claim or cause of action otherwise arising out of or related to the subject matter hereof will be those remedies available at law or in equity for breach of contract only (as such contractual remedies have been further limited or excluded pursuant to the express terms of this Agreement); and the Parties hereby agree that neither party hereto will have any remedies or cause of action (whether in contract or in tort) for any statements, communications, disclosures, failure to disclose, representations or warranties not set forth in this Agreement, absent fraud.

Section 8.3 Expenses. Except as otherwise expressly provided in this Agreement, whether or not the transactions contemplated hereby are consummated, each Party will pay its own costs and expenses incurred in anticipation of, relating to and in connection with the negotiation and execution of this Agreement and the transactions contemplated hereby, including all expenses and costs incurred to obtain approvals required by such Party from Governmental Authorities.

Section 8.4 Disclosure. Seller may, at its option, include in the Schedules items that are not material in order to avoid any misunderstanding, and any such inclusion, or any references to dollar amounts, will not be deemed to be an acknowledgment or representation that such items are material, to establish any standard of materiality or to define further the meaning of such terms for purposes of this Agreement. Information disclosed in any Schedule will constitute a disclosure for purposes of all other Schedules notwithstanding the lack of specific cross-reference thereto, but only to the extent the applicability of such disclosure to such other Schedule is readily apparent. In no event will the inclusion of any matter in the Schedules be deemed or interpreted to broaden Seller's representations, warranties, covenants or agreements contained in this Agreement. The

mere inclusion of an item in the Schedules will not be deemed an admission by Seller that such item represents a material exception or fact, event, or circumstance or that such item is reasonably likely to result in a Material Adverse Effect. Each Party will promptly notify the other Party upon becoming aware of (a) the occurrence, or failure to occur, of any event, which occurrence or failure has caused any representation or warranty of such Party contained in this Agreement or in any exhibit, schedule, certificate, document or written instrument attached hereto to be untrue or inaccurate in any material respect, (b) any material failure of such Party to comply with, perform or satisfy, in any respect, any covenant, condition or agreement to be complied with, performed by or satisfied by it under this Agreement or any exhibit, schedule, certificate, document or written instrument attached hereto and (c) any notice or other communication from any Governmental Authority in connection with this Agreement, the Company Assignment Agreement or the transactions contemplated herein and therein; provided, that such disclosure will not be deemed to cure, or to relieve any Party of any liability or obligation with respect to, any breach of or failure to satisfy any representation, warranty, covenant or agreement or any condition hereunder, and will not affect any Party's right with respect to indemnification hereunder.

Section 8.5 Waiver. Any term or condition of this Agreement may be waived at any time by the Party that is entitled to the benefit thereof, but no such waiver will be effective unless set forth in a written instrument duly executed by or on behalf of the Party waiving such term or condition. No waiver by any Party of any term or condition of this Agreement, in any one or more instances, will be deemed to be or construed as a waiver of the same or any other term or condition of this Agreement on any future occasion. All remedies, either under this Agreement or by Law or otherwise afforded, will be cumulative and not alternative.

Section 8.6 Amendment. This Agreement may be amended, supplemented or modified only by a written instrument duly executed by or on behalf of each Party.

Section 8.7 No Third Party Beneficiary. Except for the provisions of Sections 7.2 and 7.3 (which are intended for the benefit of the Persons identified therein), the terms and provisions of this Agreement are intended solely for the benefit of the Parties and their respective successors or permitted assigns, and it is not the intention of the Parties to confer third-party beneficiary rights upon any other Person. For the avoidance of doubt, no Person who is not a Party to this Agreement, may challenge any termination of this Agreement, for any reason, or enforce or seek to enforce any provisions of this Agreement (except as set forth in the first sentence of this Section).

Section 8.8 Assignment; Binding Effect. Buyer may assign its rights under this Agreement to any Affiliate or to Buyer's lenders for collateral security purposes, but such assignment will not release Buyer from its obligations hereunder. Except as provided in the preceding sentence, neither this Agreement nor any right, interest or obligation hereunder may be assigned at any time (including without limitation following Closing) by any Party without the prior written consent of each of the other Party. For the avoidance of doubt, no merger or consolidation of the Company with or into the Buyer or any Affiliate

of Buyer, or any other assignment by operation of law, shall constitute a breach of this Agreement.

Section 8.9 Headings. The headings used in this Agreement have been inserted for convenience of reference only and do not define or limit the provisions hereof.

Section 8.10 Invalid Provisions. If any provision of this Agreement is held to be illegal, invalid or unenforceable under any present or future Law, and if the rights or obligations of any Party under this Agreement will not be materially and adversely affected thereby, such provision will be fully severable, this Agreement will be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part hereof, the remaining provisions of this Agreement will remain in full force and effect and will not be affected by the illegal, invalid or unenforceable provision or by its severance herefrom and in lieu of such illegal, invalid or unenforceable provision, there will be added automatically as a part of this Agreement a legal, valid and enforceable provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible.

Section 8.11 Counterparts; Facsimile. This Agreement may be executed in any number of counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument. Any facsimile or portable document format (pdf) copies hereof or signature hereon will, for all purposes, be deemed originals.

Section 8.12 Governing Law; Venue; and Jurisdiction.

(a) This Agreement, and all claims or causes of action (whether in contract or tort) that may be based upon, arise out of or relate to this Agreement, or the negotiation, execution or performance of this Agreement (including any claim or cause of action based upon, arising out of or related to any representation or warranty made in or in connection with this Agreement or as an inducement to enter into this Agreement), will be governed by the laws of the State of New Mexico without giving effect to any conflict or choice of law provision.

(b) THE PARTIES HEREBY IRREVOCABLY SUBMIT TO THE EXCLUSIVE JURISDICTION OF ANY STATE OR FEDERAL COURT IN NEW MEXICO FOR PURPOSES OF ANY SUIT, ACTION OR OTHER PROCEEDING ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY AND EACH PARTY HEREBY CONSENTS TO THE JURISDICTION OF SUCH COURTS (AND OF THE APPROPRIATE APPELLATE COURTS THEREFROM) IN ANY SUCH SUIT, ACTION OR PROCEEDING AND IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF THE VENUE OF ANY SUCH SUIT, ACTION OR PROCEEDING IN ANY SUCH COURT OR THAT ANY SUCH SUIT, ACTION OR PROCEEDING THAT IS BROUGHT IN ANY SUCH COURT HAS BEEN BROUGHT IN AN INCONVENIENT FORUM. DURING THE PERIOD A LEGAL DISPUTE THAT IS FILED IN ACCORDANCE WITH THIS SECTION 8.12 IS PENDING BEFORE A COURT, ALL ACTIONS, SUITS OR PROCEEDINGS WITH RESPECT TO SUCH LEGAL DISPUTE

OR ANY OTHER LEGAL DISPUTE, INCLUDING ANY COUNTERCLAIM, CROSS-CLAIM OR INTERPLEADER, WILL BE SUBJECT TO THE EXCLUSIVE JURISDICTION OF SUCH COURT. EACH PARTY HEREBY WAIVES, AND WILL NOT ASSERT AS A DEFENSE IN ANY LEGAL DISPUTE, THAT (A) SUCH PARTY IS NOT SUBJECT THERETO, (B) SUCH ACTION, SUIT OR PROCEEDING MAY NOT BE BROUGHT OR IS NOT MAINTAINABLE IN SUCH COURT, (C) SUCH PARTY'S PROPERTY IS EXEMPT OR IMMUNE FROM EXECUTION, (D) SUCH ACTION, SUIT OR PROCEEDING IS BROUGHT IN AN INCONVENIENT FORUM OR (E) THE VENUE OF SUCH ACTION, SUIT OR PROCEEDING IS IMPROPER. A FINAL JUDGMENT IN ANY ACTION, SUIT OR PROCEEDING DESCRIBED IN THIS SECTION 8.12 FOLLOWING THE EXPIRATION OF ANY PERIOD PERMITTED FOR APPEAL AND SUBJECT TO ANY STAY DURING APPEAL WILL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY APPLICABLE LAWS.

(c) EACH PARTY HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY.

Section 8.13 Waiver of Remedies; Legal Fees.

(a) All claims, obligations, liabilities, or causes of action (whether in contract or in tort, in law or in equity, or granted by statute) that may be based upon, in respect of, arise under, out or by reason of, be connected with, or relate in any manner to this Agreement, or the negotiation, execution, or performance of this Agreement (including any representation or warranty made in, in connection with, or as an inducement to, this Agreement), may be made only against (and are those solely of) Seller and Buyer ("**Contracting Parties**"). No Person who is not a Contracting Party, including without limitation any director, officer, employee, incorporator, member, partner, manager, stockholder, affiliate, agent, attorney, or Representative of, and any financial advisor or lender to, any Contracting Party, or any director, officer, employee, incorporator, member, partner, manager, stockholder, affiliate, agent, attorney, or Representative of, and any financial advisor or lender to, any of the foregoing ("**Nonparty Affiliates**"), will have any liability (whether in contract or in tort, in law or in equity, or granted by statute) for any claims, causes of action, obligations, or liabilities arising under, out of, in connection with, or related in any manner to this Agreement or based on, in respect of, or by reason of this Agreement or its negotiation, execution, performance, or breach; and, to the maximum extent permitted by law, each Contracting Party hereby waives and releases all such liabilities, claims, causes of action, and obligations against any such Nonparty Affiliates. Without limiting the foregoing, to the maximum extent permitted by law, (a) each Contracting Party hereby waives and releases any and all rights, claims, demands, or causes of action that may otherwise be available at law or in equity, or granted by statute, to avoid or disregard the entity form of a Contracting Party or otherwise impose liability of a Contracting Party on any Nonparty Affiliate, whether granted by statute or based on theories of equity, agency, control, instrumentality, alter ego, domination, sham, single business enterprise, piercing the veil, unfairness, undercapitalization, or otherwise; and (b) each Contracting Party disclaims any reliance upon any Nonparty Affiliates with respect

to the performance of this Agreement or any representation or warranty made in, in connection with, or as an inducement to this Agreement.

(b) If a court of competent jurisdiction determines that either Party has breached this Agreement, such Party will reimburse the non-breaching Party for its costs and expenses (including, without limitation, legal fees and expenses) incurred in connection with such litigation.

Section 8.14 Specific Performance. The Parties acknowledge and agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the Parties shall be entitled to an injunction or injunctions to prevent breaches or threatened breaches of this Agreement and to specifically enforce the terms and provisions of this Agreement and any other agreement or instrument executed in connection herewith or contemplated hereby, and the Parties agree that specific performance is the remedy intended by the parties for any such breaches or threatened breaches. The Parties further agree that (a) by seeking the remedies provided for in this Section 8.14, a Party shall not in any respect waive its right to seek any other form of relief that may be available to a party under this Agreement, including monetary damages and (b) the commencement of any Action pursuant to this Section 8.14 or anything contained in this Section 8.14 shall not restrict or limit any other remedies under this Agreement that may be available then or thereafter.

Section 8.15 Reinstatement. If and to the extent that for any reason any payment made pursuant to this Agreement is rescinded or otherwise restored to the Party that originally made such payment or any other Person, whether as a result of any proceedings in bankruptcy or reorganization or otherwise or as a result of any settlement or compromise, the obligations of such Party hereunder shall automatically be reinstated, and such Party shall pay the other Party on demand all of its reasonable costs and expenses (including reasonable fees of counsel) incurred in connection with such rescission or restoration.

[Signature pages follow]

IN WITNESS WHEREOF, this Agreement has been duly executed and delivered by the duly authorized officer of each Party as of the date first above written.

SELLER:

INVENERGY WIND DEVELOPMENT NORTH AMERICA LLC,
a Delaware limited liability company

By: Michael Baird
Name: Michael Baird
Title: Vice President



COMPANY:

SAGAMORE WIND ENERGY LLC,
a Delaware limited liability company

By: Michael Baird
Name: Michael Baird
Title: Vice President

IN WITNESS WHEREOF, this Agreement has been duly executed and delivered by the duly authorized officer of each Party as of the date first above written.

BUYER:

SOUTHWESTERN PUBLIC SERVICE COMPANY,
a New Mexico corporation

By: David T. Hudson
Name: David T. Hudson
Title: President

Exhibit A

Form of Company Assignment Agreement

Assignment of Membership Interests Agreement

This Assignment of Membership Interests Agreement (the “Agreement”) is entered into this ____ day of _____, 2017 by and between Invenergy Wind Development North America LLC, a Delaware limited liability company (the “Assignor”), and Southwestern Public Service Company, a New Mexico corporation (the “Assignee”).

RECITALS

WHEREAS, Assignor owns all of the membership interests (the “Membership Interests”) in [●], a [●] (the “Company”);

WHEREAS, the Assignor, the Company and Assignee entered into that certain Purchase and Sale Agreement dated March 9, 2017 (the “PSA”);

WHEREAS, Assignor agreed in the PSA to assign, transfer and set over onto Assignee the Membership Interests and all of Assignor’s right, title and interests therein and thereto subject to the terms and conditions of the PSA; and

WHEREAS, Assignee agreed in the PSA to assume all the Membership Interests and all of the obligations of Assignor as sole member and holder of the Membership Interests subject to the terms and conditions of the PSA.

NOW THEREFORE, in consideration of the exchange of representations, warranties and covenants set forth herein and in the PSA and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto covenant and agree as follows:

1. **Assignment by Assignor.** The Assignor hereby assigns, transfers and sets over onto the Assignee all of the Membership Interests and all of Assignor’s right, title and interests therein and thereto including all benefits, advantages, rights and obligations related thereto (the “Assignment”).
2. **Assumption by Assignee.** The Assignee hereby accepts the Assignment and assumes all the Membership Interests and all of Assignor’s right, title and interests therein and thereto including all benefits, advantages, rights and obligations related thereto.
3. **PSA.** This Agreement is executed and delivered pursuant to the PSA and is subject to all of the terms, conditions and obligations set forth therein. Nothing in this Agreement shall, or shall be deemed to, modify or otherwise affect any provisions of the PSA or affect the rights of the parties under the PSA. In the event of any conflict between the provisions hereof and the provisions of the PSA, the provisions of the PSA shall govern and control.

4. **Counterparts.** This document may be executed in any number of counterparts, each of which may be executed by any one or more of the parties hereto, but all of which shall constitute one instrument.

5. **Governing Law.** This Agreement and the rights and obligations of the Parties and any dispute arising under or relating thereto shall be governed by the laws of the State of New Mexico, without giving effect to the conflict of law rules thereof.

[Signature Page Follows]

IN WITNESS WHEREOF, Assignor and Assignee have executed this Agreement as of the date and year first set forth above.

Assignee:

Southwestern Public Service Company,
a New Mexico corporation

By: _____
Name: _____
Its: _____

Assignor:

**Invenergy Wind Development North America
LLC,**
a Delaware limited liability company

By: _____
Name: _____
Its: _____

Exhibit B

WIND LEASE AND EASEMENT AGREEMENT

Sagamore Wind Energy
Roosevelt County, State of New Mexico

THIS WIND LEASE AND EASEMENT AGREEMENT (this “**Agreement**”) is made, dated and effective as of [_____], 20[___] (the “**Effective Date**”), by and between [_____] (collectively, and together with their successors, assigns and heirs, comprising “**Owner**”), and Sagamore Wind Energy LLC, a Delaware limited liability company (together with its transferees, successors and assigns, “**Grantee**”), and in connection herewith, Owner and Grantee agree, covenant and contract as set forth in this Agreement. Owner and Grantee are sometimes referred to in this Agreement as a “**Party**” or collectively as the “**Parties**”.

1. **Lease; Easement.** For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by Owner and Grantee, upon the terms and conditions set forth in this Agreement, Owner hereby grants and conveys to Grantee an exclusive easement and lease to convert, maintain and capture the flow of wind and wind resources over across and through the surface estate of that certain real property, including, but not limited to, the air space thereon, located in Roosevelt County, (the “**County**”), State of New Mexico consisting of [_____()] acres, as more particularly described in Exhibit A attached hereto and incorporated herein (the “**Property**”) for the purposes set forth herein.

1.1 Purposes of the Lease/Easement. This Agreement is solely and exclusively for wind energy purposes (as such term is broadly defined, including ancillary rights related thereto and necessary for the development and operation of Windpower Facilities (as defined below)), and not for any other purpose, and Grantee shall have the exclusive right to develop and use the Property for wind energy purposes and to derive all profits therefrom, including but not limited to the following activities (collectively, “**Windpower Activities**”):

(a) Converting wind energy into electrical energy, and collecting and transmitting the electrical energy so converted;

(b) Determining the feasibility of wind energy conversion and other power generation on the Property or on adjacent lands, including studies of wind speed, wind direction and other meteorological data, environmental conditions and extracting soil samples;

(c) Constructing, laying down, installing, using, replacing, relocating, reconstructing and removing from time to time, and monitoring, maintaining, repairing and operating the following only for the benefit of the Project or Projects (as defined below) (i) wind power generating machines, of any kind (including supporting towers, foundations and any other associated equipment or structures)(collectively, “**Wind Turbines**”); (ii) overhead and underground electrical distribution, collection, transmission and communications lines, electric transformers, electric substations, energy storage facilities, telecommunications equipment, and power generation facilities; (iii) roads and crane pads; (iv) meteorological towers and wind measurement equipment; (v) control buildings, operations and maintenance building, maintenance yards, temporary construction laydown and staging yards and related facilities and equipment; and

(vi) undertaking any other activities, whether accomplished by Grantee or a third party authorized by Grantee, that Grantee reasonably determines are necessary, useful or appropriate to accomplish any of the foregoing (all of the above, including the Wind Turbines, collectively referred to as “**Windpower Facilities**”). The term “**Project**”, for the purposes of this Agreement, means an integrated wind energy generation system, consisting of Windpower Facilities, that is constructed and operated on the Property, and/or adjacent lands, by Grantee, or a third party authorized by Grantee. Grantee may determine whether any particular group of Windpower Facilities constitutes a single Project or multiple Projects for purposes of this Agreement, and in the case of multiple Projects, which portion of the Property shall be included within each Project.

1.2 Other Uses. Subject to Sections 9.2 and 9.5 below, Owner reserves the right to use the Property for any purpose other than wind energy purposes; provided, however, that such uses shall exclude use of the property for the development or generation of wind energy. During the Term when Grantee construction is or is about to occur, Owner agrees to provide Grantee with current information concerning the status and location of all other land uses occurring on the Property (including, without limitation, agricultural use, industrial use and oil and gas exploration and production activities). Any new leases or renewals and or extensions of existing leases, options to lease, seismic operations, or any other agreement made by Owner with a third party regarding the Property (including any of the foregoing related to water, oil, gas or other minerals) shall contain language that states that such third party shall not disturb, interfere with, preclude, or destroy Grantee’s rights hereunder.

1.3 Mineral Rights. Without limiting the generality of the foregoing, Owner shall fully cooperate with and assist Grantee in obtaining a recognition agreement, non-disturbance agreement or other appropriate agreement from each party from time to time holding a mineral interest, lease, grant or reservation of interest under or affecting the Property, confirming to Grantee’s reasonable satisfaction that the use and exploitation of said existing mineral leases or interests is not anticipated to interfere with or adversely affect Grantee’s planned or contemplated uses, disturb the subsurface under the Windpower Facilities or the free flow of wind across the Property. Owner shall notify Grantee in writing within ten (10) days after any notice of mineral exploration or development in, on, or under the Property, including without limitation a notice of intent to drill, petition to appoint an appraiser or notice provided by a mineral operator under the Surface Owner Protection Act (Section 7-12-1 through Section 7-12-10 NMSA 1978, as amended from time to time), and such notice shall include a copy of any documents and information provided to Owner in relation to the notice. Owner and Grantee shall cooperate in good faith and work jointly as to, and each party shall be permitted to participate in, any (i) response to any such notification; (ii) negotiation with any mineral rights holder, including without limitation acceptance or rejection of any surface use and compensation proposal and/or entry into any surface use and compensation agreement; (iii) enforcement of the rights of the surface owner as set forth in the Surface Owner Protection Act, including without limitation recovery of costs and attorneys’ fees and (iv) pursuit of compensation for damages associated with mineral exploration and development in, on or under the Property.

2. **Grant of Additional Easements.**

2.1 Owner hereby grants, conveys and warrants to Grantee the following additional easements upon, over, across and under the Property:

(a) Overhang. An exclusive easement to allow the rotors of Wind Turbines installed on adjacent land to overhang onto the Property;

(b) Non-Obstruct. An exclusive easement to capture, use and convert the unobstructed wind resources over and across the Property;

(c) Interference. An exclusive easement for electromagnetic, audio, flicker, visual, view, light, noise, vibration, air turbulence, wake, electrical, radio interference, shadow or other effects attributable to the Wind Turbines, or any other Windpower Activities;

(d) Access Easement. A non-exclusive easement for ingress to and egress from the Project or Projects (whether located on the Property, on adjacent property or elsewhere) over and across the Property by means of roads and lanes thereon if existing or later constructed by Owner, or otherwise by such route or routes as Grantee may construct from time to time; and

(e) Other Easements. All other easements reasonably necessary to accomplish the activities permitted by this Agreement, including but not limited to those activities described in Section 1.1.

2.2 Additional Easements. If Grantee wishes to obtain from Owner one or more easements on, over, across, along and/or above any real property that is owned by Owner on the date hereof and adjacent to the Property (each, an “**Additional Easement**”), in connection with, for the benefit of and for purposes incidental to the Project, including the right to install and maintain on the Property (i) transmission lines and facilities, both overhead and underground, which carry electrical energy to and/or from the Project, (ii) communications lines and facilities, both overhead and underground, which carry communications to and/or from the Project, and/or (iii) metering equipment, substations, switching stations, wind measurement equipment and control, maintenance and administration buildings (provided that no sleeping quarters will be allowed) that benefit the Project, then upon request Owner shall grant to Grantee such an easement in such location or locations as Grantee may reasonably request and that are reasonably satisfactory to Owner, provided that Grantee shall agree to pay to Owner a reasonable fee agreed to by Owner for such easement in addition to all other amounts payable by Grantee to Owner hereunder. In this Article, the term “adjacent” when used in the context of describing adjacent property means property owned by Owner which (i) shares a property line; or (ii) is separated only by a local, state or federal public right of way .

2.3 Stand-Alone Easements. Owner acknowledges that commercial operation of the Project may require, from time to time during the Project's existence, additional easements in favor of certain third parties on the Property and on real property that is owned by Owner on the date hereof and adjacent to the Property. Accordingly, if the independent system operator with jurisdiction over the system in which the Project operates, the transmission system owner or operator to whose transmission lines the Project interconnects, or the off-taker to whom output and/or credits from the Project is sold, determines that one or more separate, stand-alone easements (each, a “**Stand-Alone Easement**”) on, over, across, along and/or above the Property and any other real property that is owned by Owner on the date hereof and adjacent to the Property, including the right to install and maintain on the Property (i) transmission lines and facilities, both overhead and underground, which carry electrical energy to and/or from the Project, (ii) communications lines and facilities, both overhead and underground, which carry communications to and/or from the Project, and/or (iii) metering equipment, substations, switching stations, wind

measurement equipment and control, maintenance and administration buildings that benefit the Project, is reasonably required for the efficient and/or safe operation of the Project, then upon request Owner shall grant to such third party such an easement in such location or locations as such party may reasonably request, and that are reasonably satisfactory to Owner, provided that such party shall agree to pay to Owner a reasonable fee agreed to by Owner for such easement in addition to all other amounts payable by Grantee to Owner hereunder.

2.4 Nature of Additional Easements and Stand-Alone Easements. Each Additional and Stand-Alone Easement (i) shall be in the nature of and similar to the Easements granted to Grantee under Section 2.1, and shall be in a recordable form and in a form reasonably acceptable to Grantee, such Affiliate or the grantee of such easement as applicable (which form shall at a minimum include adequate lender-protective provisions) (ii) shall, upon the granting thereof, be included within the meaning of the term “**Easement**”, except where otherwise stated or where the context otherwise requires and (ii) will only be for the purposes described in this Agreement.

3. **Term.**

3.1 **Development Term.** This Agreement shall be for an initial term (the “**Development Term**”) commencing on the Effective Date and continuing until the earlier to occur of: (a) the date on which Grantee begins selling electrical energy generated by substantially all of the Wind Turbines to be included in the Project to a third party power purchaser (as declared by Grantee, the “**Operations Date**”), or (b) the eighth (8th) anniversary of the Effective Date.

3.2 Operations Term. Upon the expiration of the Development Term, the term of this Agreement shall automatically extend for an additional twenty-five (25) year term (the “**Operations Term**”).

3.3 Extended Term. Provided that Grantee has not fully surrendered or terminated this Agreement, then on or before the expiration of the Operations Term, Grantee may, at its option, extend the term of this Agreement for an additional twenty-five (25) year period (the “**Extended Term**”, collectively with the Development Term and Operations Term, the “**Term**”). Grantee may exercise its option to extend this Agreement for the Extended Term by giving Owner written notice thereof on or before the date that is one hundred and eighty (180) days prior to the expiration of the Operations Term.

4. **Payments to Owner.** In consideration of the rights granted hereunder, Grantee will pay Owner the amounts set forth in Exhibit B attached hereto. Exhibit B shall not be recorded without the specific prior written consent of Grantee.

5. **Ownership of Windpower Facilities.** Owner shall have no ownership, lien, security or other interest in any Windpower Facilities installed on the Property, or any profits derived therefrom, and Grantee may remove any or all Windpower Facilities at any time. Except for payments to Owner described in this Agreement, including Exhibit B, Owner shall not be entitled to any other payments or benefits accrued by or from the Project, including, but not limited to, renewable energy credits, environmental credits or tax credits.

6. **Taxes.** Owner shall pay all taxes, assessments, or other governmental charges, general and specific, that shall or may during the Term be imposed on, or arise in connection with the Property itself; provided, however, during the Term, Grantee shall be liable for any incremental increase in such taxes, assessments, or other governmental charges directly resulting from the

presence of the Windpower Facilities on the Property (“**Grantee Taxes**”). To the extent the applicable taxing authority provides a separate tax bill for the Grantee Taxes to Grantee, Grantee shall pay such Grantee Taxes directly to the applicable taxing authorities prior to the date such Grantee Taxes become delinquent. If a separate tax bill for the Grantee Taxes is not provided to Grantee, Grantee shall pay the Grantee Taxes within thirty (30) days following receipt of written demand from Owner of the amount of the Grantee Taxes with a copy of the applicable tax bill. Both Parties shall pay their respective tax bills when due and if either Party fails to make such payments when due, then the other Party may, but shall not be obligated to, pay the taxing authorities the entire amount due on the tax bill, including any interest and/or penalties, and obtain reimbursement for such amount paid on behalf of such Party plus interest (computed from the date of full payment) at a rate equal to the sum of: (i) two percent (2%) per annum; plus, (ii) the prime lending rate as from time to time may be published by The Wall Street Journal under the “Money Rates” section; provided, that in no event shall such total interest exceed the maximum rate permitted by applicable law. If Grantee pays taxes, assessments, and/or real property taxes on behalf of Owner that are Owner’s obligation hereunder, Grantee may offset the amount of such payments against amounts due Owner under this Agreement.

7. **Indemnity/Liability.**

7.1 Each Party (the “**Indemnifying Party**”) shall defend, indemnify and hold harmless the other Party and such other Party's Related Persons (as defined below)(each, an “**Indemnified Party**”) from and against any and all third party (excluding Related Persons) claims, litigation, actions, proceedings, losses, damages, liabilities, obligations, costs and expenses, including reasonable attorneys’, investigators’ and consulting fees, court costs and litigation expenses (collectively, “**Claims**”) suffered or incurred by such Indemnified Party, arising from the negligence or intentional misconduct of the Indemnifying Party. Notwithstanding the foregoing to the contrary, Grantee may elect, upon written notice, to control any or all aspects of the defense of any legal action covered by the prior sentence.

7.2 In no event shall either Party be liable to the other Party to the extent any Claim is caused by, arising from or contributed by the negligence or intentional misconduct of such other Party or any Related Person thereof.

7.3 Except for payments expressly required herein, in no event, whether as a result of breach of contract, warranty, indemnity, tort (including negligence), strict liability or otherwise, shall either Party be liable to the other Party for loss of profit or revenues, loss of business opportunities or for any other special, consequential, incidental, indirect or exemplary damages.

7.4 In no event shall Grantee or its Related Persons be liable to Owner for property damage or personal injuries to Owner or its Related Persons attributable to risks of known and unknown dangers associated with normal day-to-day operation of electrical generating facilities, such as flickering, noise and electromagnetic fields.

7.5 In no event shall either Party or its Related Persons be liable to the Other Party for expenses incurred in such other Party’s lawful enforcement of its rights under this Agreement for a default during any applicable cure period.

7.6 As used herein the term “**Related Person**” shall mean:

(a) With respect to Owner, any principals, employees, servants, guests or invitees of Owner or those third persons over whom Owner exercises actual control; or

(b) With respect to Grantee, any affiliates, contractors, lessees, and sublessees of Grantee, and each of their respective, principals, officers, employees, servants, agents, representatives, subcontractors, licensees, invitees, and/or guests.

7.7 To the extent, if at all, a court of competent jurisdiction determines that Section 56-7-1 NMSA 1978 applies to any indemnification provisions in this Agreement, including certain types of insurance coverage as set forth in Section 56-7-1 NMSA 1978, such contractual indemnities shall not extend to liability, claims, damages, losses or expenses, including attorney fees, arising out of bodily injury to persons or damage to property caused by or resulting from, in whole or in part, the negligence, act or omission of the Indemnified Party or additional insured, as the case may be, its officers, employees or agents and shall further be modified, if required, by the provisions of Section 56-7-1(B) NMSA 1978.

7.8 This Section 7 shall survive the expiration or earlier termination of this Agreement.

8. **Grantee's Representations, Warranties, and Covenants.** Grantee hereby represents, warrants, and covenants to Owner that:

8.1 Grantee's Authority. Grantee has the unrestricted right and authority to execute this Agreement. Each person signing this Agreement on behalf of Grantee is authorized to do so. Upon execution by all Parties hereto, this Agreement shall constitute a valid and binding agreement enforceable against Grantee in accordance with its terms.

8.2 Minimal Impacts. Grantee agrees to conduct its Windpower Activities and to locate and operate its Windpower Facilities in such a way as to reasonably minimize impacts to the Property and to Owner's activities on the Property, to the extent practical, without negatively impacting the Project(s). At least fifteen (15) days prior to Grantee commencing construction of the Windpower Facilities on the Property, Grantee shall provide Owner with a site plan indicating the approximate proposed location of the Wind Turbines and access roads. No later than five (5) days after receipt of the site plan from Grantee, Owner shall provide Grantee with all, if any, suggestions or concerns Owner has regarding the proposed site plan. Grantee shall consider in good faith any such suggestions or concerns Owner may have with the siting of such Wind Turbines and access roads and shall implement those that, in Grantee's reasonable discretion, do not negatively impact the Project. Grantee shall operate and maintain the Windpower Facilities in good order and repair throughout the Term. Grantee shall not store materials, vehicles or equipment on the Property, except to the extent that such materials, vehicles and equipment are directly connected with the construction, operation and/or maintenance of the Windpower Facilities. If Owner's Property is fenced, all access roads constructed by Grantee on the Property shall be gated by Grantee at Grantee's expense, and Owner shall be furnished with keys or other ability to open and close such gates. The terms "**commencing construction**" and "**commencement of construction**" as used in this Agreement shall mean that date on which Grantee begins excavation on a Wind Turbine foundation on the Property. If any event of Force Majeure (as defined in Section 14.1) occurs which requires, in Grantee's reasonable discretion, relocation of Grantee's Windpower Facilities, then subject to the terms and conditions of this Agreement including those contained in this Section 8.2 and the payment provisions set forth

herein, Grantee shall have the right to relocate such Windpower Facilities on the Property at its sole cost and expense.

8.3 Insurance. Grantee shall, at its expense, be responsible for assuring that insurance coverages, as would be customary and reasonable for similarly situated companies performing the work carried out by Grantee at such time, are maintained, including, without limitation, adequate coverage to cover any personal injuries or accidents that could reasonably be expected as a direct result of the Windpower Activities conducted by Grantee or its Related Persons on the Property.

8.4 Requirements of Governmental Agencies. Grantee, at its expense, shall comply in all material respects with valid laws, ordinances, statutes, orders, and regulations of any governmental agency applicable to the Windpower Facilities. Grantee shall have the right, in its sole discretion, to contest by appropriate legal or administrative proceedings, the validity or applicability to Grantee, the Property or Windpower Facilities of any law, ordinance, statute, order, regulation, property assessment, or the like now or hereafter made or issued by any federal, state, county, local or other governmental agency or entity. Any such contest or proceeding shall be controlled and directed by Grantee.

8.5 Construction Liens. Grantee shall keep the Property free and clear of all liens and claims of liens for labor and services performed on, and materials, supplies, or equipment furnished to, the Property in connection with Grantee's use of the Property pursuant to this Agreement; provided, however, that if Grantee wishes to contest any such lien, Grantee shall, at Grantee's sole discretion and within sixty (60) days after it receives written notice of the filing of such lien, either (i) provide a bond to Owner for the amount of such lien, (ii) have the lien removed from the Property in accordance with the processes provided by law or (iii) provide Owner with title insurance insuring Owner's interest in the Property against such lien claim.

8.6 Hazardous Materials. Neither Grantee nor its Related Persons shall violate any federal, state, or local law, ordinance, or regulation relating to the generation, manufacture, production, use, storage, release, discharge, disposal, transportation or presence of asbestos-containing materials, petroleum, explosives or any other substance, material, or waste which is now or hereafter classified as hazardous or toxic, or which is regulated under current or future federal, state, or local laws or regulations, on or under the Property (each, a "**Hazardous Material**"). Grantee shall promptly notify Owner if any violation occurs.

9. **Owner's Representations, Warranties, and Covenants**. Owner hereby represents, warrants, and covenants as follow:

9.1 Owner's Authority. Owner is the sole owner of the Property and has the unrestricted right and authority to execute this Agreement and to grant to Grantee the rights granted hereunder. Each person signing this Agreement on behalf of Owner is authorized to do so. Upon execution by all Parties hereto, this Agreement shall constitute a valid and binding agreement enforceable against Owner in accordance with its terms. Each person/entity comprising Owner, as listed in the preamble to this Agreement, owns the fractional interest in the Property set forth below:

Owner:	<i>Name 1</i>	<i>Name 2</i>	<i>Name 3</i>	<i>Name 4</i>
---------------	---------------	---------------	---------------	---------------

Fractional Ownership:	[]%	[]%	[]%	[]%
-----------------------	------	------	------	------

9.2 No Interference. Owner’s activities and any grant of rights Owner makes to any person or entity, shall not, currently or prospectively, disturb or interfere with: the construction, installation, maintenance, or operation of the Windpower Facilities, whether located on the Property or elsewhere; access over the Property to such Windpower Facilities; any Windpower Activities; or the undertaking of any other Grantee activities permitted hereunder. Without limiting the generality of the foregoing, Owner’s activities or any rights granted by Owner to a third party shall not (i) disturb or interfere with the wind speed or wind direction over the Property, whether by placing telecommunication towers or antennas, planting trees or constructing buildings or other structures, or by engaging in any other activity on the Property or elsewhere that could be reasonably expected to cause a decrease in the output or efficiency of the Windpower Facilities, or (ii) disturb the subsurface such that it could be reasonably expected to damage or interfere with the structural integrity of the Windpower Facilities.

9.3 Liens and Tenants. Except as may be disclosed in the real property records of the County, or as disclosed by Owner in writing to Grantee on or prior to the Effective Date, Owner represents there are no leases (including oil, gas and/or other mineral interests), easements, licenses, rights of way, mortgages, deeds of trust, liens, security interests, mechanic’s liens or any other encumbrances encumbering all or any portion of the Property that could interfere with Grantee’s operations on the Property, including mechanic’s liens. If such Owner representation and warranty is breached and such breach is not caused by Grantee, then Owner shall fully cooperate and assist Grantee in removing or limiting such interference, including, but not limited to, obtaining a subordination and non-disturbance agreement where Grantee deems it necessary, with terms and conditions reasonably requested by Grantee to protect its rights hereunder, from each party that holds such rights (recorded or unrecorded), and in the case of monetary liens such as mechanic’s liens, bonding over any such liens in an amount that may be reasonably requested by Grantee.

9.4 Requirements of Governmental Agencies and Setback Waiver. Owner shall assist and fully cooperate with Grantee, at no out-of-pocket expense to Owner, in complying with or obtaining any land use permits and approvals, building permits, environmental impact reviews or any other permits and approvals required for the financing, construction, installation, monitoring, repair, replacement, relocation, maintenance, operation or removal of Windpower Facilities, including, but not limited to, execution of applications and documents reasonably necessary for such approvals and permits, and participating in any appeals or regulatory proceedings respecting the Windpower Facilities. To the extent permitted by law, Owner hereby waives enforcement of any applicable setback requirements respecting the Windpower Facilities to be placed on or near the Property that are reasonably necessary, in Grantee’s sole and absolute discretion, to carry out Grantee’s Windpower Activities on or near the Property. In addition, Owner shall cooperate with Grantee in Grantee obtaining any necessary approvals or exemptions in accordance with applicable subdivision law and regulation, including without limitation, agreeing not to further subdivide the Property and any adjacent property of Owner for five (5) years from the effective date of this agreement and signing any required documentation of such agreement.

9.5 Hazardous Materials. Neither Owner nor its Related Persons shall violate any federal, state or local law, ordinance or regulation relating to the generation, manufacture, production, use, storage, release, discharge, disposal, transportation or presence of any Hazardous Material. Owner shall promptly notify Grantee if any such violation occurs. To the best of Owner's knowledge, (i) no underground tanks are now located or at any time in the past have been located on the Property or any portion thereof, (ii) no Hazardous Material has been generated, manufactured, transported, produced, used, treated, stored, released, disposed of or otherwise deposited in or on or allowed to emanate from the Property or any portion thereof other than as permitted by applicable law and (iii) there are no Hazardous Materials in, on or emanating from the Property or any portion thereof which may support a claim or cause of action under any applicable law. Owner certifies it has never received any notice or other communication from any governmental authority alleging that the Property is or was in violation of any applicable law.

9.6 Litigation. No litigation is pending, and, to the best of Owner's knowledge, no actions, claims or other legal or administrative proceedings are pending, threatened or anticipated with respect to, or which could affect, the Property. If Owner learns that any such litigation, action, claim or proceeding is threatened or has been instituted, Owner shall promptly deliver notice thereof to Grantee and provide Grantee with periodic updates of the status of said litigation, action, claim or proceeding that is ongoing.

9.7 Title Insurance and Financing. Owner agrees that Owner shall execute and deliver to Grantee any documents reasonably required by the title insurance company and/or a financing party within five (5) business days after presentation of said documents by Grantee; provided, however, in no event shall such documents materially increase any obligation or materially decrease any right of Owner hereunder. Owner shall have no obligation to initiate the process to obtain title insurance on behalf of the Grantee.

9.8 Separate Agreements. As used herein, the following terms shall have the meaning set forth below:

"Leasehold Estate" shall mean the entire right, title and interest in and to the Property, as evidenced by this Agreement and each Separate Agreement, being a portion of the leasehold estate under this Agreement.

"Leasehold Estate Owner" means the owner or its successor or assign then owning the Leasehold Estate under this Agreement or any Separate Agreement.

"Separate Agreement" shall mean a lease agreement entered into evidencing the separation, amendment and restatement of this Agreement with respect to any Leasehold Estate, including any Leasehold Estate remaining subject to this Agreement which is not amended and restated.

(a) Division of Property. Grantee may use the Property for one Project or divide the Property into multiple separate Projects. If Grantee divides the Property into multiple Projects, Owner shall, within thirty (30) days after written request from Grantee, and without any additional consideration, divide this Agreement by entering into and delivering to Grantee two or more new Separate Agreements (which shall supersede and replace this Agreement) that provide Grantee with separate Leasehold Estates in different portions of the Property. Each such new Separate Agreement shall: (i) designate Grantee or any Assignee selected by Grantee as the Grantee thereunder; (ii) specify the portion(s) of the Property to be covered thereby; (iii) contain

the same terms and conditions as this Agreement (except for any requirements that have been fulfilled by Grantee or any Assignee prior to the execution of such new agreements and any modifications that may be required to ensure that each Party's combined obligations under such new agreements do not exceed such Party's obligations under this Agreement); (iv) be for a term equal to the remaining term of this Agreement; (v) contain a grant of the easements granted herein for the benefit of each portion of the Leasehold Estate, covering such portion or portions of the Property as Grantee may designate; and (vi) enjoy the same priority as this Agreement over any lien, encumbrance or other interest created by Owner.

(b) Effect of Separate Agreements. If any Separate Agreement is entered into with respect to a Leasehold Estate, Owner and Grantee hereby agree that the effect of each Separate Agreement is to partition the Leasehold Estate as originally granted under this Agreement and declare that, from and after the effective date thereof, each Separate Agreement is a separate easement agreement covering the Leasehold Estate on the terms set forth therein. Owner and Grantee agree that the Leasehold Estate under each Separate Agreement constitutes an interest in severalty and not an undivided interest in the Leasehold Estate, and that, for avoidance of doubt, all rights and obligations under each Separate Agreement and partitioned interest covered thereby shall be independent of each other such that (i) no default occurring under any Separate Agreement shall be a default under any other Separate Agreement, (ii) all rights and remedies with respect to a default under any Separate Agreement shall be exercised independently of the other Separate Agreements, (iii) each Separate Agreement may be terminated in accordance with its terms without affecting any other Separate Agreement, and (iv) no Leasehold Estate Owner shall be liable for any obligation arising under this Agreement arising prior to the execution of its Separate Agreement (other than if, and solely with respect to, any Leasehold Estate owned by such Leasehold Estate Owner under this Agreement prior thereto) or under any other Separate Agreement. The terms of each Separate Agreement (other than an Leasehold Estate which is not restated and amended and remains subject to the terms of this Agreement) supersede and replace the terms of this Agreement from and after the effective date of each with respect to the Leasehold Estate thereunder, but the Leasehold Estate under each Separate Agreement is derivative of the original Leasehold Estate and, as amended and restated under the terms of each such Separate Agreement, retains the same priority as this Agreement.

(c) Release of Leasehold Estate Owners under Separate Agreements. Owner hereby releases each Leasehold Estate Owner from any and all losses, damages, expenses and other liabilities, including without limitation attorneys' fees and any third party claims, (i) to the extent arising out of or relating to any property demised under this Agreement which is not subject to the Leasehold Estate under the Separate Agreement of such Leasehold Estate Owner, or (ii) to the extent arising under the terms of any other Separate Agreement.

10. Assignment.

10.1 Collateral Assignments. Grantee shall have the absolute right in its sole and exclusive discretion, without obtaining the consent of Owner, to finance, mortgage, encumber, hypothecate, pledge or transfer to one or more Mortgagees any and all of the rights granted hereunder, including the easements granted in Section 2, and/or any or all rights and interests of Grantee in the Windpower Facilities.

10.2 Non-Collateral Assignments. Grantee shall have the right, without the prior consent of Owner, to sell, convey, lease, assign or transfer (including granting co-easements,

separate easements, subeasements) any or all of its rights hereunder in and to any or all of the Property provided such transfer is related to a Project. Grantee shall be relieved of all of its obligations arising under this Agreement, as to all or such portion of its interests in the Property transferred, from and after the effective date of such transfer, provided such rights and obligations have been assumed by such transferee.

10.3 Acquisition of Interest. The acquisition of all interests, or any portion of interest, in Grantee by another person shall not require the consent of Owner or constitute a breach of any provision of this Agreement and Owner shall recognize the person as Grantee's proper successor.

11. **Default and Remedies.**

11.1 Default. If a Party defaults in or otherwise fails to perform an obligation under this Agreement, the non-defaulting Party shall not have the right to exercise any remedies hereunder if the default is cured by the defaulting Party within sixty (60) days of receiving written notice of such default specifying in detail the default and the requested remedy (a "**Notice of Default**"); provided, that if the nature of the default requires, in the exercise of commercially reasonable diligence, more than sixty (60) days to cure, the non- defaulting Party shall not have the right to exercise any remedies hereunder as long as the defaulting Party commences performance of the cure within sixty (60) days of receipt of Notice of Default and thereafter completes such cure with commercially reasonable diligence. Further, if the Parties have a good faith dispute as to whether a payment is due hereunder, the alleged defaulting Party may deposit the amount in controversy (not including claimed consequential, special, exemplary or punitive damages) into escrow with any reputable third party escrowee, or may interplead the same, which amount shall remain undistributed and shall not accrue interest penalties, and no default shall be deemed to have occurred, until final decision by a court of competent jurisdiction or upon agreement by the Parties. No such deposit shall constitute a waiver of the defaulting Party's right to institute legal action for recovery of such amounts.

11.2 Remedies. Except as qualified by Section 12 regarding Mortgagee Protections, should a default remain uncured beyond the applicable cure periods, the non-defaulting Party shall have the right to exercise any and all remedies available to it at law or in equity, all of which remedies shall be cumulative, including the right to enforce this Agreement by injunction, specific performance or other equitable relief. Notwithstanding anything in this Agreement to the contrary or any rights or remedies Owner might have at law or in equity, if any of Grantee's Windpower Facilities are then located on the Property and Grantee fails to perform any of its obligations hereunder beyond applicable cure periods, Owner shall be limited to pursuing damages and Owner may not commence any action to terminate or cancel this Agreement.

12. **Mortgagee Protection**. In the event that any mortgage, deed of trust or other security interest in this Agreement or in any Windpower Facilities, or any portion thereof (a "**Mortgage**"), is entered into by Grantee, then any person who is the mortgagee, grantee or beneficiary of a Mortgage (a "**Mortgagee**") shall, for so long as its Mortgage is in existence and until the lien thereof has been extinguished, be entitled to the protections set forth in this Section 12. Grantee shall send written notice to Owner of the name and address of any such Mortgagee; provided that failure of Grantee to give notice of any such Mortgagee shall not constitute a default under this Agreement and shall not invalidate such Mortgage.

12.1 Mortgagee's Right to Possession, Right to Acquire and Right to Assign. A Mortgagee shall have the absolute right: (i) to assign its security interest; (ii) to enforce its lien and acquire title to the leasehold and/or easement estate by any lawful means; (iii) to take possession of and operate the Windpower Facilities or any portion thereof, to exercise all of Grantee's rights hereunder, and to perform all obligations to be performed by Grantee hereunder, or to cause a receiver to be appointed to do so; and (iv) to acquire the leasehold and/or easement estate by foreclosure or by an assignment in lieu of foreclosure and thereafter to assign or transfer the leasehold and/or easement estate to a third party. Owner's consent shall not be required for the acquisition of the encumbered leasehold, easement or subeasement estate by a third party who acquires the same by foreclosure or assignment in lieu of foreclosure.

12.2 Notice of Default; Opportunity to Cure. As a precondition to exercising any rights or remedies as a result of any default of Grantee, Owner shall give a Notice of Default to each Mortgagee of which it has notice, concurrently with delivery of such notice to Grantee. In the event Owner gives a Notice of Default, the following provisions shall apply:

(a) A "**Monetary Default**" means Grantee's failure to pay when due any monetary obligation of Grantee under this Agreement. Any other default by Grantee is a "**Non-Monetary Default.**"

(b) The Mortgagee shall have the same period after receipt of the Notice of Default to remedy the default, or cause the same to be remedied, as is given to Grantee, plus, in each instance, the following additional time periods: (i) thirty (30) days, for a total of ninety (90) days after receipt of the Notice of Default in the event of any Monetary Default; and (ii) sixty (60) days, for a total of one hundred twenty (120) days after receipt of the Notice of Default in the event of any Non-Monetary Default, provided that such 120-day period shall be extended for the time reasonably required to complete such cure, including the time required for the Mortgagee to perfect its right to cure such Non-Monetary Default by obtaining possession of the Property (including possession by a receiver) or by instituting foreclosure proceedings, provided the Mortgagee acts with reasonable and continuous diligence. The Mortgagee shall have the absolute right to substitute itself for Grantee and perform the duties of Grantee hereunder for purposes of curing such default. Owner expressly consents to such substitution, agrees to accept such performance, and authorizes the Mortgagee (or its employees, agents, representatives or contractors) to enter upon the Property to complete such performance with all the rights, privileges and obligations of the original Grantee hereunder. Owner shall not take any action to terminate this Agreement in law or equity prior to the expiration of the cure periods available to a Mortgagee as set forth above.

(c) During any period of possession of the Property by a Mortgagee (or a receiver requested by such Mortgagee) and/or during the pendency of any foreclosure proceedings instituted by a Mortgagee, the Mortgagee shall pay or cause to be paid all monetary charges payable by Grantee hereunder which have accrued and are unpaid at the commencement of said period and those which accrue thereafter during said period. Following acquisition of Grantee's leasehold and easement estate by the Mortgagee or its assignee or designee as a result of either foreclosure or acceptance of an assignment and/or deed in lieu of foreclosure, or by a purchaser at a foreclosure sale, this Agreement shall continue in full force and effect and the Mortgagee or party acquiring title to Grantee's leasehold and/or easement estate shall, as promptly as reasonably possible, commence the cure of all of Grantee's defaults which are reasonably susceptible of being cured by the Mortgagee or party acquiring title, hereunder and thereafter diligently process such

cure to completion, whereupon such defaults shall be deemed cured without incurring any default hereunder.

(d) Any Mortgagee or other party who acquires Grantee's leasehold and/or easement interest pursuant to foreclosure or assignment in lieu of foreclosure shall be liable to perform the obligations imposed on Grantee by this Agreement for such interest so long as such Mortgagee or other party has ownership of the leasehold and/or easement estate or possession of the Property.

(e) Neither the bankruptcy nor the insolvency of Grantee shall be grounds for terminating this Agreement as long as all material obligations of Grantee under the terms of this Agreement are performed by the Mortgagee in accordance with the terms hereunder.

(f) Nothing herein shall be construed to extend this Agreement beyond the Term or to require a Mortgagee to continue foreclosure proceedings after a default has been cured. If the default is cured and the Mortgagee discontinues foreclosure proceedings, this Agreement shall continue in full force and effect.

12.3 New Agreement to Mortgagee. If this Agreement terminates because of Grantee's default or if the leasehold and/or easement estate is foreclosed upon, or if this Agreement is rejected or disaffirmed pursuant to bankruptcy law or other law affecting creditors' rights, Owner shall, upon written request from any Mortgagee within ninety (90) days after such event, enter into a new agreement for the Property on the following terms and conditions:

(a) The terms of the new agreement shall commence on the date of termination, foreclosure, rejection or disaffirmance and shall continue for the remainder of the Term, at the same rent and subject to the same terms and conditions set forth in this Agreement.

(b) The new agreement shall be executed within thirty (30) days after receipt by Owner of written notice of the Mortgagee's election to enter a new agreement, provided said Mortgagee: (i) pays to Owner all rent and other monetary charges payable by Grantee under the terms of this Agreement up to the date of execution of the new agreement, as if this Agreement had not been terminated, foreclosed, rejected or disaffirmed; (ii) performs all other obligations of Grantee under the terms of this Agreement, to the extent performance is then due and susceptible of being cured and performed by the Mortgagee; and (iii) agrees in writing to perform, or cause to be performed, all non-monetary obligations which have not been performed by Grantee and would have accrued under this Agreement up to the date of commencement of the new agreement, except those obligations which constitute non-curable defaults. Any new agreement granted to the Mortgagee shall enjoy the same priority as this Agreement over any lien, encumbrances or other interest created by Owner.

(c) At the option of the Mortgagee, the new agreement may be executed by a designee of such Mortgagee without the Mortgagee assuming the burdens and obligations of Grantee thereunder.

(d) If more than one Mortgagee makes a written request for a new agreement pursuant hereto, the new agreement shall be delivered to the Mortgagee requesting such new agreement whose Mortgage is prior in lien, and the written request of any other Mortgagee whose lien is subordinate shall be void and of no further force or effect.

(e) The provisions of this Section 12 shall survive the termination, rejection or disaffirmance of this Agreement and shall continue in full force and effect thereafter to the same extent as if this Section 12 were a separate and independent contract made by Owner, Grantee and such Mortgagee, and, from the effective date of such termination, rejection or disaffirmance of this Agreement to the date of execution and delivery of such new agreement, such Mortgagee may use and enjoy said Property without hindrance by Owner or any person claiming by, through or under Owner, provided that all of the conditions for a new agreement as set forth herein are complied with.

12.4 Mortgagee's Consent to Amendment, Termination or Surrender. Notwithstanding any provision of this Agreement to the contrary, the Parties agree that so long as there exists an unpaid Mortgage, this Agreement shall not be modified or amended and Owner shall not accept a surrender of the Property or any part thereof or accept a cancellation, termination or release of this Agreement from Grantee prior to expiration of the Term without the prior written consent of the Mortgagee. This provision is for the express benefit of and shall be enforceable by such Mortgagee.

12.5 No Waiver. No payment made to Owner by a Mortgagee shall constitute an agreement that such payment was, in fact, due under the terms of this Agreement; and a Mortgagee, having made any payment to Owner pursuant to Owner's wrongful, improper or mistaken notice or demand, shall be entitled to the return of any such payment.

12.6 No Merger. There shall be no merger of this Agreement, or of the leasehold or easement estate created by this Agreement, with the fee estate in the Property by reason of the fact that this Agreement or the leasehold estate or the easement estate or any interest therein may be held, directly or indirectly, by or for the account of any person or persons who shall own the fee estate or any interest therein, and no such merger shall occur unless and until all persons at the time having an interest in the fee estate in the Property and all persons (including Mortgagee) having an interest in this Agreement or in the leasehold estate or in the estate of Owner and Grantee shall join in a written instrument effecting such merger and shall duly record the same.

12.7 Estoppel Certificates, Etc. Owner shall execute such estoppel certificates (certifying as to such matters as Grantee may reasonably request, including without limitation that no default by Grantee then exists under this Agreement, if such be the case) and/or consents to assignment (whether or not such consent is actually required) and/or non-disturbance agreements as Grantee, any transferee of Grantee or Mortgagee may reasonably request from time to time. The failure of Owner to deliver any estoppel certificate within fifteen (15) days after Grantee's written request therefor shall be conclusive evidence that (i) this Agreement is in full force and effect and has not been modified; (ii) any amounts payable by Grantee to Owner have been paid through the date of such written request; (iii) there are no uncured defaults by Grantee; and (iv) the other certifications requested by Grantee in its estoppel, are in fact, true and correct.

13. **TERMINATION.**

13.1 Grantee's Right to Terminate. Grantee shall have the right to terminate this Agreement as to all or any part of the Property at any time and without cause, effective upon written notice to Owner from Grantee.

13.2 Owner's Right to Terminate. Subject to Section 12.4, Owner shall have the right to terminate all or any portion of its rights in this Agreement after the eighth (8th) anniversary of the Effective Date if, at the time Owner's written termination notice is delivered, Grantee has not commenced construction of Windpower Facilities for the Project on or near the Property.

13.3 Effect of Termination. Upon termination of this Agreement, Grantee shall, as soon as practicable thereafter, but not later than one (1) year after the termination, remove above-ground and below-ground (to a depth of three (3) feet below grade) Windpower Facilities from the Property. All Property disturbed by Grantee shall be restored to a condition reasonably similar to its original condition as it existed upon the Effective Date. If Grantee fails to remove such Windpower Facilities within one (1) year of termination of this Agreement, or such longer period as Owner may provide by extension, Owner shall have the right to restore the Property and remove, or to cause removal of, any property owned by Grantee to the extent required by Grantee under this Section 13.3, and the right to receive reimbursement, less the salvage value of the Windpower Facilities, from Grantee for any remaining amounts reasonably incurred for removal and restoration of the Property.

14. MISCELLANEOUS.

14.1 Force Majeure. If performance of this Agreement or of any obligation hereunder is prevented or substantially restricted or interfered with by reason of an event of Force Majeure (defined below), the affected Party, upon giving notice to the other Party, shall be excused from such performance to the extent of and for the duration of such prevention, restriction or interference, and the Term or any other time periods herein shall be extended for such period of time. The affected Party shall use its reasonable efforts to avoid or remove such causes of nonperformance and shall continue performance hereunder whenever such causes are removed. "**Force Majeure**" means fire, earthquake, flood, or other casualty, condemnation or accident; strikes or labor disputes; war, acts of terrorism, civil strife or other violence; any law, order, proclamation, regulation, ordinance, action, demand or requirement of any government agency or utility; or any other act or condition beyond the reasonable control of a Party hereto.

14.2 Confidentiality. To the fullest extent allowed by law, Owner shall maintain in the strictest confidence, and Owner shall require each Related Person of Owner to maintain in the strictest confidence, for the sole benefit of Grantee, all information pertaining to the financial terms of or payments under this Agreement, Grantee's site or product design, methods of operation, methods of construction, power production or availability of the Windpower Facilities, and the like, whether disclosed by Grantee or discovered by Owner, unless such information either (i) is in the public domain by reason of prior publication through no act or omission of Owner or any Related Person of Owner, or (ii) was already known to Owner at the time of disclosure and which Owner is free to use or disclose without breach of any obligation to any person or entity. To the fullest extent permitted by law, Owner shall not use such information for its own benefit, publish or otherwise disclose it to others, or permit its use by others for their benefit or to the detriment of Grantee. Notwithstanding the foregoing, Owner may disclose such information to any auditor or to Owner's family members, lenders, attorneys, accountants and other personal advisors; any prospective purchaser of or lenders for the Property; or pursuant to lawful process, subpoena or court order; provided Owner in making such disclosure advises the party receiving the information of the confidentiality of the information and obtains the agreement of said party not to disclose the information.

14.3 Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon Owner and Grantee and, to the extent provided in any assignment or other transfer under Section 10 hereof, any transferee, and their respective heirs, transferees, successors and assigns, and all persons claiming under them. References to Grantee in this Agreement shall be deemed to also include transferees of Grantee that hold a direct ownership interest in this Agreement and actually are exercising rights under this Agreement to the extent consistent with such interest.

14.4 Memorandum; Recording. At Grantee's option: (i) Grantee may record a copy of this Agreement, excluding Exhibit B, or (ii) upon request from Grantee, Owner shall execute in recordable form, and Grantee may then record, a memorandum of this Agreement substantially in the form of Exhibit D attached hereto, incorporating only those non-substantive changes to the form as may be required by the applicable jurisdiction in which recording is sought and to reflect the terms of this Agreement. Owner hereby consents to the recordation of the interest of a transferee of Grantee in the Property. With respect to the Operations Term and Extended Term, upon request from Grantee, Owner shall execute, in recordable form, and Grantee may then record, a memorandum evidencing the Operations Term and Extended Term, as applicable; provided that the execution of such memorandum is not necessary for such Operations Term or Extended Term to be effective.

14.5 Notices. All notices or other communications required or permitted by this Agreement, including payments to Owner, shall be in writing and shall be deemed given when personally delivered to Owner or Grantee, the same day if sent via facsimile with confirmation, or the next business day if sent via overnight delivery or five (5) days after deposit in the United States mail, first class, postage prepaid, certified, addressed as follows:

If to Owner:

Fax: _____

If to Grantee:

c/o Invenenergy LLC
One S. Wacker Drive, Suite 1800
Chicago, Illinois 60606
Attn: General Counsel
Fax: 312-224-1444

Either Party may change its address for purposes of this paragraph by giving written notice of such change to the other Parties in the manner provided in this paragraph.

14.6 Entire Agreement; Amendments. This Agreement, together with all exhibits attached hereto, constitutes the entire agreement between Owner (and its respective successors, heirs, affiliates and assigns) and Grantee (and its respective successors, heirs, affiliates and assigns) respecting its subject matter, and supersedes any and all oral or written agreements. All of the provisions of the Exhibits shall be treated as if such provisions were set forth in the body of this Agreement and shall represent binding obligations of each of the Parties as part of this Agreement. Any agreement, understanding or representation respecting the Property, or any other matter referenced herein not expressly set forth in this Agreement or a previous writing signed by both Parties is null and void. No purported modifications or amendments, including without limitation any oral agreement (even if supported by new consideration), course of conduct or absence of a response to a unilateral communication, shall be binding on either Party unless in a writing signed by both Parties. Provided that no material default in the performance of Grantee's

obligations under this Agreement shall have occurred and remain uncured, Owner shall cooperate with Grantee in amending this Agreement from time to time to include any provision that may be reasonably requested by Grantee for the purpose of implementing the provisions contained in this Agreement or for the purpose of preserving the security interest of any transferee of Grantee or Mortgagee.

14.7 Legal Matters. This Agreement shall be governed by and interpreted in accordance with the laws of the State of New Mexico. If the Parties are unable to resolve amicably any dispute arising out of or in connection with this Agreement, they agree that such dispute shall be resolved in the state courts located in the County. The Parties agree that any rule of construction to the effect that ambiguities are to be resolved in favor of either Party shall not be employed in the interpretation of this Agreement and is hereby waived. The prevailing Party in any action or proceeding for the enforcement, protection or establishment of any right or remedy under this Agreement shall be entitled to recover its reasonable attorneys' fees and costs in connection with such action or proceeding from the non-prevailing Party.

14.8 Partial Invalidity. Should any provision of this Agreement be held, in a final and unappealable decision by a court of competent jurisdiction, to be either invalid, void or unenforceable, the remaining provisions hereof shall remain in full force and effect, unimpaired by the holding. Notwithstanding any other provision of this Agreement, the Parties agree that in no event shall the Term, or the term of any easement granted herein be longer than, respectively, the longest period permitted by applicable law.

14.9 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same document.

14.10 Tax and Renewable Energy Credits. If under applicable law, the holder of a leasehold or easement estate becomes ineligible for any tax credit, renewable energy credit, environmental credit or any other benefit or incentive for renewable energy established by any local, state or federal government, then, at Grantee's option, Owner and Grantee shall exercise good faith and negotiate an amendment to this Agreement or replace it with a different instrument so as to convert Grantee's interest in the Property to a substantially similar interest that makes Grantee eligible for such credit, benefit or incentive.

14.11 No Partnership. Nothing contained in this Agreement shall be construed to create an association, joint venture, trust or partnership covenant, obligation or liability on or with regard to any one or more Parties in this Agreement.

14.12 Waiver of Right to Trial by Jury. EACH OF THE PARTIES KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES THE RIGHT TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION BASED ON THIS AGREEMENT, OR ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT AND ANY AGREEMENT CONTEMPLATED TO BE EXECUTED IN CONJUNCTION HERewith, OR ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER VERBAL OR WRITTEN) OR ACTIONS OF ANY PARTY HERETO. EACH OF THE PARTIES TO THIS AGREEMENT WAIVES ANY RIGHT TO CONSOLIDATE ANY ACTION IN WHICH A JURY TRIAL HAS BEEN WAIVED WITH ANY OTHER ACTION IN WHICH A JURY TRIAL CANNOT OR HAS NOT BEEN WAIVED. THIS PROVISION IS A

MATERIAL INDUCEMENT TO EACH OF THE PARTIES FOR ENTERING INTO THIS AGREEMENT.

14.13 Public Officials. Owner acknowledges that its receipt of monetary and other good and valuable consideration hereunder may represent a conflict of interest if Owner is a government employee or otherwise serves on a governmental entity with decision-making authority (a “**Public Official**”) as to any rights Grantee may seek, or as to any obligations that may be imposed upon Grantee in order to develop and/or operate the Project (“**Development Rights**”), and Owner hereby agrees to (1) recuse him/herself from all such decisions related to Grantee’s Development Rights unless such recusal is prohibited by law or is not reasonably practicable considering the obligations of such Public Official’s position and (2) recuse him/herself from all such decisions related to Grantee’s Development Rights if such recusal is required by law. If Owner is not required pursuant to (1) or (2) above to recuse him/herself from a decision related to Grantee’s Development Rights, Owner shall, in advance of any vote or other official action on the Development Rights, disclose the existence of this Agreement (but not the financial terms therein) at an open meeting of the relevant governmental entity Owner serves on as a Public Official. Additionally, if Owner is a Public Official and any of Owner’s spouse, child or other dependent has a financial interest in the Project, Owner shall disclose such relationship (but not the financial terms thereof) at an open meeting of the relevant governmental entity Owner serves on as a Public Official, prior to participation in any decision related to Grantee’s Development Rights.

14.14 Conservation Reserve Program. If Owner is a party to a Conservation Reserve Program contract (“**CRP Contract**”) with the U.S. Department of Agriculture pursuant to 7 C.F.R. Part 1410, as amended regarding the Property, then Owner shall provide Grantee with a true and complete copy of such CRP Contract, together with all amendments and modifications, and if applicable, Grantee shall reimburse Owner for (a) any rental payments, or portion thereof, Owner would have received from the U.S. Department of Agriculture but for locating the Windpower Facilities on the Property (including any payments that would have been received for the destruction of an existing crop or for crops that Owner was unable to plant due to Grantee’s presence on the Property), and (b) the penalties and interest, if any (including for any past payments received by Owner that must be repaid by Owner), assessed by, the U.S. Department of Agriculture as a result of the location of the Windpower Facilities on the Property. Owner shall cooperate with Grantee in completing and submitting documents to obtain any exemptions allowed under the Conservation Reserve Program for the use of Windpower Facilities on the portions of the Property covered by a CRP Contract. After the Effective Date, Owner shall not enter into a new CRP Contract covering the Property or exercise any option to extend or renew any CRP Contract entered into prior to the Effective Date.

[Signatures on Following Page]

IN WITNESS WHEREOF, Owner and Grantee, acting through their duly authorized representatives, have executed this Agreement with the intent that it be effective as of the Effective Date, and certify that they have read, understand and agree to the terms and conditions of this Agreement.

OWNER:

[_____]

By: _____
Name: _____
Title: _____

GRANTEE:

Sagamore Wind Energy LLC,
a Delaware limited liability company

By: _____
Name: _____
Title: _____

OR

[Name], [a married person OR an unmarried person]

ACKNOWLEDGMENT OF OWNER

STATE OF _____)
)
COUNTY OF _____)

This instrument was acknowledged before me, _____ .

(S E A L)

My Commission Expires: _____

ACKNOWLEDGMENT OF GRANTEE

STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

Personally came before me this ____ day of _____, 201__,
_____ who executed the foregoing instrument as Vice President of
Sagamore Wind Energy LLC, and acknowledged the same.

(S E A L)

Name: _____

Notary Public, State of Illinois
My Commission Expires: _____

EXHIBIT A
Description of the Property

[ENTER LEGAL DESCRIPTION]

EXHIBIT B
Payment Terms

In consideration for the rights provided to Grantee under the Agreement, Grantee agrees to make payments to Owner as follows:

2. Development Term Fees. Within forty-five (45) days of the Effective Date of this Agreement, Grantee shall pay Owner a one-time fee of One Thousand Dollars (\$1000) and the product of Three Dollars (\$3) and the number of acres listed in Exhibit A. Within thirty (30) days of each anniversary of the Effective Date during the Development Term, Grantee shall pay Owner an annual fee of the product of Three Dollars (\$3) and the number of acres listed in Exhibit A (each a “**Development Term Fee**”).

3. Operating Fees. Upon commencement of the Operations Date, and for each year during the Operations Term and Extended Term (each an “**Operations Term Year**”), after giving credit, if any, for any Development Term Fee prepaid for the year in which the Operations Term begins, Grantee shall pay to Owner the following amounts for Windpower Facilities installed on the Property (collectively, the “**Operating Fees**”):

(a) For each year during the Operations Term and Extended Term after the Development Term (each an “**Operations Term Year**”), Grantee shall pay to Owner as operating fees (the “**Operating Fees**”) an amount equal to the greater of the following for each applicable period listed in Table 2(a) below: (i) the product of the number listed in “Column A” in Table 2(a) below as the “Per Acre Amount” and the number of acres of the Property then subject to this Agreement (the “**Per Acre Amount**”) and (ii) the product of the number listed in “Column B” in Table 2(a) below as the “Per Megawatt Amount” and number of megawatts of nameplate capacity (as determined by the manufacturer of the Wind Turbines) of Wind Turbines Grantee has then installed on the Property (the “**Per Megawatt Amount**”).

Table 2(a)

Term Year	Column A Per Acre Amount	Column B Per Megawatt Amount
Years 1 through 10	\$10.00	\$5000
Years 11 through 20	\$12.00	\$6000
Years 21 through 30	\$14.00	\$7000
Years 31 through 40	\$16.00	\$8000
Years 41 through 50	\$18.00	\$9000

(b) The Operating Fees payable during the Operations Term and Extended Term shall be paid as follows:

i. Within ninety (90) days of the end of each Operations Term Year, Grantee shall, for the Operations Term Year directly prior,

determine the greater of: (a) the Per Acre Amount and (b) the Per Megawatt Amount, and shall within ninety (90) days of each such anniversary pay to Owner the higher of the two amounts.

(c) Substation and O & M Fee. If Grantee constructs on the Property either (a) an electrical substation (which term includes, for purposes of this Section, all associated transformers, circuit breakers, interconnection and switching facilities and other associated improvements, facilities, structures, fixtures, appurtenances, appliances, machinery, materials and equipment) (a “**Substation**”), or (b) a permanent operations and maintenance building, (an “**O&M Building**”), (neither a Substation nor an O&M Building shall occupy more than three (3) acres of the Property each unless the Additional Acreage Fee (as defined below) is paid), then of Grantee shall pay to Owner the one-time sum of Ten Thousand Dollars (\$10,000) for each such installed structure (the “**Substation/O&M Fee**”). If Grantee needs additional acreage on the Property above three (3) acres for the Substation or the O&M Building then the Substation/O&M Fee shall be increased by the product of Two Thousand Dollars (\$2,000) and the number of additional acres, or portions of acres, Grantee needs for each such installed structure (the “**Additional Acreage Fee**”). Grantee shall pay the Substation/O&M Fee and Additional Acreage Fee, if applicable, within sixty (60) days of the Operations Date.

(d) Installation Fees. Within sixty (60) days of the Operations Date or, if subsequent to the Operations Date, within forty-five (45) days of the completion of the installation, Grantee shall pay to Owner an amount equal to the greater of (i) the product of Five Thousand Dollars (\$5,000) and the number of MW Grantee installed on the Property, and (ii) the sum of One and a Half Dollars (\$1.50) per lineal foot of access road installed on the property (the “**Access Road Payment**”) and One Hundred and Fifty cents (\$1.50) per lineal foot of transmission and/or distribution line installed on the Property (the “**Transmission and Distribution Facilities Payment**”), collectively the “**Installation Fee**”.

(e) Permanent Meteorological Tower Payment. One Thousand Dollars (\$1,000) annually for each permanent meteorological tower installed on the Property.

(f) Crop Compensation. Grantee shall pay Owner one-time compensation for any and all portions of the Property where permanent Windpower Facilities are not constructed that are either taken out of commercial crop production for a season because of the construction of the Windpower Facilities, or that are removed or damaged as a direct result of Grantee’s construction of the Windpower Facilities on the Property (“**Crop Damage Compensation**”). Portions of the Property shall be deemed to have been taken out of commercial crop production only if the Owner was actually farming such portions of the Property immediately prior to Grantee’s commencing construction of the Windpower Facilities on the Property. The Crop Damage Compensation shall be deemed full compensation for any losses of income, rent, business opportunities, profits or other losses arising out of such Grantee construction. Crop Damage Compensation shall be equal to the fair market value of the crops that are damaged per season, but a minimum of the following amounts determined by multiplying the total acreage of damaged cultivated crops, specialty crops, pasture or hay on the Property for which Grantee is responsible pursuant to this Agreement by the following amounts: (i) hay at Two Hundred

Sixty and no/100 Dollars (\$260.00) per acre, (ii) corn at Six Hundred and no/100 Dollars (\$600.00) per acre, (iii) oats at One Hundred Seventy-Five and no/100 Dollars (\$175.00) per acre, (iv) pasture at Fifty-Five and no/100 Dollars (\$55.00) per acre, (v) soybeans at Six Hundred and no/100 Dollars (\$600.00) per acre, and (vi) wheat at Six Hundred and no/100 Dollars (\$600.00) per acre. If less than one acre of Owner's cultivated crops, pasture or hay on the Property is damaged by Grantee's activities on the Property, the applicable dollar amount per acre shall be reduced proportionally. The Parties shall attempt, in good faith, to agree upon the extent of damage and amount of acreage affected. If the Parties cannot agree, the Parties shall have the area measured and the extent of damage assessed by an impartial party chosen by mutual agreement of the Parties, such as a crop insurance adjuster.

(g) Compaction Compensation. In addition to payments owed hereunder for crop compensation, if any, Grantee shall pay Owner for areas determined to have significant soil compaction directly caused by Grantee's activities on the Property ("**Compaction Compensation**") if Grantee fails to de-compact such areas within three (3) months of completion of construction of Windpower Facilities for the Project. Compaction Compensation shall be equal to an amount that is quadruple the fair market value of the crops that Owner had most recently been growing on such Property for the area compacted. In consideration of this payment, no additional damages shall be paid in future years for that incident of soil compaction. The Parties shall try in good faith to agree to the extent of damage and acreage affected. If the Parties cannot agree, the Parties shall have the area measured and the extent of damage assessed by an impartial party chosen by mutual agreement of the Parties, such as a crop insurance adjuster.

(h) Late Payment Penalty. If Grantee fails to make any payment to Owner required of it hereunder when due, interest shall accrue on the overdue amount, from the date of expiration of Grantee's cure period until the date paid, at a rate equal to the sum of: (i) two percent (2%) per annum; plus, (ii) the prime lending rate as from time to time may be published by The Wall Street Journal under the "Money Rates" section; provided, that in no event shall such total interest exceed the maximum rate permitted by law.

(i) IRS Form W-9. Notwithstanding anything in this Agreement to the contrary, Grantee shall have no obligation to make any payment to Owner otherwise required under this Agreement until Owner has returned to Grantee a completed Internal Revenue Service Form W-9, such W-9 form to either (i) have been provided by Grantee to Owner prior to execution of this Agreement or (ii) be provided by Grantee to Owner promptly upon execution of this Agreement.

(j) Payment Instructions. Unless otherwise indicated in the table below, all payments issued hereunder will be paid to Owner, and if Owner is comprised of more than one person or entity, such payments will be issued by a single check payable to all such persons or entities. If Owner elects to have payments made as set forth in the table below, Owner and each person or entity holding record title to the Property hereby acknowledges and agrees that all payments are legally permitted to be made as set forth in the table below and that no other party shall have any right to such payments or to contest the payments and allocations as set forth below. Each person receiving payment pursuant

to the table below hereunder agrees to fully indemnify, defend and hold harmless Grantee against claims and liability by any third party in connection with its payments hereunder to the person/entities set forth herein. **Check one below:**

A single check should be issued payable to all persons/entities comprising Owner.

Separate checks should be issued to each Owner as set forth below:

Owner:	Name 1	Name 2	Name 3	Name 4
Payment Allocation:	[]%	[]%	[]%	[]%

EXHIBIT C
Special Conditions

(None)

EXHIBIT D
[Form of Recording Memorandum]

After recording return to:

Invenergy Wind Development LLC

One South Wacker Drive
Suite 1800

Chicago, Illinois 60606

ATTN: Land Administration

MEMORANDUM OF WIND LEASE AND EASEMENT AGREEMENT

THIS MEMORANDUM OF WIND LEASE AND EASEMENT AGREEMENT (this “**Memorandum**”), is made, dated and effective as of [_____] (the “**Effective Date**”), between [_____] (together with its successors, assigns and heirs, “**Owner**”), whose address is [_____], and Sagamore Wind Energy LLC, a Delaware limited liability company (together with its transferees, successors and assigns, “**Grantee**”), whose address is One South Wacker Drive, Suite 1800, Chicago, IL 60606, with regards to the following:

1. Owner and Grantee did enter into that certain WIND LEASE AND EASEMENT AGREEMENT dated _____ (the “**Agreement**”), which grants and conveys to Grantee an easement and lease to convert, maintain and capture the flow of wind and wind resources over across and through the real property located in Roosevelt County, New Mexico, as more particularly described in Exhibit A attached hereto (the “**Property**”). Capitalized terms used and not defined herein have the meaning given the same in the Agreement.

2. The Agreement grants certain easements that benefit Grantee, and among other things, contains certain additional terms regarding payments to be made by Grantee to Owner, rights of Grantee and Owner to terminate the grant of easements, compliance with governmental requirements, representations and warranties by Grantee and Owner to each other, third party use restrictions, and other matters.

3. The Agreement shall commence on the Effective Date and continue until the twenty-fifth (25th) anniversary of the earlier of (i) the date eight (8) years thereafter, or (ii) the date on which Grantee begins selling electrical energy generated by substantially all of the wind turbines to be included in the Project (as defined in the Agreement) to a third party power purchaser, regardless of whether Windpower Facilities are installed on the Property, and may be extended for an additional period of twenty-five (25) years at Grantee's option in accordance with the terms specified in the Agreement.

4. This Memorandum does not supersede, modify, amend or otherwise change the terms, conditions or covenants of the Agreement, and Owner and Grantee executed and are recording this Memorandum solely for the purpose of providing constructive notice of the Agreement and Grantee’s rights thereunder. The terms, conditions and covenants of the

Agreement are set forth at length in the Agreement and are incorporated herein by reference as though fully set forth herein. This Memorandum shall not, in any manner or form whatsoever, alter, modify or vary the terms, covenants and conditions of the Agreement.

5. This Memorandum shall also bind and benefit, as the case may be, the heirs, legal representatives, assigns and successors of the respective parties hereto, and all covenants, conditions and agreements contained herein shall be construed as covenants running with the land.

6. Except as otherwise set forth in the Agreement, Owner shall have no ownership, lien, security or other interest in any Windpower Facilities installed on the Property, or any profits derived therefrom, and Grantee may remove any or all Windpower Facilities at any time.

7. This Memorandum may be executed in counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same document.

[signature page to follow]

IN WITNESS WHEREOF, the parties have executed this Memorandum to be effective as of the date first written above.

OWNER:

GRANTEE:

[_____]

Sagamore Wind Energy LLC,
a Delaware limited liability company

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

OR

[Name], [a married person OR an unmarried
person]

ACKNOWLEDGMENT OF OWNER

STATE OF _____)
) .
COUNTY OF _____)

This instrument was acknowledged before me, _____ .

(S E A L)

My Commission Expires: _____

ACKNOWLEDGMENT OF GRANTEE

STATE OF _____)
) SS.
COUNTY OF _____)

Personally came before me this ____ day of _____, 201__,
_____ who executed the foregoing instrument as Vice President of
Sagamore Wind Energy LLC, and acknowledged the same.

(S E A L)

Name: _____
Notary Public, State of _____

My Commission Expires: _____

Exhibit C-1

Form of Lease Amendment (Leases)

**FIRST AMENDMENT TO
WIND ENERGY LEASE AGREEMENT**

THIS FIRST AMENDMENT TO **WIND ENERGY LEASE AGREEMENT** (this "Amendment") is entered into as of _____, 2017 (the "Amendment Date"), by _____ ("Owner"), and _____, a Delaware limited liability company ("Lessee").

WHEREAS, Owner and Lessee previously entered into that certain **WIND ENERGY LEASE AGREEMENT**, dated _____, 20__[, as evidenced of record by that certain **Memorandum dated _____, 20__]**¹ and filed for record with the County Recorder of Roosevelt County, New Mexico on _____, 20__ as Doc. No. _____ (the "Original Lease").

WHEREAS, Owner and Lessee desire to amend the Original Lease, in accordance with the terms and conditions set forth below.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are mutually acknowledged, Owner and Lessee agree as follows:

1. Project. The definition of the term "Project" of the Fourth Recital of the Original Lease is hereby amended and restated as follows:

"**Project**", for the purposes of this Agreement, means an integrated wind energy generation system, consisting of Windpower Facilities, that is constructed and operated on the Property, and/or adjacent lands, by Lessee, or a third party authorized by Lessee. Lessee may determine whether any particular group of Windpower Facilities constitutes a single Project or multiple Projects for purposes of this Agreement, and in the case of multiple Projects, which portion of the Property shall be included within each Project.

2. Windpower Facilities. Section 1.2(b) of the Original Lease is hereby amended and restated in its entirety as follows:

(b) Constructing, laying down, installing, using, replacing, relocating, reconstructing and removing from time to time, and monitoring, maintaining, repairing and operating the following only for the benefit of the Project or Projects (or, with respect to clause (ii) below, other integrated wind energy generation systems): (i) wind power generating machines, of any kind (including supporting towers, foundations and any other associated equipment

¹ Include if applicable.

or structures) (collectively, “**Wind Turbines**”); (ii) overhead and underground electrical distribution, collection, transmission and communications lines, electric transformers, electric substations, energy storage facilities, telecommunications equipment, and power generation facilities; (iii) roads and crane pads; (iv) meteorological towers and wind measurement equipment; (v) control buildings, maintenance yards, temporary construction laydown and staging yards and related facilities and equipment; and (vi) undertaking any other activities, whether accomplished by Lessee or a third party authorized by Lessee, that Lessee reasonably determines are necessary, useful or appropriate to accomplish any of the foregoing (all of the above, including the Wind Turbines, collectively “**Windpower Facilities**”).

3. The following are hereby added as new Sections 1.4, 1.5, and 1.6:

1.4 Additional Easements. If Lessee wishes to obtain from Owner one or more easements on, over, across, along and/or above any real property that is owned by Owner on the date hereof and adjacent to the Property (each, an “**Additional Easement**”), in connection with, for the benefit of and for purposes incidental to the Project, including the right to install and maintain on the Property (i) transmission lines and facilities, both overhead and underground, which carry electrical energy to and/or from the Project, (ii) communications lines and facilities, both overhead and underground, which carry communications to and/or from the Project, and/or (iii) metering equipment, substations, switching stations, wind measurement equipment and control, maintenance and administration buildings (provided that no sleeping quarters will be allowed) that benefit the Project, then upon request Owner shall grant to Lessee such an easement in such location or locations as Grantee may reasonably request and that are reasonably satisfactory to Owner, provided that Lessee shall agree to pay to Owner a reasonable fee agreed to by Owner for such easement in addition to all other amounts payable by Lessee to Owner hereunder. In this Section, the term “adjacent” when used in the context of describing adjacent property means property owned by Owner which (i) shares a property line; or (ii) is separated only by a local, state or federal public right of way.

1.5 Stand-Alone Easements. Owner acknowledges that commercial operation of the Project may require, from time to time during the Project's existence, additional easements in favor of certain third parties on the Property and on real property that is owned by Owner on the date hereof and adjacent to the Property. Accordingly, if the independent system operator with jurisdiction over the system in which the Project operates, the transmission system owner or operator to whose transmission lines the Project interconnects, or the off-taker to whom output and/or credits from the Project is sold, determines that one or more separate, stand-alone easements (each, a “**Stand-Alone Easement**”) on, over, across, along and/or above the Property and any other real property that is owned by Owner on the date hereof and adjacent to the Property, including the right to install and maintain on the Property (i) transmission lines and facilities,

both overhead and underground, which carry electrical energy to and/or from the Project, (ii) communications lines and facilities, both overhead and underground, which carry communications to and/or from the Project, and/or (iii) metering equipment, substations, switching stations, wind measurement equipment and control, maintenance and administration buildings that benefit the Project, is reasonably required for the efficient and/or safe operation of the Project, then upon request Owner shall grant to such third party such an easement in such location or locations as such party may reasonably request, and that are reasonably satisfactory to Owner, provided that such party shall agree to pay to Owner a reasonable fee agreed to by Owner for such easement in addition to all other amounts payable by Lessee to Owner hereunder.

1.6 Nature of Additional Easements and Stand-Alone Easements. Each Additional and Stand-Alone Easement shall be in the nature of and similar to the rights granted to Grantee under Section 1.3, and shall be in a recordable form and in a form reasonably acceptable to Grantee, such affiliate or the grantee of such easement as applicable (which form shall at a minimum include adequate lender-protective provisions).

4. Term. Section 2 is hereby deleted and replaced with the following:

2.1 Development Term. This Agreement shall be for an initial term (the “**Development Term**”) commencing on the Effective Date and continuing until the earlier to occur of: (a) the date on which Lessee begins selling electrical energy generated by substantially all of the Wind Turbines to be included in the Project to a third party power purchaser (as declared by Lessee, the “**Operations Date**”), or (b) [May 31, 2021].

2.2 Operations Term. Upon the expiration of the Development Term, the term of this Agreement shall automatically extend for an additional twenty-five (25) year term (the “**Operations Term**”).

2.3 Extended Operations Term. Provided that Lessee has not fully surrendered or terminated this Agreement, then on or before the expiration of the Operations Term, Lessee may, at its option, extend the term of this Agreement for an additional twenty-five (25) year period (the “**Extended Term**”, collectively with the Development Term and the Operations Term, the “**Term**”). Lessee may exercise its option to extend this Agreement for the Extended Term by giving Owner written notice thereof on or before the date that is one hundred eighty (180) days prior to the expiration of the Operations Term.

5. Development Term Fees. Section 3.1(a) is hereby deleted and replaced with the following:

(a) Development Term Fees. Within forty-five (45) days of the Effective Date of this Agreement, Lessee shall pay Owner a one-time fee of One Thousand Dollars (\$1,000.00). Within thirty (30) days of each anniversary of the Effective Date prior to the Operations Date, Lessee shall pay Owner an

annual fee of the product of Two Dollars (\$2.00) and the number of acres of the Property then subject to this Agreement (each a “**Development Term Fee**”).

6. Operating Fees. Section 3.1(b) is hereby deleted and replaced with the following:

(b) Operating Fees. Upon the Operations Date, and for each year after the Operations Date (each year therein being an “**Operations Term Year**”), after giving credit, if any, for any Development Term Fee prepaid for the year in which the Operations Term begins, Lessee shall pay to Owner as operating fees (the “**Operating Fees**”) an amount equal to the greater of the following for each applicable period listed in Table 3.1(b)(i) below: (i) the product of the number listed in “Column A” in Table 3.1(b)(i) below as the “Per Acre Amount” and the number of acres of the Property then subject to this Agreement (the “**Per Acre Amount**”) and (ii) the product of the number listed in “Column B” in Table 3.1(b)(i) below as the “Per Megawatt Amount” and the number of megawatts of nameplate capacity (as determined by the manufacturer of the Wind Turbines) of Wind Turbines Lessee has then installed on the Property (the “**Per Megawatt Amount**”). Lessee shall pay to Owner, for the Operations Term Year directly prior, within ninety (90) days of each such Operations Term Year end, the greater of: (a) the Per Acre Amount and (b) the Per Megawatt Amount.

Table 3.1(b)(i)

Term Year	Column A Per Acre Amount	Column B Per Megawatt Amount
Years 1 through 10	\$10.00	\$5000
Years 11 through 20	\$12.00	\$6000
Years 21 through 30	\$14.00	\$7000
Years 31 through 40	\$16.00	\$8000
Years 41 through 50	\$18.00	\$9000

7. Substation Installation Fee. Section 3.1(c) is deleted and replaced with the following:

Substation Installation Fee. If a transmission substation (a “**Substation**”) is constructed on the Property pursuant to this Agreement, Lessee shall pay to Owner a one-time installation fee equal to Ten Thousand Dollars (\$10,000). The Substation installation fee shall be payable within thirty (30) days

following the date such Substation begins delivering electricity, other than test electricity.

8. Right of Way Installation Fee. Section 3.1(d) is hereby deleted and replaced with the following:

Right of Way Installation Fees. Within sixty (60) days of the Operations Date or, if subsequent to the Operations Date, within forty-five (45) days of the completion of the installation of a permanent road, overhead transmission or distribution line or buried cable (a “**Right of Way**”), Lessee shall pay to Owner an amount equal to the greater of (i) the product of Five Thousand Dollars (\$5,000) and the number of MW Lessee installed on the Property, and (ii) the sum of One Dollar and Fifty Cents (\$1.50) per lineal foot of access road installed on the property (the “**Access Road Payment**”) and One Dollar and Fifty Cents (\$1.50) per lineal foot of transmission and/or distribution line installed on the Property (the “**Transmission and Distribution Facilities Payment**”) and together with the Access Road Payment, the “**Installation Fee**”).

9. Wind Protection Fee. Section 3.1(e) is deleted.

10. Divided Property. Section 3.1(f) is deleted and replaced with the following:

In the event that ownership of the Property is divided at the time of this Agreement, or subsequently, such that different parties comprising Owner hereunder own different portions of the Property (as opposed to undivided interests in the Property or a portion of the Property), the payments and fees described above shall be payable to the owner of the portion of the Property on which the particular Windpower Facilities for which payments are calculated above are physically located (excluding Wind Turbine overhang), without regard to whether other Windpower Facilities may be located on other portions of the Property, except that the annual fee described in clause (b) above shall be payable based on acreage until the Operations Date as to any portion of the Property. Owner shall notify Lessee in writing of any division of ownership of the Property, as provided in Section 8.2 below. Notwithstanding the foregoing, Lessee's rights under this Agreement shall in any case extend to, upon, over and across the entire Property hereunder.

11. Conservation Reserve Program. The following sentence is hereby added to the end of Section 3.4:

After the Effective Date, Owner shall not enter into a new CRP Contract covering the Property or exercise any option to extend or renew any CRP Contract entered into prior to the Effective Date.

12. Binding Effect. The benefits arising from this Amendment shall inure to, and the obligations hereof shall be binding upon, the parties hereto, their heirs, personal representatives, successors and assigns.

13. Recording. This Amendment shall not be recorded in any County's public records. However, Lessee may require that a memorandum of this Amendment be recorded and Owner shall execute the same in recordable form.

14. Lease Effectiveness. Except as expressly amended hereby, the Original Lease is fully ratified and confirmed and continues in full force and effect. Owner warrants and represents to Lessee that, (i) to Owner's knowledge, there exists no breach, default, or event or condition which, with the giving of notice or the passage of time or both, would constitute a breach or default under the Original Lease, as amended by this Amendment, either by Lessee or Owner; (ii) Owner has no existing claims or defenses under the Original Lease, as amended by this Amendment; and (iii) all fees, rent and payments due to Owner under the Original Lease, as amended by this Amendment, for the period through and including the date of this Amendment have been paid.

15. Miscellaneous. Except as expressly amended hereby, the Original Lease is fully ratified and confirmed and continues in full force and effect. Should any provision of this Amendment be held invalid, void or unenforceable, the remaining provisions hereof shall remain in full force and effect, unimpaired. This Amendment shall not be modified or amended except in a writing signed by both parties or their lawful successors in interest. This Amendment may be executed in counterparts, all of which together shall constitute one and the same instrument. The signature and acknowledgment of a party to any counterpart may be removed and attached to and recorded with any other otherwise identical counterpart.

[Signature Page Follows]

LESSEE:

[_____,]
a Delaware limited liability company

By: _____
Name: _____
Title: _____

STATE OF _____)
_____) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me on _____, 2017, by _____, the _____ of _____, a Delaware limited liability company, on behalf of said limited liability company.

Signature of Notary Public or Other Official

This Document Was Prepared By
And After Recordation Should Be Returned To:

[]

Exhibit C-2

Form of Lease Amendment (Easements)

**[FIRST] AMENDMENT TO
GRANT OF EASEMENTS**

THIS [FIRST] AMENDMENT TO GRANT OF EASEMENTS (this "Amendment") is entered into as of _____, 2017 (the "Amendment Date"), by _____ ("Owner"), and _____, a Delaware limited liability company ("Grantee").

WHEREAS, Owner and Grantee previously entered into that certain **GRANT OF EASEMENTS**, dated _____, 20__[, as evidenced of record by that certain **Memorandum dated _____, 20__]** and filed for record with the County Recorder of Roosevelt County, New Mexico on _____, 20__ as Doc. No. _____ (the "Original Easement").

WHEREAS, Owner and Grantee desire to amend the Original Easement, in accordance with the terms and conditions set forth below.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are mutually acknowledged, Owner and Grantee agree as follows:

1. Windpower Facilities. Section 2.1(b) of the Original Easement is hereby amended and restated in its entirety as follows:

(b) Constructing, laying down, installing, using, replacing, relocating, reconstructing and removing from time to time, and monitoring, maintaining, repairing and operating the following only for the benefit of the Project or Projects (or, with respect to clause (ii) below, other integrated wind energy generation systems): (i) wind power generating machines, of any kind (including supporting towers, foundations and any other associated equipment or structures (collectively, "**Wind Turbines**"); (ii) overhead and underground electrical distribution, collection, transmission and communications lines, electric transformers, electric substations, energy storage facilities, telecommunications equipment, and power generation facilities (collectively, "**Collection Facilities**"); (iii) roads and crane pads; (iv) meteorological towers and wind measurement equipment; (v) control buildings, maintenance yards, temporary construction laydown and staging yards and related facilities and equipment; and (vi) undertaking any other activities, whether accomplished by Grantee or a third party authorized by Grantee, that Grantee reasonably determines are necessary, useful or appropriate to accomplish any of the foregoing (all of the above, including the Wind Turbines and Collection Facilities, collectively "**Windpower Facilities**").

2. Project. The following sentence is added to the end of Section 2.1:

The term “**Project**”, for the purposes of this Agreement, means an integrated wind energy generation system, consisting of Windpower Facilities, that is constructed and operated on the Property, and/or adjacent lands, by Grantee, or a third party authorized by Grantee. Grantee may determine whether any particular group of Windpower Facilities constitutes a single Project or multiple Projects for purposes of this Agreement, and in the case of multiple Projects, which portion of the Property shall be included within each Project.

3. Additional Easements. The following sections are hereby added as new Sections 2.2, 2.3, and 2.4:

2.2 Additional Easements. If Grantee wishes to obtain from Owner one or more easements on, over, across, along and/or above any real property that is owned by Owner on the date hereof and adjacent to the Property (each, an “**Additional Easement**”), in connection with, for the benefit of and for purposes incidental to the Project, including the right to install and maintain on the Property (i) transmission lines and facilities, both overhead and underground, which carry electrical energy to and/or from the Project, (ii) communications lines and facilities, both overhead and underground, which carry communications to and/or from the Project, and/or (iii) metering equipment, substations, switching stations, wind measurement equipment and control, maintenance and administration buildings (provided that no sleeping quarters will be allowed) that benefit the Project, then upon request Owner shall grant to Grantee such an easement in such location or locations as Grantee may reasonably request and that are reasonably satisfactory to Owner, provided that Grantee shall agree to pay to Owner a reasonable fee agreed to by Owner for such easement in addition to all other amounts payable by Grantee to Owner hereunder. In this Article, the term “adjacent” when used in the context of describing adjacent property means property owned by Owner which (i) shares a property line; or (ii) is separated only by a local, state or federal public right of way.

2.3 Stand-Alone Easements. Owner acknowledges that commercial operation of the Project may require, from time to time during the Project's existence, additional easements in favor of certain third parties on the Property and on real property that is owned by Owner on the date hereof and adjacent to the Property. Accordingly, if the independent system operator with jurisdiction over the system in which the Project operates, the transmission system owner or operator to whose transmission lines the Project interconnects, or the off-taker to whom output and/or credits from the Project is sold, determines that one or more separate, stand-alone easements (each, a “**Stand-Alone Easement**”) on, over, across, along and/or above the Property and any other real property that is owned by Owner on the date hereof and adjacent to the Property, including the right to install and maintain on the Property (i) transmission lines and facilities, both overhead and underground, which carry electrical energy to and/or from the Project, (ii) communications lines and facilities, both overhead and underground, which carry communications to

and/or from the Project, and/or (iii) metering equipment, substations, switching stations, wind measurement equipment and control, maintenance and administration buildings that benefit the Project, is reasonably required for the efficient and/or safe operation of the Project, then upon request Owner shall grant to such third party such an easement in such location or locations as such party may reasonably request, and that are reasonably satisfactory to Owner, provided that such party shall agree to pay to Owner a reasonable fee agreed to by Owner for such easement in addition to all other amounts payable by Grantee to Owner hereunder.

2.4 Nature of Additional Easements and Stand-Alone Easements. Each Additional and Stand-Alone Easement (i) shall be in the nature of and similar to the Easements granted to Grantee under Section 2.1, and shall be in a recordable form and in a form reasonably acceptable to Grantee, such affiliate or the grantee of such easement as applicable (which form shall at a minimum include adequate lender-protective provisions) (ii) shall, upon the granting thereof, be included within the meaning of the term "**Easement**", except where otherwise stated or where the context otherwise requires and (ii) will only be for the purposes described in this Agreement.

4. Term. Section 3 is hereby deleted and replaced with the following:

3.1 Development Term. This Agreement shall be for an initial term (the "**Development Term**") commencing on the Effective Date and continuing until the earlier to occur of: (a) the date on which Grantee begins selling electrical energy generated by substantially all of the Wind Turbines to be included in the Project to a third party power purchaser (as declared by Grantee, the "**Operations Date**"), or (b) [May 31, 2021].

3.2 Operations Term. Upon the expiration of the Development Term, the term of this Agreement shall automatically extend for an additional twenty-five (25) year term (the "**Operations Term**").

3.3 Extended Operations Term. Provided that Grantee has not fully surrendered or terminated this Agreement, then on or before the expiration of the Operations Term, Grantee may, at its option, extend the term of this Agreement for an additional twenty-five (25) year period (the "**Extended Term**", collectively with the Development Term and the Operations Term, the "**Term**"). Grantee may exercise its option to extend this Agreement for the Extended Term by giving Owner written notice thereof on or before the date that is one hundred eighty (180) days prior to the expiration of the Operations Term.

5. Payments. Section 4 shall be deleted and replaced by:

Payments. In consideration for the rights provided to Grantee under the Agreement, Grantee agrees to make payments to Owner as follows:

4.1 Development Term Fees. Within forty-five (45) days of the Effective Date of this Agreement, Grantee shall pay Owner a one-time fee of One Thousand Dollars (\$1,000). Within thirty (30) days of each anniversary of the Effective Date prior to the Operations Date, Grantee shall pay Owner an annual fee of the product of Three Dollars (\$3) and the number of acres of the Property then subject to this Agreement (each a “**Development Term Fee**”).

4.2 Operating Fees. Upon the Operations Date, and for each year after the Operations Date (each year therein being an “**Operations Term Year**”), after giving credit, if any, for any Development Term Fee prepaid for the year in which the Operations Term begins, Grantee shall pay to Owner as operating fees (the “**Operating Fees**”) an amount equal to the greater of the following for each applicable period listed in Table 4.2(i) below: (i) the product of the number listed in “Column A” in Table 4.2(i) below as the “Per Acre Amount” and the number of acres of the Property then subject to this Agreement (the “**Per Acre Amount**”) and (ii) the product of the number listed in “Column B” in Table 4.2(i) below as the “Per Megawatt Amount” and the number of megawatts of nameplate capacity (as determined by the manufacturer of the Wind Turbines) of Wind Turbines Grantee has then installed on the Property (the “**Per Megawatt Amount**”). Grantee shall pay to Owner, for the Operations Term Year directly prior, within ninety (90) days of each such Operations Term Year end, the greater of: (a) the Per Acre Amount and (b) the Per Megawatt Amount.

Table 4.2(i)

Term Year	Column A Per Acre Amount	Column B Per Megawatt Amount
Years 1 through 10	\$10.00	\$5000
Years 11 through 20	\$12.00	\$6000
Years 21 through 30	\$14.00	\$7000
Years 31 through 40	\$16.00	\$8000

Years 41 through 50	\$18.00	\$9000
---------------------------	---------	--------

4.3 Substation and O & M Fee. If Grantee constructs on the Property either (a) an electrical substation (which term includes, for purposes of this Section, all associated transformers, circuit breakers, interconnection and switching facilities and other associated improvements, facilities, structures, fixtures, appurtenances, appliances, machinery, materials and equipment) (a “**Substation**”), or (b) a permanent operations and maintenance building, (an “**O&M Building**”), (neither a Substation nor an O&M Building shall occupy more than three (3) acres of the Property each unless the Additional Acreage Fee (as defined below) is paid), then Grantee shall pay to Owner the one-time sum of Ten Thousand Dollars (\$10,000) for each such installed structure (the “**Substation/O&M Fee**”). If Grantee needs additional acreage on the Property above three (3) acres for the Substation or the O&M Building, then the Substation/O&M Fee shall be increased by the product of Two Thousand Dollars (\$2,000) and the number of additional acres, or portions of acres, Grantee needs for each such installed structure (the “**Additional Acreage Fee**”). Grantee shall pay the Substation/O&M Fee and Additional Acreage Fee, if applicable, within sixty (60) days of the Operations Date.

4.4 Installation Fees. Within sixty (60) days of the Operations Date or, if subsequent to the Operations Date, within forty-five (45) days of the completion of the installation of a permanent road, overhead transmission or distribution line or buried cable (a “**Right of Way**”) , Grantee shall pay to Owner an amount equal to the greater of (i) the product of Five Thousand Dollars (\$5,000.00) and the number of MW Grantee installed on the Property, and (ii) the sum of One Dollar and Fifty Cents (\$1.50) per lineal foot of access road installed on the property (the “**Access Road Payment**”) and One Dollar and Fifty Cents (\$1.50) per lineal foot of transmission and/or distribution line installed on the Property (the “**Transmission and Distribution Facilities Payment**”) and together with the Access Road Payment, the “**Installation Fee**”).

4.5 Permanent Meteorological Tower Payment. One Thousand Dollars (\$1,000.00) annually for each permanent meteorological tower installed on the Property.

4.6 Crop Compensation. Grantee shall pay Owner one-time compensation for any and all portions of the Property where permanent Windpower Facilities are not constructed that are either taken out of commercial crop production for a season because of the construction of the Windpower Facilities, or that are removed or damaged as a direct result of Grantee’s construction of the Windpower Facilities on the Property (“**Crop Damage Compensation**”). Portions of the Property shall be deemed to have

been taken out of commercial crop production only if the Owner was actually farming such portions of the Property immediately prior to Grantee's commencing construction of the Windpower Facilities on the Property. The Crop Damage Compensation shall be deemed full compensation for any losses of income, rent, business opportunities, profits or other losses arising out of such Grantee construction. Crop Damage Compensation shall be equal to the fair market value of the crops that are damaged per season, but a minimum of the following amounts determined by multiplying the total acreage of damaged cultivated crops, specialty crops, pasture or hay on the Property for which Grantee is responsible pursuant to this Agreement by the following amounts: (i) hay at Two Hundred Sixty and no/100 Dollars (\$260.00) per acre, (ii) corn at Six Hundred and no/100 Dollars (\$600.00) per acre, (iii) oats at One Hundred Seventy-Five and no/100 Dollars (\$175.00) per acre, (iv) pasture at Fifty-Five and no/100 Dollars (\$55.00) per acre, (v) soybeans at Six Hundred and no/100 Dollars (\$600.00) per acre, and (vi) wheat at Six Hundred and no/100 Dollars (\$600.00) per acre. If less than one acre of Owner's cultivated crops, pasture or hay on the Property is damaged by Grantee's activities on the Property, the applicable dollar amount per acre shall be reduced proportionally. The Parties shall attempt, in good faith, to agree upon the extent of damage and amount of acreage affected. If the Parties cannot agree, the Parties shall have the area measured and the extent of damage assessed by an impartial party chosen by mutual agreement of the Parties, such as a crop insurance adjuster.

4.7 Compaction Compensation. In addition to payments owed hereunder for crop compensation, if any, Grantee shall pay Owner for areas determined to have significant soil compaction directly caused by Grantee's activities on the Property ("**Compaction Compensation**") if Grantee fails to de-compact such areas within three (3) months of completion of construction of Windpower Facilities for the Project. Compaction Compensation shall be equal to an amount that is quadruple the fair market value of the crops that Owner had most recently been growing on such Property for the area compacted. In consideration of this payment, no additional damages shall be paid in future years for that incident of soil compaction. The Parties shall try in good faith to agree to the extent of damage and acreage affected. If the Parties cannot agree, the Parties shall have the area measured and the extent of damage assessed by an impartial party chosen by mutual agreement of the Parties, such as a crop insurance adjuster.

4.8 Repowering. In the event Grantee replaces all or portions of any Turbines or other improvements in connection with any repowering effort during the term of this Agreement, the payment provisions described in this Section 4 will apply with respect to such repowering efforts to the extent such efforts require use of additional surface or new disturbance of the surface estate.

4.9 Conservation Reserve Program. If Owner is a party to a Conservation Reserve Program contract (a “**CRP Contract**”) with the U.S. Department of Agriculture pursuant to 7 C.F.R. Part 1410, Owner shall provide Grantee with a true and complete copy of such CRP Contract, together with all amendments and modifications, and if applicable, Grantee shall reimburse Owner for (a) any rental payments, or portion thereof, Owner would have received from the U.S. Department of Agriculture but for the construction or occupation of the Windpower Facilities on the Property and (b) the penalties and interest, if any (including for any past payments received by Owner that must be repaid by Owner), assessed by, the U.S. Department of Agriculture as a result of the construction or occupation of the Windpower Facilities on the Property. Owner shall cooperate with Grantee in completing and submitting documents to obtain any exemptions allowed under the Conservation Reserve Program for the use of Windpower Facilities on Property covered by a CRP Contract. After the Effective Date, Owner shall not enter into a new CRP Contract covering the Property or exercise any option to extend or renew any CRP Contract entered into prior to the Effective Date.

6. Taxes. Section 6 is hereby amended and restated in its entirety as follows:

6. Taxes. Owner shall pay all taxes, assessments, or other governmental charges that shall or may during the Term be imposed on, or arise in connection with the Property itself; provided that during the Term Grantee shall promptly reimburse Owner or, as is the preference of Grantee, pay directly for any such taxes, assessments, or other governmental charges directly resulting from the presence of the Windpower Facilities on the Property.

7. New Mexico Indemnification. The following sentence is added to the end of Section 7.4:

To the extent, if at all, a court of competent jurisdiction determines that Section 56-7-1 NMSA 1978 applies to any indemnification provisions in this Agreement, including certain types of insurance coverage as set forth in Section 56-7-1 NMSA 1978, such contractual indemnities shall not extend to liability, claims, damages, losses or expenses, including attorney fees, arising out of bodily injury to persons or damage to property caused by or resulting from, in whole or in part, the negligence, act or omission of the indemnified party or additional insured, as the case may be, its officers, employees or agents and shall further be modified, if required, by the provisions of Section 56-7-1(B) NMSA 1978.

8. New Mexico Subdivision. The following sentence is added to the end of Section 8.4:

In addition, Owner shall cooperate with Grantee in Grantee obtaining any necessary approvals or exemptions in accordance with applicable subdivision law and regulation, including without limitation the Land Subdivision Act (Section 47-5-1 and Section 47-5-8 NMSA 1978) and the New Mexico Subdivision Act (Section 47-6-1 through Section 47-6-29 NMSA 1978), both as amended from time to time, including

without limitation, agreeing not to further subdivide the Property and any adjacent property of Grantee for five (5) years from the Effective Date and signing any required documentation of such agreement.

9. Access Easement. Section 8.5 of the Original Lease is hereby amended and restated in its entirety as follows:

Access. Owner hereby grants the Grantee, for no additional consideration, an easement for Access Rights over and across portions of Owner's property that are not part of the Property, in locations to be determined that are reasonably acceptable to Owner ("**Access Easement**"). Any Access Easement shall include the right to improve existing roads and lanes, shall be appurtenant to the Property, and shall inure to the benefit of Grantee and be binding upon Owner and their respective transferees, successors, and assigns, and all persons claiming under them.

10. Mineral Rights. New Section 8.7 is hereby added to the Original Lease as follows:

Mineral Rights. Owner shall fully cooperate with and assist Grantee in obtaining a Recognition Agreement, Non-Disturbance Agreement or other appropriate agreement from each party from time to time holding a mineral interest, lease, grant or reservation of interest under or affecting the Property, confirming to Grantee's reasonable satisfaction that the use and exploitation of said mineral leases or interests is not anticipated to interfere with or adversely affect Grantee's planned or contemplated uses, disturb the subsurface under the Windpower Facilities or the free flow of wind across the Property. Owner shall notify Grantee in writing within ten (10) days after any notice of mineral exploration or development in, on, or under the Property, including without limitation a notice of intent to drill, petition to appoint an appraiser or notice provided by a mineral operator under the Surface Owner Protection Act (Section 7-12-1 through 7-12-10 NMSA 1978, as amended from time to time), and such notice shall include a copy of any documents and information provided to Owner in relation to the notice. Owner and Grantee shall cooperate in good faith and work jointly as to, and each Party shall be permitted to participate in, any (a) response to any such notification, (b) negotiation with any mineral rights holder, including without limitation acceptance or rejection of any surface use and compensation proposal and/or entry into any Surface Use and Compensation Agreement, (c) enforcement of the rights of the surface owner as set forth in the Surface Owner Protection Act, including without limitation recovery of costs and attorneys' fees and (d) pursuit of compensation for damages associated with mineral exploration and development in, on, or under the Property.

11. Separation of Agreements. New Sections 9.3 through 9.5 are hereby added to the Original Lease as follows:

9.3 Separate Agreements. As used herein, the following terms shall have the meaning set forth below:

“Easement Interest” shall mean the entire right, title and interest in and to the Property, as evidenced by this Agreement and each Separate Agreement, being a portion of the easement interest under the Agreement.

“Easement Interest Owner” means the owner or its successor or assign then owning the Easement Interest under this Agreement or any Separate Agreement.

“Separate Agreement” shall mean an easement agreement entered into evidencing the separation, amendment and restatement of the Agreement with respect to any Easement Interest, including any Easement Interest remaining subject to the Agreement which is not amended and restated.

Grantee may use the Property for one Project or divide the Property into multiple separate Projects. If Grantee divides the Property into multiple Projects, Owner shall, within thirty (30) days after written request from Grantee, and without any additional consideration, divide this Agreement by entering into and delivering to Grantee two or more new Separate Agreements (which shall supersede and replace this Agreement) that provide Grantee with separate Easement Interests in different portions of the Property. Each such new Separate Agreement shall: (i) designate Grantee or any Assignee selected by Grantee as the Grantee thereunder; (ii) specify the portion(s) of the Property to be covered thereby; (iii) contain the same terms and conditions as this Agreement (except for any requirements that have been fulfilled by Grantee or any Assignee prior to the execution of such new agreements and any modifications that may be required to ensure that each Party’s combined obligations under such new agreements do not exceed such Party’s obligations under this Agreement); (iv) be for a term equal to the remaining term of this Agreement; (v) contain a grant of the Access Easement and Collection Facilities Easement for the benefit of each portion of the Easement Interest, covering such portion or portions of the Property as Grantee may designate; and (vi) enjoy the same priority as this Agreement over any lien, encumbrance or other interest created by Owner.

9.4. Effect of Separate Agreements. If any Separate Agreement is entered into with respect to an Easement Interest, Owner and Grantee hereby agree that the effect of each Separate Agreement is to partition the Easement as originally granted under the Agreement and declare that, from and after the effective date thereof, each Separate Agreement is a separate easement agreement covering the Easement Interest on the terms set forth therein. Owner and Grantee agree that the Easement Interest under each Separate Agreement constitutes an interest in severalty and not an undivided interest in the Easement, and that, for avoidance of doubt, all rights and obligations under each Separate Agreement and partitioned interest covered thereby shall be independent of each other such that (i) no default occurring under any Separate Agreement shall be a default under any other Separate Agreement, (ii) all rights and remedies with respect to a default under any Separate Agreement

shall be exercised independently of the other Separate Agreements, (iii) each Separate Agreement may be terminated in accordance with its terms without affecting any other Separate Agreement, and (iv) no Easement Interest Owner shall be liable for any obligation arising under the Agreement arising prior to the execution of its Separate Agreement (other than if, and solely with respect to, any Easement Interest owned by such Easement Interest Owner under the Agreement prior thereto) or under any other Separate Agreement. The terms of each Separate Agreement (other than an Easement Interest which is not restated and amended and remains subject to the terms of the Agreement) supersede and replace the terms of the Agreement from and after the effective date of each with respect to the Easement Interest thereunder, but the Easement Interest under each Separate Agreement is derivative of the Easement and, as amended and restated under the terms of each such Separate Agreement, retains the same priority as the Agreement.

9.5 Release of Easement Interest Owners under Separate Agreements. Owner hereby releases each Easement Interest Owner from any and all losses, damages, expenses and other liabilities, including without limitation attorneys' fees and any third party claims, (i) to the extent arising out of or relating to any property demised under the Agreement which is not subject to the Easement Interest under the Separate Agreement of such Easement Interest Owner, or (ii) to the extent arising under the terms of any other Separate Agreement.

12. Collection Facilities Easement. Section 10.1 of the Original Lease is hereby amended and restated in its entirety as follows:

Grant of Collection Facilities Easement. Owner hereby grants to Grantee one or more easements for the construction, operation and maintenance of underground or overhead Collection Facilities including underground or overhead radial electric transmission and distribution lines, interconnections and switching stations on, under, over and across portions of the Property to be determined that are reasonably acceptable to Owner ("**Collection Facilities Easement**"). Any such Collection Facilities Easement shall contain all of the rights and privileges for Windpower Facilities as are set forth in this Agreement.

13. Notice of Default; Opportunity to Cure. Section 11.2(c) and 11.2(f) is hereby amended and restated in its entirety as follows:

(c) During any period of possession of the Windpower Facilities by an Easement Mortgagee (or a receiver requested by such Easement Mortgagee) and/or during the pendency of any foreclosure proceedings instituted by an Easement Mortgagee, the Easement Mortgagee shall pay or cause to be paid all monetary charges payable by Grantee hereunder which have accrued and are unpaid at the commencement of said period and those which accrue thereafter during said period. Following acquisition of Grantee's easement estate by the Easement Mortgagee or its assignee or designee as a result of either foreclosure or acceptance of an assignment in lieu of foreclosure,

or by a purchaser at a foreclosure sale, the Easement shall continue in full force and effect and the Easement Mortgagee or party acquiring title to Grantee's easement estate shall, as promptly as reasonably possible, commence the cure of all defaults hereunder and thereafter diligently process such cure to completion, whereupon Owner's right to terminate this Easement based upon such defaults shall be deemed waived.

(f) Nothing herein shall be construed to extend the Easement beyond the Extended Term or to require an Easement Mortgagee to continue foreclosure proceedings after the default has been cured. If the default is cured and the Easement Mortgagee discontinues foreclosure proceedings, the Easement shall continue in full force and effect.

14. New Easement to Mortgagee. Sections 11.3(a) and 11.3(b) are hereby amended and restated in their entirety as follows:

(a) The terms of the new easement shall commence on the date of termination, foreclosure, rejection or disaffirmance and shall continue for the remainder of the terms of the Easement at the same rent and subject to the same terms and conditions set forth in this Easement.

(b) The new easement shall be executed within thirty (30) days after receipt by Owner of written notice of the Easement Mortgagee's election to enter a new easement, provided said Easement Mortgagee: (i) pays to Owner all rent and other monetary charges payable by Grantee under the terms of the Easement up to the date of execution of the new easement, as if the Easement had not been terminated, foreclosed, rejected or disaffirmed; (ii) performs all other obligations of Grantee under the terms of the Easement to the extent performance is then due and susceptible of being cured and performed by the Easement Mortgagee; and (iii) agrees in writing to perform, or cause to be performed, all non-monetary obligations which have not been performed by Grantee and would have accrued under this Easement up to the date of commencement of the new easement, except those obligations which constitute non-curable defaults as defined above. Any new easement granted to the mortgagee shall enjoy the same priority as this Easement over any lien, encumbrances or other interest created by Owner.

15. Owner's Right to Terminate. The last sentence of Section 12.2 is deleted.

16. Binding Effect. The benefits arising from this Amendment shall inure to, and the obligations hereof shall be binding upon, the parties hereto, their heirs, personal representatives, successors and assigns.

17. Recording. This Amendment shall not be recorded in any County's public records. However, Grantee may require that a memorandum of this Amendment be recorded and Owner shall execute the same in recordable form.

18. Lease Effectiveness. Except as expressly amended hereby, the Original Easement is fully ratified and confirmed and continues in full force and effect. Owner warrants and represents to Grantee that, (i) to Owner's knowledge, there exists no breach, default, or event or condition which, with the giving of notice or the passage of time or both, would constitute a breach or default under the Original Easement, as amended by this Amendment, either by Grantee or Owner; (ii) Owner has no existing claims or defenses under the Original Easement, as amended by this Amendment; and (iii) all fees, rent and payments due to Owner under the Original Easement, as amended by this Amendment, for the period through and including the date of this Amendment have been paid.

19. Miscellaneous. Except as expressly amended hereby, the Original Easement is fully ratified and confirmed and continues in full force and effect. Should any provision of this Amendment be held invalid, void or unenforceable, the remaining provisions hereof shall remain in full force and effect, unimpaired. This Amendment shall not be modified or amended except in a writing signed by both parties or their lawful successors in interest. This Amendment may be executed in counterparts, all of which together shall constitute one and the same instrument. The signature and acknowledgment of a party to any counterpart may be removed and attached to and recorded with any other otherwise identical counterpart.

[Signature Page Follows]

GRANTEE:

[_____],
a Delaware limited liability company

By: _____
Name: _____
Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me on _____, 2017, by
_____, the _____ of _____, a Delaware
limited liability company, on behalf of said limited liability company.

Signature of Notary Public or Other Official

This Document Was Prepared By
And After Recordation Should Be Returned To:

[]]

Exhibit C-3

Form of Lease Amendment (Sufficient Leases)

**[FIRST] AMENDMENT TO
WIND LEASE AND EASEMENT AGREEMENT**

THIS [FIRST] AMENDMENT TO **WIND LEASE AND EASEMENT AGREEMENT** (this "Amendment") is entered into as of _____, 2017 (the "Amendment Date"), by _____ ("Owner"), and _____, a Delaware limited liability company ("Grantee").

WHEREAS, Owner and Grantee previously entered into that certain **WIND LEASE AND EASEMENT AGREEMENT**, dated _____, 20__[, **as evidenced of record by that certain Memorandum dated _____, 20__]** and filed for record with the County Recorder of Roosevelt County, New Mexico on _____, 20__ as Doc. No. _____ (the "Original Easement").

WHEREAS, Owner and Grantee desire to amend the Original Easement, in accordance with the terms and conditions set forth below.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are mutually acknowledged, Owner and Grantee agree as follows:

1. Additional Easements. The following sections are hereby added as new Sections 2.2, 2.3, and 2.4:

2.2 Additional Easements. If Grantee wishes to obtain from Owner one or more easements on, over, across, along and/or above any real property that is owned by Owner on the date hereof and adjacent to the Property (each, an "**Additional Easement**"), in connection with, for the benefit of and for purposes incidental to the Project, including the right to install and maintain on the Property (i) transmission lines and facilities, both overhead and underground, which carry electrical energy to and/or from the Project, (ii) communications lines and facilities, both overhead and underground, which carry communications to and/or from the Project, and/or (iii) metering equipment, substations, switching stations, wind measurement equipment and control, maintenance and administration buildings (provided that no sleeping quarters will be allowed) that benefit the Project, then upon request Owner shall grant to Grantee such an easement in such location or locations as Grantee may reasonably request and that are reasonably satisfactory to Owner, provided that Grantee shall agree to pay to Owner a reasonable fee agreed to by Owner for such easement in addition to all other amounts payable by Grantee to Owner hereunder. In this Article, the term "adjacent" when used in the context of describing adjacent property means property owned by Owner which (i) shares

a property line; or (ii) is separated only by a local, state or federal public right of way .

2.3 Stand-Alone Easements. Owner acknowledges that commercial operation of the Project may require, from time to time during the Project's existence, additional easements in favor of certain third parties on the Property and on real property that is owned by Owner on the date hereof and adjacent to the Property. Accordingly, if the independent system operator with jurisdiction over the system in which the Project operates, the transmission system owner or operator to whose transmission lines the Project interconnects, or the off-taker to whom output and/or credits from the Project is sold, determines that one or more separate, stand-alone easements (each, a "**Stand-Alone Easement**") on, over, across, along and/or above the Property and any other real property that is owned by Owner on the date hereof and adjacent to the Property, including the right to install and maintain on the Property (i) transmission lines and facilities, both overhead and underground, which carry electrical energy to and/or from the Project, (ii) communications lines and facilities, both overhead and underground, which carry communications to and/or from the Project, and/or (iii) metering equipment, substations, switching stations, wind measurement equipment and control, maintenance and administration buildings that benefit the Project, is reasonably required for the efficient and/or safe operation of the Project, then upon request Owner shall grant to such third party such an easement in such location or locations as such party may reasonably request, and that are reasonably satisfactory to Owner, provided that such party shall agree to pay to Owner a reasonable fee agreed to by Owner for such easement in addition to all other amounts payable by Grantee to Owner hereunder.

2.4 Nature of Additional Easements and Stand-Alone Easements. Each Additional and Stand-Alone Easement (i) shall be in the nature of and similar to the Easements granted to Grantee under Section 2.1, and shall be in a recordable form and in a form reasonably acceptable to Grantee, such affiliate or the grantee of such easement as applicable (which form shall at a minimum include adequate lender-protective provisions) (ii) shall, upon the granting thereof, be included within the meaning of the term "**Easement**", except where otherwise stated or where the context otherwise requires and (ii) will only be for the purposes described in this Agreement.

2. Separate Agreements. New Section 9.8 is hereby added to the Original Lease as follows:

9.8 Separate Agreements. As used herein, the following terms shall have the meaning set forth below:

"**Leasehold Estate**" shall mean the entire right, title and interest in and to the Property, as evidenced by this Agreement and each Separate Agreement, being a portion of the leasehold estate under this Agreement.

“Leasehold Estate Owner” means the owner or its successor or assign then owning the Leasehold Estate under this Agreement or any Separate Agreement.

“Separate Agreement” shall mean a lease agreement entered into evidencing the separation, amendment and restatement of this Agreement with respect to any Leasehold Estate, including any Leasehold Estate remaining subject to this Agreement which is not amended and restated.

(a) Division of Property. Grantee may use the Property for one Project or divide the Property into multiple separate Projects. If Grantee divides the Property into multiple Projects, Owner shall, within thirty (30) days after written request from Grantee, and without any additional consideration, divide this Agreement by entering into and delivering to Grantee two or more new Separate Agreements (which shall supersede and replace this Agreement) that provide Grantee with separate Leasehold Estates in different portions of the Property. Each such new Separate Agreement shall: (i) designate Grantee or any Assignee selected by Grantee as the Grantee thereunder; (ii) specify the portion(s) of the Property to be covered thereby; (iii) contain the same terms and conditions as this Agreement (except for any requirements that have been fulfilled by Grantee or any Assignee prior to the execution of such new agreements and any modifications that may be required to ensure that each Party’s combined obligations under such new agreements do not exceed such Party’s obligations under this Agreement); (iv) be for a term equal to the remaining term of this Agreement; (v) contain a grant of the easements granted herein for the benefit of each portion of the Leasehold Estate, covering such portion or portions of the Property as Grantee may designate; and (vi) enjoy the same priority as this Agreement over any lien, encumbrance or other interest created by Owner.

(b) Effect of Separate Agreements. If any Separate Agreement is entered into with respect to a Leasehold Estate, Owner and Grantee hereby agree that the effect of each Separate Agreement is to partition the Leasehold Estate as originally granted under this Agreement and declare that, from and after the effective date thereof, each Separate Agreement is a separate easement agreement covering the Leasehold Estate on the terms set forth therein. Owner and Grantee agree that the Leasehold Estate under each Separate Agreement constitutes an interest in severalty and not an undivided interest in the Leasehold Estate, and that, for avoidance of doubt, all rights and obligations under each Separate Agreement and partitioned interest covered thereby shall be independent of each other such that (i) no default occurring under any Separate Agreement shall be a default under any other Separate Agreement, (ii) all rights and remedies with respect to a default under any Separate Agreement shall be exercised independently of the other Separate Agreements, (iii) each Separate Agreement may be terminated in accordance with its terms without affecting any other Separate Agreement, and (iv) no Leasehold Estate Owner shall be liable for any obligation arising under this Agreement arising prior to the execution of its Separate Agreement (other than if, and solely with respect to, any Leasehold Estate owned by such Leasehold Estate Owner under this Agreement prior thereto) or under any other Separate Agreement. The terms of each Separate Agreement (other than an Leasehold Estate which is not restated and amended and remains subject to the terms of this

Agreement) supersede and replace the terms of this Agreement from and after the effective date of each with respect to the Leasehold Estate thereunder, but the Leasehold Estate under each Separate Agreement is derivative of the original Leasehold Estate and, as amended and restated under the terms of each such Separate Agreement, retains the same priority as this Agreement.

(c) Release of Leasehold Estate Owners under Separate Agreements. Owner hereby releases each Leasehold Estate Owner from any and all losses, damages, expenses and other liabilities, including without limitation attorneys' fees and any third party claims, (i) to the extent arising out of or relating to any property demised under this Agreement which is not subject to the Leasehold Estate under the Separate Agreement of such Leasehold Estate Owner, or (ii) to the extent arising under the terms of any other Separate Agreement.

3. Conservation Reserve Program. The following sentence is hereby added to the end of Exhibit C:

After the Effective Date, Owner shall not enter into a new CRP Contract covering the Property or exercise any option to extend or renew any CRP Contract entered into prior to the Effective Date.

4. Binding Effect. The benefits arising from this Amendment shall inure to, and the obligations hereof shall be binding upon, the parties hereto, their heirs, personal representatives, successors and assigns.

5. Recording. This Amendment shall not be recorded in any County's public records. However, Grantee may require that a memorandum of this Amendment be recorded and Owner shall execute the same in recordable form.

6. Lease Effectiveness. Except as expressly amended hereby, the Original Easement is fully ratified and confirmed and continues in full force and effect. Owner warrants and represents to Grantee that, (i) to Owner's knowledge, there exists no breach, default, or event or condition which, with the giving of notice or the passage of time or both, would constitute a breach or default under the Original Easement, as amended by this Amendment, either by Grantee or Owner; (ii) Owner has no existing claims or defenses under the Original Easement, as amended by this Amendment; and (iii) all fees, rent and payments due to Owner under the Original Easement, as amended by this Amendment, for the period through and including the date of this Amendment have been paid.

7. Miscellaneous. Except as expressly amended hereby, the Original Easement is fully ratified and confirmed and continues in full force and effect. Should any provision of this Amendment be held invalid, void or unenforceable, the remaining provisions hereof shall remain in full force and effect, unimpaired. This Amendment shall not be modified or amended except in a writing signed by both parties or their lawful successors in interest. This Amendment may be executed in counterparts, all of which together shall constitute one and the same instrument. The signature and acknowledgment of a party to any counterpart may be removed and attached to and recorded with any other otherwise identical counterpart.

[Signature Page Follows]

IN WITNESS WHEREOF, Owner and Grantee have executed this Amendment as of the Amendment Date.

OWNER:

[IF AN ENTITY]

[_____] ,
a [_____]

By: _____
Name: _____
Title: _____

[IF AN INDIVIDUAL]

[NOTE: TO BE SIGNED BY BOTH SPOUSES]

[_____]

[_____]

ACKNOWLEDGMENTS

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me on _____, 2017, by _____.

Signature of Notary Public or Other Official

Exhibit D

Geotechnical Testing Requirements

1. Geotechnical Engineering Services SOW

a. Mobilization

- (1) Truck mounted drill or hydraulic rig(s) will be mobilized to the site to complete the subsurface field exploration. Geotechnical Engineer assumes all geotechnical field investigation locations are accessible to truck mounted equipment.
- (2) Geotechnical Engineer's drilling investigation will perform utility locate survey at each boring location in accordance with State requirements for soundings located on public property.
- (3) Seller will determine investigation site locations based on Owner input and approval, provide site coordinates of these locations, and survey and stake the locations. Seller will stake investigation locations a minimum of three days prior to the start of the investigation.
- (4) Seller will gain landowner permissions and obtain access to all investigation locations in a manner that allows Geotechnical Engineer to complete the work in one mobilization.

b. Geotechnical Borings at Proposed Turbines

- (1) The total number of geotechnical tests at the Sagamore Wind Project Site required by the Purchase and Sale Agreement to which this document is attached will be performed, including alternate locations. The tests shall consist of 100% geotechnical bores. However, pending Owner approval, the use of cone-penetrometer-tests (CPT) at 100% of the geotechnical test locations plus geotechnical bores at a minimum of 10% of the geotechnical test locations may be allowed. Each test will be extended to a depth of 50 feet except as noted. The depth of investigation may be reduced at the discretion of the geotechnical engineer if hard rock or stiff soil conditions are encountered. Geotechnical borings will be advanced using hollow stem auger or air rotary drilling techniques through soil and rock with logging based on visual identification of the boring cuttings. Samples will be collected at 2 ½-foot intervals to a depth of 15 feet and then at 5-foot intervals either by driving a split spoon sampler or pushing a Shelby tube. For the top 8 feet of soil, bulk samples may be collected from auger cuttings.
- (2) Groundwater levels in the borings, if any, will be measured during and immediately following drilling. Alternatively, temporary piezometers shall be installed at all geotechnical testing locations. Groundwater levels measured by

temporary piezometers shall be recorded twice: once after installation and again after equilibrium is achieved.

c. Geotechnical Borings at Proposed Substation(s)

- (1) Eight (8) geotechnical borings will be performed at each proposed substation location, each to a depth of 40 feet. The bores shall be located such that there is one bore at each main power transformer, one at the dead end structure, one at the control house, at least two near the high side structures and at least two near the low side structures. Geotechnical borings will be advanced using hollow stem auger or air rotary drilling techniques through soil and rock with logging based on visual identification of the boring cuttings. Samples will be collected at 2 ½-foot intervals to a depth of 15 feet and then at 5-foot intervals either by driving a split spoon sampler or pushing a Shelby tube. For the top 8 feet of soil, bulk samples may be collected from auger cuttings.
- (2) Groundwater levels in the borings, if any, will be measured during and immediately following drilling. Alternatively, temporary piezometers shall be installed at all geotechnical testing locations. Groundwater levels measured by temporary piezometers shall be recorded twice: once after installation and again after equilibrium is achieved.

d. Geotechnical Borings at Proposed O&M Building

- (1) Four (4) geotechnical borings will be performed at the proposed O&M building location, each to a depth of 30 feet. Geotechnical borings will be advanced using hollow stem auger or air rotary drilling techniques through soil and rock with logging based on visual identification of the boring cuttings. Samples will be collected at 2 ½-foot intervals to a depth of 15 feet and then at 5-foot intervals either by driving a split spoon sampler or pushing a Shelby tube. For the top 8 feet of soil, bulk samples may be collected from auger cuttings.
- (2) Groundwater levels in the borings, if any, will be measured during and immediately following drilling. Alternatively, temporary piezometers shall be installed at all geotechnical testing locations. Groundwater levels measured by temporary piezometers shall be recorded twice: once after installation and again after equilibrium is achieved.

e. Geotechnical Borings along Proposed Transmission Line

- (1) Geotechnical boring will be performed per mile of overall length for the proposed transmission line alignment. Each boring will extend to a depth of 30 feet. Geotechnical borings will be advanced using hollow stem auger or air rotary drilling techniques through soil and rock with logging based on visual identification of the boring cuttings. Samples will be collected at 2 ½-foot intervals to a depth of 15 feet and then at 5-foot intervals either by driving a split spoon sampler or pushing a Shelby tube. For the top 8 feet of soil, bulk

samples may be collected from auger cuttings.

- (2) Groundwater levels in the borings, if any, will be measured during and immediately following drilling. Alternatively, temporary piezometers shall be installed at all geotechnical testing locations. Groundwater levels measured by temporary piezometers shall be recorded twice: once after installation and again after equilibrium is achieved.

f. Groundwater Measurements and Corrosion Testing

- (1) Immediately following completion of each borehole, groundwater levels will be measured. Groundwater levels will also be measured 24 hours after completion of the borehole and then backfilled immediately unless the information warrants further measurements. Alternatively, temporary piezometers shall be installed at all geotechnical testing locations. Groundwater levels measured by temporary piezometers shall be recorded twice: once after installation and again after equilibrium is achieved.
- (2) At each borehole or temporary piezometer location where groundwater is encountered, one sample will be collected and shipped to the laboratory for testing. Each sample will be tested for sulfate and chloride levels in the water.

g. Field Reconnaissance and Geotechnical Inspection

- (1) Geotechnical Engineer will review aerial photos to identify and map geotechnical features which could affect foundation design such as drainage courses and unstable slopes.
- (2) Geotechnical Engineer will perform site reconnaissance at proposed turbine locations for field identification of geotechnical risks.
- (3) Geotechnical Engineer will include the findings of the field reconnaissance in the project geotechnical report.
- (4) Seller will gain landowner permissions and obtain access to all investigation locations in a manner that allows Geotechnical Engineer to complete field reconnaissance in one mobilization.

h. Geophysical Investigation

- (1) One geophysical testing crew will be mobilized to the site to perform geophysical testing to determine the dynamic shear modulus parameters for foundation design.
- (2) Multi-Channel Analysis of Surface Waves (MASW) and Seismic Refraction (SR) testing will be completed at approximately 10 percent of the turbine locations at locations selected by Geotechnical Engineer.

- (3) Results including graphical sonic data, dynamic shear modulus, Poisson's ratio and Young's modulus in graphical and tabular form will be combined into an attachment to the geotechnical report.
- (4) Seller will determine location of investigation sites, provide site coordinates of these locations, and survey and stake the locations. Seller will stake investigation locations a minimum of three days prior to the start of the investigation.
- (5) Seller will gain landowner permissions and obtain access to all investigation locations in a manner that allows Geotechnical Engineer to complete geophysical work in one mobilization. Stops in work to wait for permissions or access, or additional site mobilizations to complete the work, will require a change to this work order for stand-by time.

i. Laboratory Testing

- (1) Bulk samples, split spoon samples, and Shelby tube samples will be tested in the laboratory with some or all of the following tests performed:
 - a. Moisture Content.
 - b. Grain Size Analysis.
 - c. Atterberg Limits.
 - d. Chemical Analysis.
 - e. Standard Proctor.
 - f. Shrink-swell testing.
 - g. Soil strength testing as appropriate (unconfined compression, direct shear, and/or triaxial compression).
 - h. Soil density testing.
 - i. Specific gravity tests, as appropriate.
 - j. Consolidation.

j. Electrical and Thermal Resistivity Testing

- (1) Geotechnical Engineer will perform field electrical resistivity testing at a total of 28 locations. Tests will be performed at approximately 10% proposed turbine locations and (2) tests will be completed at each proposed substation location. Locations will be designated by Seller. Tests will be performed using a 4-pin Wenner array at five different "A" spacings (2, 5, 10, 20, and 40 feet). Geotechnical Engineer will perform test using the "four point method" in accordance with ASTM Standard Test Method G57. Geotechnical Engineer will record ambient air temperatures during the test. Geotechnical Engineer will present the results in a letter report. The letter report will be issued only in

final form and electronically.

- (2) Sampling and testing shall be completed in accordance with current ASTM standards, following procedures and practices per ASTM D3740. Testing and reporting shall be in accordance with requirements of ASTM D5334-08.
- (3) The general location of sites where soil samples are to be taken will be provided to Seller. Unless otherwise indicated, Seller may exercise reasonable latitude in the actual location of sampling to allow for equipment access and maneuvering. All areas are to be restored to essentially original condition after samples are taken.
- (4) Two samples are to be collected from each test site. One sample shall be a loose mixture of soils taken between 18” and 48” below grade. The second sample shall be a thin wall tube sample of undisturbed soil at approximately 48” below grade. If rock or other conditions are encountered that prevent sampling at the depths specified, one thin wall tube sample shall be taken at the maximum possible depth with the loose sample of soils above that depth.
- (5) The loose sample shall be remolded to approximately 85% of the Standard Proctor Density before testing. The thin wall tube sample shall be tested at the “as-found” density.
- (6) All samples shall be tested at the as-found moisture content and at a minimum of three additional points as the sample is dried, including a final test at 0% moisture content. Intermediate test points shall be spaced approximately equally between 0% moisture and the as-found moisture content.
- (7) Geotechnical Engineer will present the results in a letter report. The letter report will be issued only in final form and electronically.

k. Road Subgrade Testing

- (1) Geotechnical Engineer will collect bulk samples of the subgrade at various locations selected by Geotechnical Engineer. The samples will be sent to a laboratory for California Bearing Ratio (CBR) testing in accordance with ASTM Standard Test Method D1883.
- (2) Geotechnical Engineer will evaluate the test results and provide recommendations in the geotechnical engineering report pertaining to roadway subgrade preparation and aggregate thickness.

l. Geotechnical Analysis, Engineering and Reporting

- (1) Field and laboratory data will be processed and analyzed by Geotechnical Engineer’s geotechnical and foundation engineers.
- (2) Borings and geophysical results will be processed and analyzed to infer soil

lithology, shear strength, groundwater conditions, shear and compression wave velocities, compaction, compressibility, and subgrade strength.

- (3) Laboratory tests will be processed and analyzed to infer properties related to density, compressibility, and strength.
- (4) Geotechnical Engineer will provide a general assessment of relevant site geotechnical and geological hazards and risks.
- (5) Geotechnical Engineer will provide recommendations for wind turbine foundations, including foundation type, bearing capacity, foundation stiffness, sliding friction, foundation settlement, backfill density, and cement type.
- (6) Geotechnical Engineer will provide recommendations for substation design aspects such as grading design, slab and spread footing design, and pier design.
- (7) Geotechnical Engineer will provide recommendations for main erection crane pad bearing pressures.
- (8) Geotechnical Engineer will provide recommendations for cement stabilization use and road section design for the project based on the results of laboratory testing.
- (9) Geotechnical Engineer will provide a summary of geotechnical parameters for foundation design of site ancillary structures, including the substation, met towers, transmission line, switchyard, and O&M building.
- (10) Geotechnical Engineer will present the investigation, analysis, and engineering in a geotechnical engineering report. Geotechnical Engineer will provide data and analysis in report discussion, tables, figures, and appendices. Appendices will include turbine site coordinates, boring logs, geophysical results, and laboratory test results.
- (11) Geotechnical Engineer will provide the geotechnical engineering report in draft for review and comment by Design-Builder. Geotechnical Engineer will incorporate any comments or revisions as are deemed necessary. Geotechnical Engineer will sign and stamp the report in accordance with requirements of the State of New Mexico.

m. Support of Independent Third Party Review

- (1) The engineering completed for the project will be reviewed by independent third parties on behalf of developer, investors, and lenders.
- (2) Geotechnical Engineer will assist Seller with facilitating the review process, by responding to information requests concerning Geotechnical Engineer's investigation, testing, analysis, and engineering.

- (3) Geotechnical Engineer will provide copies of all Geotechnical Engineer reports, drawings, calculations, and specifications to Seller for review by third parties. Geotechnical Engineer will provide clarifications and responses with respect to information contained in these documents.

n. Geotechnical Engineer Project Administration and Coordination

- (1) This task is included in all items listed above and involves coordination of information and tasks with the project team, printing and issuing of documents and reports, general project management, participation in meetings and conference calls, and administrative tasks and expenses including budget, schedule and scope monitoring and review.

2. Seller Responsibilities

- a. Seller will provide the documents to third parties.
- b. Seller will obtain necessary approvals to access the site.
- c. Seller will stake the locations for utility locates.

3. Deliverables

- a. Geotechnical Engineer will provide the following deliverables:
 - (1) Field electrical resistivity tests letter report.
 - (2) Thermal resistivity tests letter report.
 - (3) Geotechnical engineering report for use in wind turbine foundation design. This report shall include recommendations for all analyzed activities requested in this document such as: Access roads, ancillary structure foundations, and main erection crane pads.
- b. Documents will be provided in draft and final form in electronic form only.
- c. All final documents will be stamped by a professional engineer registered in the applicable project State.

- 4. Geotechnical Engineer.** Notwithstanding anything to the contrary contained in this Exhibit D, all requirements of this Exhibit D (including methodologies and amounts described herein) shall be subject to, and may be superseded by, the recommendation of the geotechnical engineer to the extent such superseding recommendations are mutually agreeable to Buyer and Seller. It is hereby agreed that compliance with such superseding recommendations shall be deemed compliance for purposes of this Exhibit D.

Exhibit E

Form of Parent Guaranty **PARENT GUARANTY**

This Parent Guaranty, dated as of March 9, 2017 (this “**Guaranty**”) is made by Invenergy Wind Global LLC, a Delaware limited liability company (the “**Guarantor**”), in favor of Southwestern Public Service Company, a New Mexico corporation (the “**Beneficiary**”).

RECITALS

Invenergy Wind Development LLC, a Delaware limited liability company (the “**Guaranteed Party**”), Sagamore Wind Energy LLC, a Delaware limited liability company, and the Beneficiary have entered into a Purchase and Sale Agreement dated as of the date hereof (the “**Guaranteed Agreement**”).

The Guaranteed Party is an affiliate of the Guarantor, and the Guarantor has agreed to guarantee certain obligations of the Guaranteed Party under the Guaranteed Agreement as more fully set forth herein.

NOW, THEREFORE, in consideration of the premises set forth herein and other good and valuable consideration, receipt of which is acknowledged, the Guarantor hereby agrees as follows:

1. Definitions, Etc.

All capitalized terms, unless otherwise defined herein, shall have the meanings ascribed to them in the Guaranteed Agreement. The following terms when used in this Guaranty shall have the following meanings:

“**Bankruptcy Event**” shall be deemed to occur, with respect to any Person, if (a) that Person shall commence any case, proceeding or other voluntary action seeking to have an order for relief entered with respect to it, or seeking to adjudicate it bankrupt or insolvent, or seeking liquidation, arrangement, adjustment, winding-up, reorganization, dissolution, composition under the Bankruptcy Law or other relief with respect to it or its debts; (b) such Person shall apply for, or consent or acquiesce to, the appointment of, a receiver, administrator, administrative receiver, liquidator, sequestrator, trustee or other official with similar powers for itself or any substantial part of its assets; (c) such Person shall make a general assignment for the benefit of its creditors; (d) an involuntary case shall be commenced seeking liquidation or reorganization of such Person under the Bankruptcy Law, or seeking issuance of a warrant of attachment, execution or distraint, or any similar proceedings shall be commenced against such Person under any other applicable law and (i) such Person consents to the institution of the involuntary case against it, (ii) the petition commencing the involuntary case is not timely controverted, (iii) the petition commencing the involuntary case is not dismissed within 45 days of its filing, (iv) an interim trustee is appointed to take possession of all or a portion of the property, and/or to operate all or any

part of the business of such Person and such appointment is not vacated within 45 days, or (v) an order for relief shall have been issued or entered therein; or (e) a decree or order of a court having jurisdiction in the premises for the appointment of a receiver, administrator, administrative receiver, liquidator, sequestrator, trustee or other official having similar powers, over such Person or all or a part of its property shall have been entered; or (f) any other similar relief shall be granted against such Person under any applicable Bankruptcy Law, or such Person shall file a petition or consent or shall otherwise institute any similar proceeding under any other applicable law, or shall take any action in furtherance of, or indicating its consent to, approval of, or acquiescence in any of the acts set forth above in this definition; or (g) such Person shall generally not, or shall be unable to, or shall admit in writing its inability to, pay its debts as they become due.

“**Bankruptcy Law**” means Title 11, United States Code, and any other existing or future law (or any successor law or statute) of any jurisdiction, domestic (including state and federal) or foreign, relating to bankruptcy, insolvency, reorganization, conservatorship, moratorium or similar law for the relief of debtors.

“**Guaranteed Obligations**” means the obligations of the Guaranteed Party pursuant to Section 2.2(b) of the Guaranteed Agreement to, in the event that the Guaranteed Agreement is terminated prior to the Closing Date, pay to the Beneficiary by wire transfer of immediately available funds an amount equal to the Initial Payment then received by the Guaranteed Party, less any amounts permitted to be retained by the Guaranteed Party pursuant to Section 2.2(b), which Guaranteed Obligations shall in no event exceed (i) one million five hundred thousand dollars (\$1,500,000) prior to September 30, 2017 and (ii) three million dollars (\$3,000,000) on or after September 30, 2017, plus all reasonable legal fees, costs and expenses incurred by Beneficiary in enforcing the obligations under this Guaranty.

“**Person**” means any individual, corporation, partnership, joint venture, association, trust, government or political subdivision or an agency or instrumentality thereof, or other entity or organization.

“**Solvent**” means, with respect to any Person, that as of the date of determination both (i) (a) the sum of such Person’s debt (including contingent liabilities) does not exceed all of its property, at a fair valuation; (b) the Person is able to pay the probable liabilities on such Person’s then existing debts as they become absolute and matured (taking into account the timing and amounts of cash to be received by such Person and the amounts to be payable on or in respect of obligations of such Person); (c) such Person’s capital is not unreasonably small in relation to its business or any contemplated or undertaken transaction; and (d) such Person does not intend to incur, or believe (nor should it reasonably believe) that it will incur, debts beyond its ability to pay such debts as they become due (taking into account the timing and amounts of cash to be received by such Person and the amounts to be payable on or in respect of obligations of such Person); and (ii) such Person is “solvent” within the meaning given that term and similar terms under applicable laws relating to fraudulent transfers and conveyances. For purposes of this definition, the amount of any contingent liability at any time shall be computed as the amount that, in light of all of the facts and circumstances existing at such time, represents the amount that can reasonably be expected to become an

actual or matured liability (discounted to present value at rates believed to be reasonable by such Person acting in good faith).

2. Guaranty.

The Guarantor hereby irrevocably and unconditionally guarantees to the Beneficiary (i) the due, punctual and full payment of the Guaranteed Obligations in accordance with the terms thereof, by acceleration or otherwise, without, offset or deduction; and (ii) the due and punctual performance of, and compliance with, the Guaranteed Obligations.

3. Unconditional Nature of Obligations; Waiver.

3.1 Unconditional Nature of Obligations.

(a) The obligations of the Guarantor contained in Section 2 hereof are direct, independent and primary obligations of the Guarantor and are absolute, present, unconditional and continuing obligations and are not conditioned in any way upon the institution of suit or the taking of any other action or any attempt to enforce performance of or compliance with the Guaranteed Obligations. Such obligations shall, without limitation, constitute a guaranty of payment and performance and not of collection, and be binding upon the Guarantor and its successors and assigns and be irrevocable without regard to (i) the genuineness, validity, legality or enforceability of the Guaranteed Agreement, (ii) the lack of power or authority of the Guaranteed Party to enter into the Guaranteed Agreement, (iii) any substitution, release or exchange of any other guaranty or any other security for any of the Guaranteed Obligations or any of the obligations under the Guaranteed Agreement, or (iv) any other circumstance whatsoever (other than full payment and performance) that might otherwise constitute a legal or equitable discharge of a surety or guarantor. Such obligations shall not be subject to any right of set-off, recoupment or counterclaim and are in no way conditioned or contingent upon (x) any attempt to collect from the Guaranteed Party or any other entity, (y) any attempt to perfect or enforce any security, or (z) any other condition or contingency or any other action, occurrence, or circumstance whatsoever.

(b) Without limiting the generality of the foregoing, the Guarantor shall have no right to terminate this Guaranty, or to be released, relieved or discharged from its obligations hereunder, and such obligations shall be neither affected or diminished for any reason whatsoever, including, without limitation, (i) any amendment or supplement to or modification of the Guaranteed Agreement or any extension or renewal of a party's obligations under the Guaranteed Agreement, (ii) any bankruptcy, insolvency, readjustment, composition, liquidation or similar proceeding with respect to the Guaranteed Party, (iii) any furnishing or acceptance of additional security or any exchange, surrender, substitution or release of any security, (iv) any waiver, consent or other action or inaction or any exercise or non-exercise of any right, remedy or power with respect to the Guaranteed Obligations or the Guaranteed Agreement, or (v) any merger or consolidation of the Guaranteed Party or the Guarantor into or with any other Person, or any change in the structure of the Guaranteed Party or in the ownership of the Guaranteed Party by the Guarantor.

3.2 Waiver.

The Guarantor unconditionally waives, to the fullest extent permitted by applicable law, any right it may have to (i) the notice of any amendment, waiver or extension granted by or to the Guaranteed Party, (ii) all notices which may be required by applicable statute, rule of law or otherwise to preserve any of the rights of the Beneficiary against the Guaranteed Party, the Guarantor or any other person, (iii) require the Beneficiary to proceed against the Guaranteed Party or any other person or pursue any collateral or remedy within the Beneficiary's power, (iv) require acceptance of this Guaranty, diligence, presentment, demand for payment, protest and all other notices, including notice of the creation, renewal, extension or accrual of any of the Guaranteed Obligations, (v) require any election of remedies, (vi) require the marshalling of assets or the resort to any other security, (vii) except as otherwise expressly provided herein, claim any other defense, contingency, circumstance or matter which might constitute a legal or equitable discharge of a surety or guarantor, (viii) any defense based on or arising out of the voluntary or involuntary bankruptcy, insolvency, liquidation, dissolution, receivership, or other similar proceeding affecting the Guaranteed Party, or (ix) any other circumstance that might otherwise constitute a defense available to, or a legal or equitable discharge of, the Guaranteed Party, the Guarantor or any other guarantor (other than the defense of full payment and performance), subject to Section 4.2.

3.3 Subrogation.

Unless and until the obligations of the Guarantor under this Guaranty shall be discharged and released in accordance with Section 4 hereof, the Guarantor hereby waives any claim, right or remedy, direct or indirect, that the Guarantor now has or may hereafter have against the Guaranteed Party in connection with this Guaranty or the performance by the Guarantor of its obligations hereunder, in each case whether such claim, right or remedy arises in equity, under contract, by statute, under common law or otherwise.

4. Term of the Obligations of the Guarantor; Reinstatement.

4.1 Term of the Obligations of the Guarantor. Subject to Section 4.2, the obligations of the Guarantor under this Guaranty shall be discharged and released upon the earlier of (i) the date on which the Guaranteed Party has indefeasibly paid and performed in full all of the Guaranteed Obligations, and (ii) the Closing Date.

4.2 Reinstatement. This Guaranty and the obligations of the Guarantor hereunder shall automatically be reinstated if and to the extent that for any reason any payment made pursuant to this Guaranty or the Guaranteed Agreement is rescinded or otherwise restored to the Guarantor or the Guaranteed Party whether as a result of any proceedings in bankruptcy or reorganization or otherwise with respect to the Guaranteed Party or any other person or entity or as a result of any settlement or compromise with any person or entity in respect of such payment, and the Guarantor shall pay the Beneficiary on demand all of its reasonable costs and expenses (including reasonable fees of counsel) incurred in connection with such rescission or restoration.

5. Representations and Warranties.

The Guarantor represents and warrants to the Beneficiary as follows:

5.1 Organization. The Guarantor (i) is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, (ii) has full power and authority to own its property, and (iii) is qualified or licensed to do business in every jurisdiction where such qualification is required, except where the failure to be so duly qualified or licensed would not result in a material adverse effect.

5.2 Authority; No Conflicts. The execution, delivery and performance by the Guarantor of this Guaranty are within its corporate powers and have been duly authorized by all necessary corporate, limited liability company or other action. Neither the execution and delivery of this Guaranty nor the consummation of the transactions herein contemplated nor the fulfillment of, or compliance with, the terms and provisions hereof will (1) conflict with, violate, or result in a breach of any of the terms, conditions or provisions of (i) any applicable material law, or (ii) the certificate of incorporation, bylaws or other organizational document of the Guarantor, or (iii) any material bond, debenture, note, mortgage, indenture, agreement, lease or other instrument to which the Guarantor is a party or (2) constitute, with the giving of notice or the passage of time or both, a default under any such agreement or instrument to which the Guarantor or any of its affiliates is a party.

5.3 Enforceability. This Guaranty constitutes the legal, valid and binding agreement of the Guarantor, enforceable against the Guarantor in accordance with its terms, except to the extent that the enforcement of remedies herein provided may be limited under applicable bankruptcy and insolvency and similar laws, public policy and equitable principles (regardless of whether enforcement is considered in a proceeding in equity or at law).

5.4 Governmental Authority. No governmental approvals are required for the due execution, delivery and performance by the Guarantor of this Guaranty.

5.5 Guaranteed Agreement. The Guarantor has reviewed and is familiar with the terms of the Guaranteed Agreement and has been provided with a copy of the Guaranteed Agreement.

5.6 Solvency Matters.

(a) Financial Information. The Guarantor has established adequate means of obtaining financial and other information pertaining to the businesses, operations and condition (financial and otherwise) of the Guaranteed Party and its properties on a continuing basis, and the Guarantor now is and hereafter will be familiar with the businesses, operations and condition (financial and otherwise) of the Guaranteed Party and its properties.

(b) Insolvency.

(i) After giving effect to the transactions contemplated by this Guaranty and the Guaranteed Agreement, including the contingent obligations evidenced hereby, the Guarantor is, on either an unconsolidated basis or a consolidated basis, Solvent, and the Guarantor has and will have assets which, fairly valued, exceed its indebtedness, liabilities or obligations.

(ii) The Guarantor is not executing this Guaranty with any intention to hinder, delay or defraud any of its present or future creditor or creditors.

(iii) The Guarantor is not engaged in any business or transaction which, after giving effect to the transactions contemplated by this Guaranty, will leave it with unreasonably small capital or assets which are unreasonably small in relation to the business or transactions engaged in by it, and the Guarantor does not intend to engage in any such business or transaction.

6. Covenants.

The Guarantor hereby covenants and agrees for the benefit of the Beneficiary that:

6.1 Maintenance of Existence. The Guarantor shall at all times do, or cause to be done, all things necessary to preserve and maintain its limited partnership or limited corporate existence, as applicable, franchises, rights and privileges in each jurisdiction in which the conduct of its business so requires, except where loss of any such franchises, rights or privileges could not reasonably be expected to have a material adverse effect on the business or financial condition of the Guarantor.

6.2 Compliance with Laws. The Guarantor shall comply, or cause compliance, in all material respects, with all requirements of law relating to it, except where such non-compliance could not reasonably be expected to have a material adverse effect on the business or financial condition of the Guarantor.

6.3 No Bankruptcy Events. The Guarantor shall not permit a Bankruptcy Event to occur with respect to the Guaranteed Party.

6.4 Further Assurances. The Guarantor shall promptly provide the Beneficiary with such information and other documents that it may reasonably request in furtherance of the intent of this Guaranty.

7. Miscellaneous.

7.1 Amendments and Waivers. No term, covenant, agreement or condition of this Guaranty may be terminated, amended or compliance therewith waived (either generally or in a particular instance, retroactively or prospectively) except by an instrument or instruments in writing executed by the Guarantor and the Beneficiary.

7.2 Notices. All notices, requests, demands and other communications under this Guaranty must be in writing and must be delivered in person or sent by overnight delivery using a nationally recognized delivery service, and properly addressed as follows:

If to Guarantor:

Invenergy Wind Development LLC
One South Wacker Drive, Suite 1800
Chicago, IL 60606

Attention: General Counsel
Telephone: (312) 224-1400
Email: GeneralCounsel@invenergyllc.com

If to Beneficiary:

Southwestern Public Service Company
414 Nicollet Mall, 401-04
Minneapolis, MN 55401-1927
Attention: George E. Tyson II, Senior Vice President, Corporate Development
Telephone: (612) 215-4627
Facsimile: (612) 215-4575
Email: george.tyson@xcelenergy.com

With a copy to:

Southwestern Public Service Company
414 Nicollet Mall, 401-09
Minneapolis, MN 55401-1927
Attention: Scott Wilensky, Executive Vice President and General Counsel
Telephone: (612) 330-5942
Facsimile: (612) 215-9025
Email: scott.wilensky@xcelenergy.com

And a copy to (which shall not constitute notice):

Orrick, Herrington & Sutcliffe LLP
Suite 4100
1301 McKinney Street
Houston, TX 77010
Attention: Dahl Thompson
Telephone: (713) 658-6611
Facsimile: (713) 658-6401
Email: Dahl.thompson@Orrick.com

Any of the foregoing Persons may from time to time change its address for the purpose of notices to that Person by a similar notice specifying a new address, but no such change is effective until it is actually received by the Person sought to be charged with its contents.

All notices and other communications required or permitted under this Guaranty which are addressed as provided in this Section 7.2 are effective upon delivery.

7.3 No Waiver. No failure on the part of the Beneficiary to exercise, and no course of dealing with respect to, and no delay in exercising, any right, power or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise by the Beneficiary

of any right, power or remedy hereunder preclude any other or further exercise thereof or the exercise of any other right, power or remedy. The remedies herein are cumulative and are not exclusive of any remedies provided by applicable law.

7.4 Successors and Assigns. This Guaranty shall be binding upon and shall inure to the benefit of, and shall be enforceable by, the Guarantor and the Beneficiary and their respective successors and assigns. This Guaranty may not be assigned or delegated by the Guarantor without the consent of the Beneficiary (in its sole discretion), and any such purported assignment shall be void and of no force or effect.

7.5 Collateral Assignment to Financing Parties. The Guarantor agrees and acknowledges that the Beneficiary shall be permitted to assign all of its right, title and interest in, to and under this Guaranty to Persons providing financing for the benefit of the Beneficiary. The Guarantor agrees execute and deliver a consent to such assignment and such other documents as may be reasonably requested by the financing parties, including customary legal opinions and certificates.

7.6 Governing Law. THIS GUARANTY SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF MINNESOTA.

7.7 SUBMISSION TO JURISDICTION; WAIVERS. EACH PARTY HERETO HEREBY IRREVOCABLY AND UNCONDITIONALLY:

(a) SUBMITS FOR ITSELF AND ITS PROPERTY IN ANY LEGAL ACTION OR PROCEEDING RELATING TO THIS GUARANTY, OR FOR RECOGNITION AND ENFORCEMENT OF ANY JUDGMENT IN RESPECT THEREOF, TO THE NON-EXCLUSIVE GENERAL JURISDICTION OF ANY COURT MINNEAPOLIS, MINNESOTA, OR IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MINNESOTA;

(b) CONSENTS THAT ANY SUCH ACTION OR PROCEEDING MAY BE BROUGHT IN SUCH COURTS AND, TO THE EXTENT PERMITTED BY LAW, WAIVES ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE VENUE OF ANY SUCH ACTION OR PROCEEDING IN ANY SUCH COURT OR THAT SUCH ACTION OR PROCEEDING WAS BROUGHT IN AN INCONVENIENT COURT AND AGREES NOT TO PLEAD OR CLAIM THE SAME;

(c) AGREES THAT SERVICE OF PROCESS IN ANY SUCH ACTION OR PROCEEDING MAY BE EFFECTED BY MAILING A COPY THEREOF BY REGISTERED OR CERTIFIED MAIL (OR ANY SUBSTANTIALLY SIMILAR FORM OF MAIL), POSTAGE PREPAID, TO ITS ADDRESS SET FORTH IN SECTION 7.2 OR AT SUCH OTHER ADDRESS OF WHICH THE OTHER PARTIES SHALL HAVE BEEN NOTIFIED; AND

(d) AGREES THAT NOTHING HEREIN SHALL AFFECT THE RIGHT TO EFFECT SERVICE OF PROCESS IN ANY OTHER MANNER

PERMITTED BY LAW OR SHALL LIMIT THE RIGHT TO SUE IN ANY OTHER JURISDICTION.

7.8 WAIVER OF JURY TRIAL. EACH PARTY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS GUARANTY OR THE TRANSACTIONS CONTEMPLATED HEREBY.

7.9 Severability. Whenever possible, each provision of this Guaranty shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Guaranty shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Guaranty.

7.10 Headings. The headings of the Sections of this Guaranty are inserted for purposes of convenience only and shall not be construed to affect the meaning or construction of any of the provisions hereof.

[Remainder of page left intentionally blank; signature page follows]

IN WITNESS WHEREOF, THIS GUARANTY HAS BEEN DULY EXECUTED AND DELIVERED AS OF THE DAY AND YEAR FIRST ABOVE WRITTEN.

Invenergy Wind Global LLC



By: _____
Name: James T. Murphy
Title: Vice President

ACCEPTED AND AGREED:

Southwestern Public Service Company, a New Mexico corporation

By: David T. Hudson

Name: David T. Hudson

Title: President

Execution Version

**SCHEDULE 1.1-K
KNOWLEDGE**

Greg Leuchtman
Julia Kimmerly
Nate Hoepner
Kristyn Dunn
Michael Baird
Krista Mann
Erin Lieberman
Erin Delawalla
Emily Paice
Chris Genetos

**SCHEDULE 1.1-PL
PERMITTED LIENS**

None, subject to additional disclosure prior to Closing related to matters occurring after the date of the Agreement in accordance with Section 6.14 of the Agreement.

SCHEDULE 2.6(b)(vi)
LIENS TO BE RELEASED

None, subject to additional disclosure prior to Closing related to matters occurring after the date of the Agreement in accordance with Section 6.14 of the Agreement.

SCHEDULE 2.6(b)(ix)
REQUIRED CONSENTS

None, subject to additional disclosure prior to Closing related to matters occurring after the date of the Agreement in accordance with Section 6.14 of the Agreement.

**SCHEDULE 2.6(b)(xv)
SUFFICIENT LEASES**

- (1) Wind Lease and Easement Agreement between Cindy Huffman, a/k/a Cynthia Ann Harth and Cindy Harth, a married woman dealing in her sole and separate property, and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,125.000 acres of land, more or less, as follows, to wit:

320.000 acres of land, more or less, being the East Half (E/2) of Section Eight (8), Township Four (4) South of Range Thirty-seven (37) East, N.M.P.M.;

160.000 acres of land, more or less, being the North West Quarter (NW/4) of Section Fourteen (14), Township Four (4) South of Range Thirty-six (36) East, N.M.P.M.;

640.000 acres of land, more or less, being Section Sixteen (16), Township. Four (4) South of Range Thirty-six (36) East, N.M.P.M.;

5.000 acres of land, more or less, being a tract of land out of the North East portion of the South East Quarter (SE/4) of Section Fourteen (14), Township Four (4) South of Range Thirty-six (36) East, N.M.P.M.;

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (2) Wind Lease and Easement Agreement between Davis Arch Ranch, LLC, a New Mexico limited liability company, and Lazy D Cattle Company, Inc., a New Mexico corporation, and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,280.000 acres of land, more or less, as follows, to wit:

640.000 acres of land, more or less, being Section Twenty-five (25), Township Three (3) South of Range Thirty-six (36) East, N.M.P.M.;

640.000 acres of land, more or less, being Section Thirty-six (36), Township Three (3) South of Range Thirty-six (36) East, N.M.P.M.;

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (3) Wind Lease and Easement Agreement between Davis Arch Ranch, LLC, a New Mexico limited liability company and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

7,794.400 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

267.400 acres of land, more or less, being the West Half (W/2) and a Tract West of Highway 235 of Section Thirty-four (34), Township Three (3) South of Range Thirty-seven (37) East;

160.000 acres of land, more or less, being the North West Quarter (NW/4) of Section Twenty-seven (27), Township Three (3) South of Range Thirty-seven (37) East;

400.000 acres of land, more or less, being the East Half (E/2) and the East Half of the North West Quarter (E/2 of the NW/4) of Section Thirty-one (31), Township Three (3) South of Range Thirty-seven (37) East;

160.000 acres of land, more or less, being the South East Quarter (S/4) of Section Thirty-two (32), Township Three (3) South of Range Thirty-seven (37) East;

160.000 acres of land, more or less, being the North West Quarter (NW/4) of Section Thirty-three (33), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Twenty-four (24), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the East Half (E/2) of Section Thirty-three (33), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Twenty-eight (28), Township Three (3) South of Range Thirty-seven (37) East;

160.000 acres of land, more or less, being the South West Quarter (SW/4) of Section Twenty-two (22), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Twenty-one (21), Township Three (3) South of Range Thirty-seven (37) East;

400.000 acres of land, more or less, being the North Half (N/2) and the North Half of the South West Quarter (N/2 of the SW/4) of Section Nineteen (19), Township Three (3) South of Range Thirty-seven (37) East;

560.000 acres of land, more or less, being the South West Quarter (SW/4), North Half (N/2), and the North Half of the South East Quarter (N/2 of the SE/4) of Section Twenty (20), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Thirteen (13), Township Three (3) South of Range Thirty-six (36) East;

560.000 acres of land, more or less, being the East Half (E/2), North West Quarter (NW/4), and the North Half of the South West Quarter (N/2 of the SW/4) of Section Thirty (30), Township Three (3) South of Range Thirty-seven (37) East;

647.000 acres of land, more or less, being Section Eighteen (18), Township Three (3) South of Range Thirty-seven (37) East;

240.000 acres of land, more or less, being the South East Quarter (SE/4) and the South Half of the South West Quarter (S/2 of the SW/4) of Section Nineteen (19), Township Three (3) South of Range Thirty-seven (37) East;

560.000 acres of land, more or less, being the South Half (S/2) , North East Quarter (NE/4), and the South Half of the North West Quarter (S/2 of the NW/4) of Section Seventeen (17), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Twenty-nine (29), Township Three (3) South of Range Thirty-seven (37) East.

(4) Wind Lease and Easement Agreement between Davis Caprock Ranch, LLC, a New Mexico limited liability company and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

13,121.070 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

640.000 acres of land, more or less, being the Section Twelve (12), Township Three (3) South of Range Thirty-five (35) East;

320.000 acres of land, more or less, being the East Half (E/2) of Section Thirteen (13), Township Three (3) South of Range Thirty-five (35) East;

320.000 acres of land, more or less, being the South Half (S/2) of Section Seventeen (17), Township Three (3) South of Range Thirty-five (35) East;

80.000 acres of land, more or less, being the South Half of the North West Quarter (S/2 of the NW/4) of Section Fifteen (15), Township Three (3) South of Range Thirty-five (35) East;

80.000 acres of land, more or less, being the North Half of the North West Quarter (N/2 of the NW/4) of Section Fifteen (15), Township Three (3) South of Range Thirty-five (35) East;

640.000 acres of land, more or less, being Section Eleven (11), Township Three (3) South of Range Thirty-five (35) East;

640.000 acres of land, more or less, being Section Ten (10), Township Three (3) South of Range Thirty-five (35) East;

640.220 acres of land, more or less, being Section One (1), Township Three (3) South of Range Thirty-five (35) East;

640.600 acres of land, more or less, being Section Two (2), Township Three (3) South of Range Thirty-five (35) East;

641.160 acres of land, more or less, being Section Three (3), Township Three (3) South of Range Thirty-five (35) East;

640.000 acres of land, more or less, being Section Seventeen (17), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the East Half (E/2) of Section Twenty (20), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-nine (29), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the West Half (W/2) of Section Thirty-Four (34), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Thirty-three (33), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-one (21), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-seven (27), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-eight (28), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-six (26), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Fourteen (14), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Fifteen (15), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-three (23), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-two (22), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the West Half (W/2) of Section Fifteen (15), Township Four (4) South of Range Thirty-six (36) East;

159.770 acres of land, more or less, being the North East Quarter (NE/4) of Section Four (4), Township Four (4) South of Range Thirty-six (36) East;

319.320 acres of land, more or less, being the North Half (N/2) of Section Three (3), Township Four (4) South of Range Thirty-six (36) East.

(5) Wind Lease and Easement Agreement between Michael Dale Clark and Thelma Ann Clark, husband and wife and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [] recorded [] as Document No. [] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,078.560 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

Tract 1:

480.000 acres of land, more or less, being the North Half (N/2) and South East Quarter (SE/4) of Section Nineteen (19), Township Four (4) South of Range Thirty-seven (37) East, being more particularly described in that certain Warranty Deed dated September 15, 1999, from Bobby Gresham, Personal Representative of the Estate of Verna Mae Thomas, Deceased, as Grantor to Michael D. Clark and T. Ann Clark, husband and wife, as Grantee, recorded in Volume 62, Page 179 of the Deed Records of Roosevelt County, New Mexico.

Tract 2:

158.000 acres of land, more or less, being the 160.00 acres of the South West Quarter (SW/4) of Section Thirty (30), Township Four (4) South of Range Thirty-six (36) East, LESS AND EXCEPT 2.00 acres being more particularly described in that certain Warranty Deed dated January 28, 1977,

from J. K. Marrs, et al, as Grantor to Mike D. Clark and Thelma Ann Clark, husband and wife, as Grantee, recorded in Volume 136, Page 913 of the Deed Records of Roosevelt County, New Mexico.

Tract 3:

280.560 acres of land, more or less, being out of the East Half (E/2) of Section Eleven (11), Township Five (5) South of Range Thirty-six (36) East, being more particularly described in that certain Warranty Deed dated April 18, 2016, from Scott Tweedy and Janay Tweedy as Grantor to Michael Dale Clark and Thelma Ann Clark, as Grantee, recorded in instrument number 20161260 of the Deed Records of Roosevelt County, New Mexico.

Tract 4:

160.000 acres of land, more or less, being the South West Quarter (SW/4) of Section Nineteen (19), Township Four (4) South of Range Thirty-seven (37) East being more particularly described in that certain Warranty Deed dated January 29, 1980, from J. D. Thomas and Marjorie L. Thomas, husband and wife, as Grantor to Mike D. Clark and Thelma Ann Clark, husband and wife, as Grantee, recorded in Volume 141, Page 339 of the Deed Records of Roosevelt County, New Mexico.

- (6) Wind Lease and Easement Agreement between Terry Varnell and Jimmie Lou Varnell, husband and wife, individually and on behalf of the Terry and Jimmie Lou Varnell Irrevocable Trust and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

956.000 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

320.000 acres of land, more or less, being the North Half (N/2) of Section Twelve (12), Township Four (4) South of Range Thirty-four (34) East;

320.000 acres of land, more or less, being the North Half (N/2) of Section Seven (7), Township Four (4) South of Range Thirty-five (35) East;

160.000 acres of land, more or less, being the South East Quarter (SE/4) of Section Five (5), Township Four (4) South of Range Thirty-five (35) East;

156.000 acres of land, more or less, being a tract of land out of Section One (1), Township Four (4) South of Range Thirty-five (35) East.

- (7) Wind Lease and Easement Agreement between Texas L. Belcher and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1749.720 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

223.000 acres of land, more or less, being the South East Quarter (SE/4) and North East Quarter of the South West Quarter (NE/4 of the SW/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the North Half (N/2) of Section Twenty-two (22), Township Four (4) South of Range Thirty-six (36) East;

160.000 acres of land, more or less, being the North West Quarter (NW/4) of Section Eighteen (18), Township Four (4) South of Range Thirty-seven (37) East;

454.720 acres of land, more or less, being a tract of land out of Section Eleven (11), Township Four (4) South of Range Thirty-six (36) East being more particularly described in that certain Warranty Deed dated December 28, 2000, from Lola Greathouse Trust, as Grantor to Texas L. Belcher, as Grantee, recorded in Volume 73, Page 847 of the Deed Records of Roosevelt County, New Mexico.

160.000 acres of land, more or less, being the South West Quarter (SW/4) of Section Eighteen (18), Township Four (4) South of Range Thirty-seven (37) East;

320.000 acres of land, more or less, being the North Half (N/2) of Section Thirteen (13), Township Four (4) South of Range Thirty-six (36) East;

112.000 acres of land, more or less, being a tract of land out of Section Thirteen (13), Township Four (4) South of Range Thirty-six (36) East being more particularly described in that certain Warranty Deed dated January 29, 2015, from Evelyn Deanna Dickson Trust, as Grantor to Texas L. Belcher, as Grantee, recorded in Document 20150294 of the Records of Roosevelt County, New Mexico.

(8) Wind Lease and Easement Agreement between Thomas P. Clark and Karen E. Clark, husband and wife and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

320.000 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

320 acres of land, more or less, being the North Half (N/2) of Section Thirty (30), Township Four (4) South of Range Thirty-six (36) East, being more particularly described in that certain Warranty Deed dated March 13, 1985, from Mike D. Clark and Thelma Ann Clark, husband and wife, as

Grantor to Tom P. Clark and Karen E. Clark, husband and wife, as Grantee, recorded in Volume 149, Page 372 of the Deed Records of Roosevelt County, New Mexico.

- (9) Wind Lease and Easement Agreement between Clarence Calvin Locke and Carolyn Locke, husband and wife, individually and on behalf of the Locke family Trust; and Lillian Rammelkamp, a married woman dealing in her sole and separate property and Sagamore Wind, a Delaware limited liability company, dated January 31, 2017; as evidenced by that Memorandum of [] recorded [] as Document No. [] in Roosevelt County, New Mexico.

The following tracts of land are included:

355.000 acres of land, more or less, situated in Roosevelt County, New Mexico, as follows, to wit:

160.000 acres of land, more or less, being the North West Quarter (NW 1/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

40.000 acres of land, more or less, being the South West Quarter of the South West Quarter (SW/4 of SW/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

40.000 acres of land, more or less, being the North East Quarter of the South West Quarter (NE/4 of SW/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

35.000 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

35.000 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

22.500 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

22.500 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East.

- (10) Wind Lease and Easement Agreement between Belcher Land, LLC and Sagamore Wind, a Delaware limited liability company, dated January 31, 2017; as evidenced by that Memorandum of [] recorded [] as Document No. [] in Roosevelt County, New Mexico.

The following tracts of land are included:

1921.370 acres of land, more or less, situated in Roosevelt County, New Mexico, as follows, to wit:

242.000 acres of land, more or less, being Lots 1, 2, 3 and 4 of the East Half (E/2) and the South West Quarter (SW/4) of Section Thirty-one (31), Township Three (3) South of Range Thirty-seven (37) East;

320.000 acres of land, more or less, being the East Half (E/2) of Section Thirty-four (34), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the West Half (W/2) of Section Thirty-five (35), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the South Half (S/2) of Section Three (3), Township Four (4) South of Range Thirty-six (36) East;

80.000 acres of land, more or less, being Lot 4 of the South East Quarter of the South West Quarter (SE/4 of the SW/4) of Section Thirty (30), Township Three (3) South of Range Thirty-seven (37) East;

4.137 acres of land, more or less, being a tract of land out of Section Two (2), Township Four (4) South of Range Thirty-six (36) East;

635.233 acres of land, more or less, being all, less 4.147 acres, of Section Two (2), Township Four (4) South of Range Thirty-six (36).

(11) Wind Lease and Easement Agreement between Dennis and Colleen Tollett, husband and wife, and Sagamore Wind Energy, LLC, a Delaware limited liability company, dated February 13, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,334.870 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

460.720 acres of land, more or less, being the West Half Short (W 1/2) and lots 1,2,3 and 4 of Section Ten (10), Township Four (4) South of Range Thirty-seven (37) East;

10.000 acres of land, more or less, being a tract of land out of the North East Quarter of the North East Quarter of the North East Quarter (NE 1/4 NE 1/4 NE 1/4) of Section One (1), Township Four (4) South of Range Thirty-six (36) East;

309.970 acres of land, more or less, being a tract of land out of the East Half (E 1/2) of Section One (1), Township Four (4) South of Range Thirty-six (36) East;

234.180 acres of land, more or less, being the South West Quarter Short (SW 1/4) and lots 5 and 6 of Section Three (3), Township Four (4) South of Range Thirty-seven (37) East;

320.000 acres of land, more or less, being the South Half (S 1/2) of Section Six (6), Township Four (4) South of Range Thirty-seven (37) East.

- (12) Wind Lease and Easement Agreement between Clarence Calvin Locke and Carolyn Locke, husband and wife, individually and on behalf of the Locke Family Trust, and Sagamore Wind, a Delaware limited liability company, dated February 13, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

62.500 acres of land, more or less, situated in Roosevelt County, New Mexico, as follows, to wit:

40.000 acres of land, more or less, being the North West Quarter of the South West Quarter (NW 1/4 of SW 1/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

22.500 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE 1/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East.

- (13) Wind Lease and Easement Agreement between The Patsy Ruth Terral Recovable Living Trust – patsy Ruth Terral, Trustee, and Sagamore Wind Energy, LLC, a Delaware limited liability company, dated February 16, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

868.78 acres more or less situated in Roosevelt County, New Mexico, as follows, to wit:

SECTION 10, TOWNSHIP-06S, RANGE-37E, N/2NE/4: 80.000 ACRES (ROOSEVELT COUNTY APN #:4-100-000-008-76800)

SECTION 11, TOWNSHIP-06S, RANGE-37E, N/2NW/4: 80.000 ACRES (ROOSEVELT COUNTY APN #:4-200-000-008-76800)

SECTION 03, TOWNSHIP-06S, RANGE-37E, LOTS 1, 2: 84.000 ACRES (ROOSEVELT COUNTY APN #:4-000-000-008-75600)

SECTION 02, TOWNSHIP-06S, RANGE-37E, LOTS 3,4(LESS N.300'): 64.780 ACRES (ROOSEVELT COUNTY APN #:4-000-000-008-75100)

SECTION 35, TOWNSHIP-05S, RANGE-36E, W/2, SE/4, S/2NE/4: 560.000 ACRES (ROOSEVELT COUNTY APN #:4-000-000-008-75000)

- (14) Wind Lease and Easement Agreement between The Darrell Caviness and Paula Caviness Revocable Trust, and Sagamore Wind Energy, LLC, a Delaware limited liability

company, dated February 16, 2017; as evidenced by that Memorandum of [] recorded [] as Document No. [] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,438.52 acres more or less situated in Roosevelt County, New Mexico, as follows, to wit:

SECTION-21, TOWNSHIP-5S, RANGE -36E, W2, W/2E/2 W/2W/2E/2, : 560 ACRES
(ROOSEVELT COUNTY APN #:4-000-000-008-22900)

SECTION-19, TOWNSHIP-5S, RANGE-37E, N/2NE4: 80 ACRES (ROOSEVELT COUNTY
APN #:4-000-000-008-54104)

SECTION-19, TOWNSHIP-5S, RANGE-37E, N/2NW4: 80 ACRES (ROOSEVELT COUNTY
APN #:4-000-000-008-54105)

SECTION-19, TOWNSHIP-5S, RANGE-37E, S/2NE4: 80 ACRES (ROOSEVELT COUNTY
APN #:4-000-000-008-54108)

SECTION-18, TOWNSHIP-5S, RANGE-37E, ALL (less 1.48 acres in NE/4): 638.520 ACRES
(ROOSEVELT COUNTY APN #:4-000-000-008-23301)

SCHEDULE 2.6(d)(i)
TITLE COMMITMENT AND SURVEY REQUIREMENTS

The terms of this Schedule 2.6(d)(i) are subject to the terms of Section 2.6(d)(i) of the Agreement and the Title Commitment and Survey shall be prepared, reviewed and finalized in accordance with the terms of this Schedule 2.6(d)(i) and the terms of Section 2.6(d)(i) of the Agreement:

1. General Title Commitment Requirements. Seller shall be responsible for ordering the Title Commitment from the Title Company and requesting all revisions and updates to the Title Commitment from the Title Company as may be required from time to time pursuant to Section 2.6(d) of the Agreement. The effective date of the Title Commitment and each revised and updated Title Commitment shall be through the most recent date available in the real property records at the time of search. The Title Commitment may initially use legal descriptions for each parcel of real property from the Land Contracts, but shall be revised once the Survey is available to conform to the legal descriptions from the Survey. The Title Commitment shall include all matters required by, and conform to, the definition thereof in Section 1.1 of the Agreement.
2. General Survey Requirements. The Survey shall list every recorded exception appearing in the Title Commitment, with a note stating whether the exception affects the property, and if so whether the exception is plottable. If the exception is plottable, it must be plotted on the Survey and include a reference to the exception number from the Title Commitment to identify it on the Survey. If the exception is not plottable, state "not plottable" and the reason (i.e. blanket in nature, does not affect property; illegible legal description; affects property — but not a survey matter). Any appurtenant easement which is plottable must also be plotted on the survey. The Survey shall include all matters required by, and conform to, the definition thereof in Section 1.1 of the Agreement.
3. General Procedures and Timelines. The following procedures and timelines will be applicable with respect to making documents and information available, preparation and review of the Title Commitments and Survey and performance of title curative requirements:
 - (a) Seller will make available to Buyer all Land Contracts for the land in the Project Area via a data site approved by the Parties.
 - (b) To the greatest extent possible, the Parties will have the Site/Project Area defined at the onset of the transaction and any changes that need to be made to it will be made subject to Section 6.6(a)(iii) of the Agreement.
 - (c) Seller will provide a complete spreadsheet of all Title Commitments ordered and will update and make the spreadsheet available to Buyer periodically, not less frequently than once every thirty (30) days, or upon request by Buyer from time to time.
 - (d) Seller will provide Title Commitments to Buyer for a first batch of the Land Contracts along with a Global Title Checklist ("GTC") which outlines the curative action Seller reasonably determines should be taken with respect to those Title Commitments. The Survey for the first batch should follow shortly thereafter. It is anticipated that the batches will comprises 25% to 30% of the total Land Contracts, but this may be adjusted by the Parties as appropriate. Seller will provide non-

binding timelines for each of the batches of Title Commitments based on feedback from the Title Company of its expected dates for delivery to Seller.

- (e) Individual and combined Title Commitments will be organized by Lease (not by individual parcels). For example, if Wind Energy Ranch Company owns 5 separately described parcels, individual title commitments will define the lease agreement with Wind Energy Ranch Company as the insured parcel, and will include each tract owned by the Wind Energy Ranch Company as a separate tract within the title commitment, as part of one insured parcel. This same procedure will be followed in a subsequent combined Title Commitment and pro forma. A single Wind Energy Ranch Company lease agreement will not appear in multiple individual commitments; nor will the various parcels owned by Wind Energy Ranch Company be shown as separate parcels on the combined commitment and pro forma.
- (f) The Title Company shall list the relevant tax assessor parcel identification numbers (PINS) at the bottom of each legal description.
- (g) The Title Company shall ensure that each combined Title Commitment and pro forma policy should be numbered in one (1) continuous sequence (as opposed to restarting the numbering for each agreement). Neither the combined Title Commitment nor the pro forma policy shall be renumbered without explicit direction from Seller and Buyer. Revised combined commitments or pro forma policy drafts will contain comparisons (i.e. redlines) of the revised drafts against the last circulated drafts of the same.
- (h) Seller will provide a draft of the template for each title curative document Seller will be obtaining.
- (i) Buyer will provide comments to the GTC, survey and the curative templates within the GTC document and relevant template.
- (j) Seller will then draft all title curative documents that the parties agree to on the GTC and will submit to the landowners for signatures.
- (k) Seller will provide the final batch (unless the searches fall into 3 batches) of Title Commitments, an updated GTC to include the second batch and the rest of the Survey. This can overlap with the work on the initial batch(es) to the extent the additional batches are ready or time concerns require this approach.
- (l) Buyer will provide comments on the second GTC and survey.
- (m) Seller will provide a combined Title Commitment/proforma from the Title Company.
- (n) Buyer will provide their comments to the title policy at this time.
- (o) Title Company will update the proforma upon receipt of comments from Buyer and any title curative documents received from Seller.
- (p) Seller will handle recording of all title curative documents and provide those to the Title Company.
- (q) We will continue this process of updating the proforma and Survey while we are completing title curative requirements.

Once complete with title curative requirements the Title Company and surveyor will circulate a final proforma and Survey for Buyer to sign-off on.

**SCHEDULE 4.5(d)
REPORTS**

A.	REPORTS
	Phase I Environmental Site Assessment Hiway Wind Farm by Enercon Services, Inc. completed February 12, 2009
	Licensed Microwave Search by Comsearch completed December 16, 2008
	Desktop NEPA Site Screening Proposed Hiway Wind Farm by Enercon Services, Inc. completed February 2009
	Letter of No Concern from NTIA by Comsearch completed March 10, 2009
	Letter of No Roosevelt County Zoning Permit by Chermac Energy Corporation completed February 4, 2010
	Feasibility Cluster Study for Generator Interconnection Requests (FCS-2016-003) by Southwest Power Pool completed October 2016
	Lesser Prairie-Chicken by Western EcoSystems Technology, Inc. completed November 11, 2016
	Feasibility Report by Aviation Systems, Inc. completed October 27, 2016
	Updated Licensed Microwave Search Study by Comsearch completed November 21, 2016
	Site Characterization Study, Highway Wind Energy Project, Roosevelt, New Mexico – Critical Issues Analysis/Tier 1 and Tier 2 Environmental Report by Western EcoSystems Technology, Inc. completed December 9, 2016

SCHEDULE 4.6
BANK ACCOUNTS

None.

SCHEDULE 4.10
UNDISCLOSED LIABILITIES

None, subject to additional disclosure prior to Closing related to matters occurring after the date of the Agreement in accordance with Section 6.14 of the Agreement.

SCHEDULE 4.11
TAXES

None.

SCHEDULE 4.13(a)
PURCHASED CONTRACTS

Those items listed on Schedule 4.14.

SCHEDULE 4.13(b)
SUPPORT OBLIGATIONS

None.

SCHEDULE 4.13(g)
SHARED CONTRACTS

1. Service Order dated November 15, 2016 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., which Service Order was issued pursuant to that certain Consulting Contract dated as of August 14, 2012 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., as amended, restated, reinstated, supplemented or otherwise modified from time to time.
2. Service Order dated January 18, 2016 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., which Service Order was issued pursuant to that certain Consulting Contract dated as of August 14, 2012 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., as amended, restated, reinstated, supplemented or otherwise modified from time to time.
3. Amended and Restated Service Order dated February 27, 2017 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., which Service Order was issued pursuant to that certain Consulting Contract dated as of August 14, 2012 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., as amended, restated, reinstated, supplemented or otherwise modified from time to time.
4. Service Order dated February 10, 2017 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., which Service Order was issued pursuant to that certain Consulting Contract dated as of August 14, 2012 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., as amended, restated, reinstated, supplemented or otherwise modified from time to time.
5. Service Order dated February 23, 2017 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., which Service Order was issued pursuant to that certain Consulting Contract dated as of August 14, 2012 between Invenergy Wind Development LLC and Western EcoSystems Technology, Inc., as amended, restated, reinstated, supplemented or otherwise modified from time to time.
6. Service Order dated January 12, 2017 between Invenergy Wind Development LLC and J. Scott Osborn, which Service Order was issued pursuant to that certain Consulting Contract dated as of January 12, 2017 between Invenergy Wind Development LLC and J. Scott Osborn, as amended, restated, reinstated, supplemented or otherwise modified from time to time.
7. Service Order dated January 17, 2017 between Invenergy Wind Development LLC and MAS Field Services, LLC, which Service Order was issued pursuant to that certain Consulting Contract dated as of January 16, 2015 between Invenergy Wind Development LLC and MAS Field Services, LLC, as amended, restated, reinstated, supplemented or otherwise modified from time to time.
8. Service Order dated February 6, 2017 between Invenergy Wind Development LLC and Blanton & Associates, Inc., which Service Order was issued pursuant to that certain Consulting Contract dated as of March 10, 2016 between Invenergy Wind Development LLC and Blanton & Associates, Inc., as amended, restated, reinstated, supplemented or otherwise modified from time to time.

**SCHEDULE 4.14
REAL PROPERTY**

- (1) Wind Energy Lease Agreement between Brenda Barrett and Highway Wind Project Company, LLC, a Texas limited liability company, dated January 10, 2014 as evidence by that Memorandum of Wind Energy Lease Agreement recorded February 3, 2014 as Document No. 20140312 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

All of Section 28, Township 5 South, Range 34 East, N.M.P.M. (Sec. 28, T 5 S- R 34 E);
All of Section 29, Township 5 South, Range 34 East, N.M.P.M (Sec. 29, T 5 S- R 34 E);
The Southeast Quarter of Section 20, Township 5 South, Range 34 East, N.M.P.M. (SE/4 Sec. 20 T 5 S- R34 E);
The South Half of the South Half of the Southwest Quarter of Section 21, Township 5 South, Range 34 East, N.M.P.M. (S/2 S/2 SW/4, Sec 21 T 5 S – R 34 E);
The West Half of Section 7, Township 6 South, Range 35 East, N.M.P.M. (W/2 Sec. 7, T 6 S – R 35 E); and
The South Half of the Northeast Quarter of Section 12, Township 6 South, Range 34 East, N.M.P.M. (S/2 NE/4 Sec. 12, T 6 S – R 34 E)

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (2) Wind Energy Lease Agreement between Douglas Toombs and Highway Wind Project Company LLC, a Texas limited liability company, dated January 10, 2014 as evidence by that Memorandum of Wind Energy Lease Agreement recorded February 3, 2014 as Document No. 20140311 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

All of Section 28, Township 5 South, Range 34 East, N.M.P.M. (Sec. 28, T 5 S- R 34 E);
All of Section 29, Township 5 South, Range 34 East, N.M.P.M (Sec. 29, T 5 S- R 34 E);
The Southeast Quarter of Section 20, Township 5 South, Range 34 East, N.M.P.M. (SE/4 Sec. 20 T 5 S- R34 E);
The South Half of the South Half of the Southwest Quarter of Section 21, Township 5 South, Range 34 East, N.M.P.M. (S/2 S/2 SW/4, Sec 21 T 5 S – R 34 E);
The West Half of Section 7, Township 6 South, Range 35 East, N.M.P.M. (W/2 Sec. 7, T 6 S – R 35 E); and

The South Half of the Northeast Quarter of Section 12, Township 6 South, Range 34 East, N.M.P.M. (S/2 NE/4 Sec. 12, T 6 S – R 34 E)

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (3) Wind Energy Lease Agreement between Loren Toombs and Highway Wind Project Company LLC, a Texas limited liability company, dated January 10, 2014 as evidence by that Memorandum of Wind Energy Lease Agreement recorded February 3, 2014 as Document No. 20140310 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

All of Section 28, Township 5 South, Range 34 East, N.M.P.M. (Sec. 28, T 5 S- R 34 E);
All of Section 29, Township 5 South, Range 34 East, N.M.P.M (Sec. 29, T 5 S- R 34 E);
The Southeast Quarter of Section 20, Township 5 South, Range 34 East, N.M.P.M. (SE/4 Sec. 20 T 5 S- R34 E);
The South Half of the South Half of the Southwest Quarter of Section 21, Township 5 South, Range 34 East, N.M.P.M. (S/2 S/2 SW/4, Sec 21 T 5 S – R 34 E);
The West Half of Section 7, Township 6 South, Range 35 East, N.M.P.M. (W/2 Sec. 7, T 6 S – R 35 E); and
The South Half of the Northeast Quarter of Section 12, Township 6 South, Range 34 East, N.M.P.M. (S/2 NE/4 Sec. 12, T 6 S – R 34 E)
ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (4) Wind Energy Lease Agreement between Darla Criswell and Doug Criswell, husband and wife and Highway Wind Project Company LLC, a Texas limited liability company, dated October 28, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133750 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Southeast Quarter (SE/4) of Section Thirty-One (31), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.;

All of Section Thirty-Two (32), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.;

All of Section Thirty-Three (33), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.; and

Lots One (1) and Two (2) and the South Half of the South Half (S/2 S/2) of Section Five (5) Township 6 South, Range 35 East, N.M.P.M. (Sec. 5 T 6 S - R 35 E);

Lots One (1); Two (2) and Three (3) and the South Half of the Southeast Quarter (S/2 SE/4) and the Southeast Quarter of the Southwest Quarter (SE/4 SW/4) of Section Six (6), Township 6 South, Range 35 East, N.M.P.M.;

East Half (E/2) of Section Seven (7), Township 6 South, Range 35 East, N.M.P.M.;

West Half (W/2), the Southeast Quarter (SE/4) and the West Half of the Northeast Quarter (W/2 NE/4) of Section Eight (8), Township 6 South, Range 35 East, N.M.P.M.;

A tract out of Lot Two (2) and the South Half of the Southwest Quarter (S/2 SW/4) of Section Four (4), described as beginning at a point on and at the Southwest Corner of the Southwest Quarter (SW1/4) of Section Thirty-Four (34), in Township Five (5) South, Range Thirty Four East, N.M.P.M., which point is on the North boundary line of Lot Two (2) of said Section Four (4); thence South 1650 feet more or less to the South boundary line of said Section Four (4); thence East along the South boundary line of said Section Four (4), a distance of 1438.8 feet to the Southeast Corner of the South Half of the Southwest Quarter (S1/2 SW1/4) of said Section Four (4); thence North a distance of 1650 feet to the North boundary line of said Lot Two (2), which is the South boundary line of Section Thirty-Four (34), in Township Five (5) South, Range Thirty-Four (34) East; thence West a distance of 1438.8 feet to the point of beginning, containing 54.5 acres, more or less, all in Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.

The Southeast Quarter (SE/4), the East Half of the Southwest Quarter (E/2 SW/4) and the Southwest Quarter of the Southwest Quarter (SW/4 SW/4) of Section Thirty-Four (34), in Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.; and

Lots One (1) and Two (2) and the South Half of the South Half (S/2 S/2) of Section Three (3), Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.;

Lot One (1) and the South Half of the Southeast Quarter (S1/2 SE1/4) of Section Four (4), Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.;;

Lot Two (2) and the South Half of the Southwest Quarter (S1/2 SW1/4), LESS AND EXCEPT a tract of land described as beginning at a point on and at the Southwest Corner of the Southwest Quarter (SW1/4) of Section Thirty-four (34), in Township Five (5) South, Range Thirty-Four (34) East, N.M.P.M., which point is on the North boundary line of Lot Two (2) of said Section Four (4); thence South 1650 feet more or less to the South boundary line of said Section Four (4); thence East along the South boundary line of said Section Four (4); a distance of 1438.8 feet to the Southeast corner of the South Half of the Southwest Quarter (S/2 SW/4) of said Section Four (4); thence North a distance of 1650 feet to the North boundary line of said Lot Two (2), which is the South boundary line of Section Thirty-Four (34), in Township Five (5) South, Range 34 East; thence West a distance of 1438.8 feet to the point of beginning, containing 54.5 acres, more or less, all in Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.; and

The East Half (E1/2) and the Southwest Quarter (SW1/4) of Section Nine (9), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.;
All of Section Ten (10), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.;
and
All of Section Fifteen (15), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (5) Wind Energy Lease Agreement between Rita Jones and Floyd Jones, husband and wife and Highway Wind Project Company LLC, a Texas limited liability company, dated October 28, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133755 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Southeast Quarter (SE/4) of Section Thirty-One (31), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.;

All of Section Thirty-Two (32), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.;

All of Section Thirty-Three (33), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.; and

Lots One (1) and Two (2) and the South Half of the South Half (S/2 S/2) of Section Five (5) Township 6 South, Range 35 East, N.M.P.M. (Sec. 5 T 6 S - R 35 E);

Lots One (1); Two (2) and Three (3) and the South Half of the Southeast Quarter (S/2 SE/4) and the Southeast Quarter of the Southwest Quarter (SE/4 SW/4) of Section Six (6), Township 6 South, Range 35 East, N.M.P.M.;

East Half (E/2) of Section Seven (7), Township 6 South, Range 35 East, N.M.P.M.;

West Half (W/2), the Southeast Quarter (SE/4) and the West Half of the Northeast Quarter (W/2 NE/4) of Section Eight (8), Township 6 South, Range 35 East, N.M.P.M.;

A tract out of Lot Two (2) and the South Half of the Southwest Quarter (S/2 SW/4) of Section Four (4), described as beginning at a point on and at the Southwest Corner of the Southwest Quarter (SW1/4) of Section Thirty-Four (34), in Township Five (5) South, Range Thirty Four East, N.M.P.M., which point is on the North boundary line of Lot Two (2) of said Section Four (4); thence South 1650 feet more or less to the South boundary line of said Section Four (4); thence East along the South boundary line of said Section

Four (4), a distance of 1438.8 feet to the Southeast Corner of the South Half of the Southwest Quarter (S1/2 SW1/4) of said Section Four (4); thence North a distance of 1650 feet to the North boundary line of said Lot Two (2), which is the South boundary line of Section Thirty-Four (34), in Township Five (5) South, Range Thirty-Four (34) East; thence West a distance of 1438.8 feet to the point of beginning, containing 54.5 acres, more or less, all in Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.

The Southeast Quarter (SE/4), the East Half of the Southwest Quarter (E/2 SW/4) and the Southwest Quarter of the Southwest Quarter (SW/4 SW/4) of Section Thirty-Four (34), in Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.; and
Lots One (1) and Two (2) and the South Half of the South Half (S/2 S/2) of Section Three (3), Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.;
Lot One (1) and the South Half of the Southeast Quarter (S1/2 SE1/4) of Section Four (4), Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.;;
Lot Two (2) and the South Half of the Southwest Quarter (S1/2 SW1/4), LESS AND EXCEPT a tract of land described as beginning at a point on and at the Southwest Corner of the Southwest Quarter (SW1/4) of Section Thirty-four (34), in Township Five (5) South, Range Thirty-Four (34) East, N.M.P.M., which point is on the North boundary line of Lot Two (2) of said Section Four (4); thence South 1650 feet more or less to the South boundary line of said Section Four (4); thence East along the South boundary line of said Section Four (4); a distance of 1438.8 feet to the Southeast corner of the South Half of the Southwest Quarter (S/2 SW/4) of said Section Four (4); thence North a distance of 1650 feet to the North boundary line of said Lot Two (2), which is the South boundary line of Section Thirty-Four (34), in Township Five (5) South, Range 34 East; thence West a distance of 1438.8 feet to the point of beginning, containing 54.5 acres, more or less, all in Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.; and
The East Half (E1/2) and the Southwest Quarter (SW1/4) of Section Nine (9), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.;
All of Section Ten (10), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.;
and
All of Section Fifteen (15), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (6) Wind Energy Lease Agreement between Teresa Sawyer and Richard Sawyer, husband and wife and Highway Wind Project Company LLC, a Texas limited liability company, dated October 28, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133756 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Southeast Quarter (SE/4) of Section Thirty-One (31), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.;

All of Section Thirty-Two (32), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.;

All of Section Thirty-Three (33), Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.; and

Lots One (1) and Two (2) and the South Half of the South Half (S/2 S/2) of Section Five (5) Township 6 South, Range 35 East, N.M.P.M. (Sec. 5 T 6 S - R 35 E);

Lots One (1); Two (2) and Three (3) and the South Half of the Southeast Quarter (S/2 SE/4) and the Southeast Quarter of the Southwest Quarter (SE/4 SW/4) of Section Six (6), Township 6 South, Range 35 East, N.M.P.M.;

East Half (E/2) of Section Seven (7), Township 6 South, Range 35 East, N.M.P.M.;

West Half (W/2), the Southeast Quarter (SE/4) and the West Half of the Northeast Quarter (W/2 NE/4) of Section Eight (8), Township 6 South, Range 35 East, N.M.P.M.;

A tract out of Lot Two (2) and the South Half of the Southwest Quarter (S/2 SW/4) of Section Four (4), described as beginning at a point on and at the Southwest Corner of the Southwest Quarter (SW1/4) of Section Thirty-Four (34), in Township Five (5) South, Range Thirty Four East, N.M.P.M., which point is on the North boundary line of Lot Two (2) of said Section Four (4); thence South 1650 feet more or less to the South boundary line of said Section Four (4); thence East along the South boundary line of said Section Four (4), a distance of 1438.8 feet to the Southeast Corner of the South Half of the Southwest Quarter (S1/2 SW1/4) of said Section Four (4); thence North a distance of 1650 feet to the North boundary line of said Lot Two (2), which is the South boundary line of Section Thirty-Four (34), in Township Five (5) South, Range Thirty-Four (34) East; thence West a distance of 1438.8 feet to the point of beginning, containing 54.5 acres, more or less, all in Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.

The Southeast Quarter (SE/4), the East Half of the Southwest Quarter (E/2 SW/4) and the Southwest Quarter of the Southwest Quarter (SW/4 SW/4) of Section Thirty-Four (34), in Township Five (5) South, Range Thirty Four (34) East, N.M.P.M.; and

Lots One (1) and Two (2) and the South Half of the South Half (S/2 S/2) of Section Three (3), Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.;

Lot One (1) and the South Half of the Southeast Quarter (S1/2 SE1/4) of Section Four (4), Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.;;

Lot Two (2) and the South Half of the Southwest Quarter (S1/2 SW1/4), LESS AND EXCEPT a tract of land described as beginning at a point on and at the Southwest Corner of the Southwest Quarter (SW1/4) of Section Thirty-four (34), in Township Five (5) South, Range Thirty-Four (34) East, N.M.P.M., which point is on the North boundary line of Lot Two (2) of said Section Four (4); thence South 1650 feet more or less to the South boundary

line of said Section Four (4); thence East along the South boundary line of said Section Four (4); a distance of 1438.8 feet to the Southeast corner of the South Half of the Southwest Quarter (S/2 SW/4) of said Section Four (4); thence North a distance of 1650 feet to the North boundary line of said Lot Two (2), which is the South boundary line of Section Thirty-Four (34), in Township Five (5) South, Range 34 East; thence West a distance of 1438.8 feet to the point of beginning, containing 54.5 acres, more or less, all in Township Six (6), South, Range Thirty-Five (35) East, N.M.P.M.; and

The East Half (E1/2) and the Southwest Quarter (SW1/4) of Section Nine (9), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.;

All of Section Ten (10), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.; and

All of Section Fifteen (15), Township Six (6) South, Range Thirty-Five (35) East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (7) Wind Energy Lease Agreement between Roy Lee Criswell and Waverly Criswell, husband and wife and Highway Wind Project Company LLC, a Texas limited liability company, dated October 28, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 26, 2013 as Document No. 20133810 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The East half of the Northeast Quarter of Section 8, Township 6 South, Range 35 East, N.M.P.M. (E/2 NE/4 Sec. 8, T 6 S – R 35 E);

The Northwest Quarter of Section 9, Township 6 South, Range 35 East, N.M.P.M. (NW/4 Sec. 9, T 6 S – R 35 E);

All of Section 19, Township 5 South, Range 34 East, N.M.P.M. (Sec. 19, T 5 S – R 34 E); and

The West Half of Section 30, Township 5 South, Range 34 East, N.M.P.M. (W/2 Sec. 30, T 5 S – R 34 E)

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (8) Wind Energy Lease Agreement between George Hay LLC and Highway Wind Project Company LLC, a Texas limited liability company, dated August 23, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133752 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Northwest Quarter of the Northwest Quarter of Section Twenty-nine (29) all in Township Six (6) South-Range Thirty-five (35) East of N.M.P.M.;

All of Section Seventeen (17), Township Six (6) South, Range Thirty-five (35) East of N.M.P.M.;

All of Section Eighteen (18), Township Six (6) South, Range Thirty-five (35) East of N.M.P.M.;

All of Section Nineteen (19), Township Six (6) South, Range Thirty-five (35) East of N.M.P.M.;

All of Section Twenty (20), Township Six (6) South, Range Thirty-five (35) East of N.M.P.M.;

All of Section Twenty-one (21), Township Six (6) South, Range Thirty-five (35) East of N.M.P.M.;

All of Section Twenty-two (22), Township Six (6) South, Range Thirty-five (35) East of N.M.P.M.; and

All of Section Thirteen (13), Township Six (6) South, Range Thirty-four (34) East of N.M.P.M.;

All of Section Twenty-three (23), Township Six (6) South, Range Thirty-four (34) East of N.M.P.M.;

All of Section Twenty-four (24), Township Six (6) South, Range Thirty-four (34) East of N.M.P.M.;

The Northwest Quarter (NW/4) of Section Twenty-six (26), Township Six (6) South, Range Thirty-four (34) East of N.M.P.M.;

The South Half (S/2) of Section Twelve (12), Township Six (6) South, Range Thirty-four (34) East of N.M.P.M.;

The West Half of the West Half (W/2 W/2) of Section Twenty-seven (27), Township Six (6) South Range Thirty-five (35) East of N.M.P.M.;

The East Half (E/2) and the East Half of the West Half (E/2 W/2) of Section Twenty-eight (28), Township Six (6) South Range Thirty-five (35) East of N.M.P.M.;

The Northwest Quarter (NW/4) and the North Half of the Northeast Quarter (N/2 NE/4) and the Southwest Quarter of the Northeast Quarter (SW/4 NE/4) of Section Thirty (30), Township Six (6) South, Range Thirty-five (35) East of N.M.P.M.; and

The South Half of Section Three (3) Township Seven (7) South-Range Thirty-four (34) East of N.M.P.M.;

All of Section Twenty-five (25), Township Six (6) South-Range Thirty Four (34) East of N.M.P.M.,

All of Section Twenty-five (25), Township Six (6) South-Range Thirty-three (33) East of N.M.P.M.;

All of Section Thirty-Five (35), Township Six (6) South-Range Thirty-three (33) East of N.M.P.M.;

The South Half (S/2) of Section Twenty-four (24), Township Six (6) South-Range Thirty-three (33) East of N.M.P.M.;

The South Half (S/2) of Section Twenty-six (26), Township Six (6) South-Range Thirty-four (34) East of N.M.P.M.;

The South Half (S/2) of Section Twenty-Seven (27), Township Six (6) South-Range Thirty-four (34) East of N.M.P.M.;

The East Half of the Northeast Quarter (E/2 NE/4) and the South Half (S/2) of Section Thirty-one (31), Township Six (6) South-Range Thirty-four (34) East of N.M.P.M.;

All of Section Thirty-two (32), Township Six (6) South-Range Thirty-four (34) East of N.M.P.M.;

All of Section Thirty-three (33), Township Six (6) South-Range Thirty-four (34) East of N.M.P.M.;

The West Half (W/2) of Section Thirty-four (34), Township Six (6) South-Range Thirty-four (34) East of N.M.P.M.;

The North Half (N/2) of Section Three (3), Township Seven (7) South-Range Thirty-four (34) East of the N.M.P.M.; and

The North Half (N/2) of Section Four (4), Township Seven (7) South-Range Thirty-four (34) East of the N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (9) Wind Energy Lease Agreement between Derrill Osborn and Highway Wind Project Company LLC, a Texas limited liability company, dated October 28, 2013 as evidence by

that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133751 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The East Half of Section 30, Township 5 South, Range 34 East, N.M.P.M. (E/2 Sec. 30, T 5 S – R 34 E); and

The North Half of Section 31, Township 5 South, Range 34 East, N.M.P.M. (N/2 Sec. 31, T 5 S – R 34 E)

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (10) Wind Energy Lease Agreement between Stephen Sharp and Highway Wind Project Company LLC, a Texas limited liability company, dated October 28, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133754 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The East Half of Section 30, Township 5 South, Range 34 East, N.M.P.M. (E/2 Sec. 30, T 5 S – R 34 E); and

The North Half of Section 31, Township 5 South, Range 34 East, N.M.P.M. (N/2 Sec. 31, T 5 S – R 34 E)

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (11) Wind Energy Lease Agreement between Karen G. Sharp and Joe M. Sharp, husband and wife and Highway Wind Project Company LLC, a Texas limited liability company, dated October 28, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133753 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The East Half of Section 30, Township 5 South, Range 34 East, N.M.P.M. (E/2 Sec. 30, T 5 S – R 34 E); and

The North Half of Section 31, Township 5 South, Range 34 East, N.M.P.M. (N/2 Sec. 31, T 5 S – R 34 E)

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (12) Wind Energy Lease Agreement between Sam Southard and Highway Wind Project Company LLC, a Texas limited liability company, dated August 23, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133749 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

Lot 1 of Section 6, Township 6 South, Range 34 East, N.M.P.M. (Lot 1, Sec. 6, T 6 S – R 34 E);

Lot 4, and the South Half of the Southeast Quarter, and the Northeast Quarter of the Southeast Quarter, and the East-Half of the Northeast Quarter of Section 7, Township 6 South, Range 34 East, N.M.P.M. (Lot 4, S/2 SE/4, NE/4 SE/4, E/2 NE/4, Sec. 7, T 6 S – R 34 E);

The West-Half of the West Half of Section 8, Township 6 South, Range 34 East, N.M.P.M. (W/2 W/2, Sec. 8, T 6 S – R 34E);

The South Half, and the West Half of the Northwest Quarter of Section 17, Township 6 South, Range 34 East, N.M.P.M. (S/2, W/2 NW/4, Sec. 17, T 6 S – R 34 E);

Lot 1, 2, 3, and 4, and the East Half of Section 18; Township 6 South, Range 34 East, N.M.P.M. (Lots 1, 2, 3, and 4, and E/2, Sec. 18, T 6 – R 34 E);

Lot 1, 2, 3, and 4, and the East Half of Section 19, Township 6 South, Range 34 East, N.M.P.M. (Lots 1, 2, 3, and 4, and E/2, Sec. 19, T 6 S – R 34 E);

All of Section 20, Township 6 South, Range 34 East, N.M.P.M. (Sec. 20, T 6 S – R 34 E);
and

All of Section 29, Township 6 South, Range 34 East, N.M.P.M. (Sec. 29, T 6 S – R 34 E)

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (13) Wind Energy Lease Agreement between LaVonne E. Coke and Highway Wind Project Company LLC, a Texas limited liability company, dated August 23, 2013 as evidence by that Memorandum of Wind Energy Lease Agreement recorded November 18, 2013 as Document No. 20133748 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

Lots 1, 2, 3, and 4, of Section 1, Township 6 South, Range 34 East, N.M.P.M. (Lots 1, 2, 3, and 4, of Sec. 1, T 6 S – R 34 E); and

The Southwest Quarter of Section 31, Township 5 South, Range 34 East, N.M.P.M. (SW/4 of Sec. 31, T 5 S –R 34 E)

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (14) Grant of Easements between Alan Belcher, a married man dealing in his sole and separate property, and Chermac Energy Corporation, an Oklahoma corporation, dated July 15, 2016; as evidenced by that Memorandum of Grant of Easements recorded July 19, 2016 as Document No. 20162380 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The West Half (W/2) of Section 25, Township 5 South, Range 34 East, N.M.P.M., less and except a tract more particularly described in Document Number 20113485 of the official records of the County Clerk of Roosevelt County, New Mexico;

The West Half (W/2) and the West Half of the East Half (W/2 E/2) of Section 36, Township 5 South, Range 34 East, N.M.P.M., less and except a tract more particularly described in Document Number 20113485 of the official records of the County Clerk of Roosevelt County, New Mexico; and

The Northwest Quarter (NW/4) of Section 29, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (15) Grant of Easements between Bill Cummings and Edna Cummings, husband and wife, and Chermac Energy Corporation, an Oklahoma corporation, dated July 26, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 10, 2016 as Document No.

20162608 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

All of Section 27, Township 5 South, Range 34 East, N.M.P.M.; and

The Southeast Quarter (SE/4) and the West Half (W/2) of Section 22, Township 5 South, Range 34 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (16) Grant of Easements between Morris D. Foster, a.k.a. Morris Foster, a married man dealing in his sole & separate estate, joined pro forma by Dian Gail Foster, his spouse and Chermac Energy Corporation, an Oklahoma corporation, dated August 8, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 10, 2016 as Document No. 20162607 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Northwest Quarter (NW/4) and the West Half of the Southwest Quarter (W/2 SW/4) and the Southeast Quarter of the Southwest Quarter (SE/4 SW/4) of Section 26, Township 5 South, Range 34 East, N.M.P.M.; and

The Northeast Quarter (NE/4) of Section 34, Township 5 South, Range 34 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (17) Grant of Easements between Gordon Frazee as Trustee of the Donald D. and Joyce Lee Frazee Revocable Trust dated June 30, 1994, a.k.a. the Donald D. and Joyce Lee Frazee Family Revocable Trust Agreement dated June 30, 1994 and Gordon Frazee as Trustee of the Donald D. Frazee Credit Shelter "B" Trust and Chermac Energy Corporation, an Oklahoma corporation, dated July 15, 2016 as evidence by that Memorandum of Grant of Easements recorded July 19, 2016 as Document No. 20162381 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Southeast Quarter (SE/4) of Section 17, Township 5 South, Range 35 East, N.M.P.M.;
and

The Northeast Quarter (NE/4) and Lots One (1) and Two (2) and the East Half of the
Northwest Quarter (E/2 NW/4) (being all the N/2) of Section 18, Township 5 South, Range
35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (18) Grant of Easements between Gerald E. Gaines and Letha Jo Gaines, husband and wife, and
Chermac Energy Corporation, an Oklahoma corporation, dated July 5, 2016 as evidence
by that Memorandum of Grant of Easements recorded July 19, 2016 as Document No.
20162379 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New
Mexico limited liability company as evidenced by that Assignment of Interests dated
October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in
Roosevelt County, New Mexico.

The following tracts of land are included:

The Southwest Quarter (SW/4) of Section 17, Township 5 South, Range 35 East, N.M.P.M.;
and

The Southeast Quarter (SE/4) of Section 18, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (19) Grant of Easements between Gerald E. Gaines as Trustee of the Carrol M. Smith Trust and
Chermac Energy Corporation, an Oklahoma corporation, dated July 15, 2016 as evidence
by that Memorandum of Grant of Easements recorded July 19, 2016 as Document No.
20162377 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New
Mexico limited liability company as evidenced by that Assignment of Interests dated
October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in
Roosevelt County, New Mexico.

The following tracts of land are included:

The Southeast Quarter (SE/4) of Section 13, Township 5 South, Range 34 East, N.M.P.M.;
The Northeast Quarter (NE/4) of Section 24, Township 5 South, Range 34 East, N.M.P.M.;
The Southwest Quarter (SW/4) of Section 18, Township 5 South, Range 35 East, N.M.P.M.;
and

The Northwest Quarter (NW/4) of Section 19, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (20) Grant of Easements between Jack Tarver and Doris Tarver, Trustees of the Jack Tarver and Doris Tarver Revocable Living Trust Agreement dated December 4, 1996 and Chermac Energy Corporation, an Oklahoma corporation, dated July 19, 2016 as evidence by that Memorandum of Grant of Easements recorded August 10, 2016 as Document No. 20162609 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The West Half (W/2) of Section 18, Township 5 South, Range 36 East, N.M.P.M.;
The East Half of the Southeast Quarter (E/2 SE/4) of Section 12, Township 5 South, Range 34 East, N.M.P.M.; and
The North Half (N/2) and the Southwest Quarter (SW/4) of Section 13, Township 5 South, Range 34 East, N.M.P.M

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (21) Grant of Easements between Darryl W. Gaines and Linda Gaines, husband and wife, and Chermac Energy Corporation, an Oklahoma corporation, dated August 5, 2016 as evidence by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162859 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The North Half (N/2) of Section 17, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (22) Grant of Easements between Danny Lynn Knox and Chermac Energy Corporation, an Oklahoma corporation, dated August 15, 2016 as evidence by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162852 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Northeast Quarter (NE/4) of Section 23, Township 5 South, Range 34 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (23) Grant of Easements between Marlene Foster, a single woman and Chermac Energy Corporation, an Oklahoma corporation, dated August 20, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 21062858 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The South Half (S/2) of Section 23, Township 5 South, Range 34 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (24) Grant of Easements between S & V Dairy, LLC, a New Mexico limited liability company and Chermac Energy Corporation, an Oklahoma corporation, dated October 19, 2016; as evidenced by that Memorandum of Grant of Easements recorded October 27, 2016 as Document No. 20163528 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Northwest Quarter (NW/4) of Section 24, Township 5 South, Range 34 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (25) Grant of Easement between Kim Blakey and Louise Blakey a.k.a. Kim Louise Blakey, husband and wife, and Chermac Energy Corporation, an Oklahoma corporation, dated August 10, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162853 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The West Half (W/2) of Section 12, Township 5 South, Range 35 East, N.M.P.M.; and

The Southeast Quarter (SE/4) of Section 8, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (26) Grant of Easements between Larry Lloyd Blakey and Sandi L. Blakey, husband and wife, and Chermac Energy Corporation, an Oklahoma corporation, dated September 27, 2016; as evidenced by that Memorandum of Grant of Easements recorded October 21, 2016 as Document No. 20163466 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Southwest Quarter (SW/4) of Section 9, Township 5 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (27) Grant of Easements between JoAnn Blakey, as Trustee of the JoAnn Blakey Living Trust dated January 18, 2011 and Chermac Energy Corporation, an Oklahoma corporation, dated September 27, 2016; as evidenced by that Memorandum of Grant of Easements recorded October 21, 2016 as Document No. 20163465 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Northeast Quarter (NE/4) of Section 17, Township 5 South, Range 36 East, N.M.P.M.;
and

The East Half (E/2) of Section 12, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (28) Grant of Easements between Roy Custer and Linda Custer, as Trustees of the Custer Family Living Trust dated October 25, 2005, and Chermac Energy Corporation, an Oklahoma corporation, dated August 1, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162849 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The South Half (S/2) of Section 7, Township 5 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (29) Grant of Easement between C V Bar Farms, Inc., a Texas corporation, and Chermac Energy Corporation, an Oklahoma corporation, dated August 8, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162854 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The West Half of Section 29, Township 4 South, Range 36 East, N.M.P.M.;

The Northwest Quarter (NW/4) of Section 25 Township 4 South, Range 36 East, N.M.P.M.;
and

The East Half (E/2) and the Southwest Quarter (SW/4) of Section 35, Township 4 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (30) Grant of Easements between Gordon Frazee, dealing in his sole and separate estate, and Chermac Energy Corporation, an Oklahoma corporation, dated July 25, 2016; as evidenced by that Memorandum of Grant of Easements recorded September 22, 2016 as Document No. 20163016 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Southwest Quarter (SW/4) of Section 26, Township 4 South, Range 36 East, N.M.P.M.;

The Southeast Quarter (SE/4) of Section 27, Township 4 South, Range 36 East, N.M.P.M.;

The North Half (N/2) of Section 2, Township 5 South, Range 36 East, N.M.P.M.;

The Northeast Quarter (NE/4) of Section 3, Township 5 South, Range 36 East, N.M.P.M.;

The East Half (E/2) of Section 34, Township 4 South, Range 36 East, N.M.P.M.; and

The Northwest Quarter (NW/4) of Section 35, Township 4 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (31) Grant of Easements between Buz Goodson and Fern Goodson, Co-Trustees of the Goodson Family Living Trust dated August 8, 2007 and Chermac Energy Corporation, an Oklahoma corporation, dated June 22, 2016; as evidenced by that Memorandum of Grant of Easements recorded July 19, 2016 as Document No. 20162378 and re-recorded August 30, 2016 as Document No. in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The East Half (E/2) and the Southwest Quarter (SW/4) of Section 15, Township 5 South, Range 35 East, N.M.P.M.;

The Northeast Quarter (NE/4) of Section 21, Township 5 South, Range 35 East, N.M.P.M.;

The East Half (E/2) and the Northwest Quarter (NW/4) of Section 22, Township 5 South, Range 35 East, N.M.P.M.;

The Southwest Quarter (SW/4) of Section 3, Township 5 South, Range 36 East, N.M.P.M.;

The South Half (S/2) of Section 4, Township 5 South, Range 36 East, N.M.P.M.; and

All of Section 10, Township 5 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (32) Grant of Easements between Billy J. Hays and Jo Ann Hays a.k.a. Joann Hays, husband and wife and Chermac Energy Corporation, an Oklahoma corporation, dated August 9, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162850 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The North Half (N/2) of Section 7, Township 5 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (33) Grant of Easements between Jack Manis and Georgia Manis, husband and wife and Chermac Energy Corporation, an Oklahoma corporation, dated June 24, 2016; as evidenced by that Memorandum of Grant of Easements recorded July 19, 2016 as Document No. 20162376 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The East Half (E/2) of Section 28, Township 4 South, Range 36 East, N.M.P.M.; and

The North Half (N/2) of Section 33, Township 4 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (34) Grant of Easements between Jimmy Mullins and Leslie Mullins, Trustees of the Jimmy Mullins & Leslie Mullins Revocable Trust dated July 22, 2014 and Chermac Energy Corporation, an Oklahoma corporation, dated August 15, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162851 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Southeast Quarter (SE/4) of Section 10, Township 5 South, Range 35 East, N.M.P.M.;

The Northwest Quarter (NW/4) of Section 15, Township 5 South, Range 35 East, N.M.P.M.;

The Northwest Quarter (NW/4) of Section 26, Township 5 South, Range 35 East, N.M.P.M.; and

The North Half (N/2) of Section 27, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (35) Grant of Easements among Shirley Ann Howard, dealing in her sole and separate non-homestead property, Keith Edward O'Hare dealing in his sole and separate non-homestead property and Rosa Lee Cundiff, dealing in her sole and separate non-homestead property and Chermac Energy Corporation, an Oklahoma corporation, dated October 19, 2016; as evidenced by that Memorandum of Grant of Easements recorded October 27, 2016 as

Document No. 20163527 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The West Half (W/2) of Section 14, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (36) Grant of Easements between Steven W. Parker & Sandra Parker a.k.a. Sandra Lynn Parker, husband and wife and Chermac Energy Corporation, an Oklahoma corporation, dated August 25, 2016; as evidenced by that Memorandum of Grant of Easements recorded September 22, 2016 as Document No. 20163105 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

All of Section 13, Township 5 South, Range 35 East, N.M.P.M.;

The East Half (E/2) of Section 14, Township 5 South, Range 35 East, N.M.P.M.;

The Southeast Quarter (SE/4) of Section 11, Township 5 South, Range 35 East, N.M.P.M.;

Lots Three (3) and Four (4) and the East Half of the Southwest Quarter (E/2 SW/4), being all of the Southwest Quarter (SW/4) of Section 31, Township 4 South, Range 36 East, N.M.P.M.; and

The West Half (W/2) of Section 28, Township 5 South, Range 36 East, N.M.P.M.; less and except a tract 1231 feet E/W and 542 feet N/S in the Northwest Corner of said section

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (37) Grant of Easement between William L. Stockton and September G. Stockton, husband and wife and Chermac Energy Corporation, an Oklahoma corporation, dated October 21, 2016; as evidenced by that Memorandum of Grant of Easements recorded November 1, 2016 as Document No. 20163590 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The South Half (S/2) of Section 14, Township 5 South, Range 34 East, N.M.P.M; and

The Northwest Quarter (NW/4) of Section 23, Township 5 South, Range 34 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

(38) [Reserved]

(39) Grant of Easements between Charles Wayne Tivis & Donna J. Tivis, husband and wife and Chermac Energy Corporation, an Oklahoma corporation, dated August 5, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162856 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Northwest Quarter (NW/4) of Section 1, Township 5 South, Range 35 East, N.M.P.M. less a tract more fully described at Book 194, Page 214 (137.84 acres);

The Northeast Quarter (NE/4) of Section 11, Township 5 South, Range 35 East, N.M.P.M. (160 acres);

The Northeast Quarter (NE/4) of Section 23, Township 5 South, Range 35 East, N.M.P.M. (160 acres); and

The Northwest Quarter (NW/4) of Section 24, Township 5 South, Range 35 East, N.M.P.M. (160 acres)

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

(40) Grant of Easements between Victor Family Living Trust, Wayne Victor, Trustee and Chermac Energy Corporation, an Oklahoma corporation, dated July 5, 2016; as evidenced by that Memorandum of Grant of Easements recorded July 19, 2016 as Document No. 20162375 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company as evidenced by that Assignment of Interests dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

Section 36, Township 4 South, Range 35 East, N.M.P.M.;

Northwest Quarter (NW/4) and Southeast Quarter (SE/4) of Section 31, Township 4 South, Range 36 East, N.M.P.M.; and

The South Half (S/2) of Section 6, Township 5 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY NEW MEXICO.

- (41) Grant of Easements between C.V. Watson, Jr. a.k.a. C. Vernon Watson, Jr. and Sabra A. Watson, husband and wife and Chermac Energy Corporation, an Oklahoma corporation, dated August 8, 2016; as evidenced by that Memorandum of Grant of Easements recorded August 30, 2016 as Document No. 20162855 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The Southwest Quarter (SW/4) of Section 21, Township 4 South, Range 36 East, N.M.P.M.;

The West Half (W/2) and the Southeast Quarter (SE/4) of Section 20, Township 4 South, Range 36 East, N.M.P.M.;

The Northwest Quarter (NW/4) of Section 17, Township 5 South, Range 36 East, N.M.P.M.;

The West Half (W/2) of Section 28, Township 4 South, Range 36 East, N.M.P.M.; and

The East Half (E/2) of Section 29, Township 4 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (42) Grant of Easements between Estate of Tommie Pauline Bennett, Charles Bennett, Personal Representative and Chermac Energy Corporation, an Oklahoma corporation, dated October 25, 2016; as evidenced by that Memorandum of Grant of Easements recorded October 27, 2016 as Document No. 20163526 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

All of Section 32, Township 4 South, Range 36 East, N.M.P.M.;

The South Half (S/2) of Section 33, Township 4 South, Range 36 East, N.M.P.M.;

The Southwest Quarter (SW/4) of Section 34, Township 4 South, Range 36 East, N.M.P.M.;

The Northwest Quarter (NW/4) of Section 3, Township 5 South, Range 36 East, N.M.P.M.;

The North Half (N/2) of Section 4, Township 5 South, Range 36 East, N.M.P.M.;

The North Half (N/2) and the Southeast Quarter (SE/4) of Section 5, Township 5 South, Range 36 East, N.M.P.M.; and

The North Half (N/2) and the Southwest Quarter (SW/4) of Section 8, Township 5 South, Range 36 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (43) Grant of Easements between Jolene Garrison, an unmarried person, and Chermac Energy Corporation, an Oklahoma corporation, dated October 25, 2016; as evidenced by that Memorandum of Grant of Easements recorded November 1, 2016 as Document No. 20163593 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The South Half (S/2) of Section 17, Township 5 South, Range 36 East, N.M.P.M.;

The East Half (E/2) of Section 18, Township 5 South, Range 36 East, N.M.P.M.;

The Northeast Quarter (NE/4) of Section 19, Township 5 South, Range 36 East, N.M.P.M.;
and

The North Half (N/2) of Section 20, Township 5 South, Range 36 East, N.M.P.M.; and

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (44) Grant of Easements between Jason Kizer, dealing in his sole and separate property, and Chermac Energy Corporation, an Oklahoma corporation, dated October 27, 2016; as evidenced by that Memorandum of Grant of Easements recorded November 1, 2016 as Document No. 20163591 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The South Half (S/2) of Section 35, Township 5 South, Range 34 East, N.M.P.M.;

Lots 3 & 4 & the East Half of the Southwest Quarter (E/2 SW/4) and the Southeast Quarter of the South Half (SE/4 S/2) all being the South Half (S/2) of Section 31, Township 5 South, Range 35 East, N.M.P.M.;

The West Half of the Southeast Quarter (W/2 SE/4) of Section 33, Township 5 South, Range 35 East, N.M.P.M.;

Lots 1 & 2 and the South Half of the Southwest Quarter (S/2 SW/4) and the South Half of the Southeast Quarter (S/2 SE/4) of Section 1, Township 6 South, Range 35 East, N.M.P.M.;

All of Section 2, Township 6 South, Range 35 East, N.M.P.M.;

All of Section 11, Township 6 South, Range 35 East, N.M.P.M. less & except a 4 acre tract described in Book 165, Page 725 and further less & except a tract of land 40 feet wide described in Book 165, Page 725 and further less & except a 3 acre tract described in Book 162, Page 229;

All of Section 12, Township 6 South, Range 35 East, N.M.P.M.;

All of Section 13, Township 6 South, Range 35 East, N.M.P.M.;

The Southwest Quarter (SW/4) of Section 23, Township 6 South, Range 35 East, N.M.P.M.;

The North Half (N/2) of Section 24, Township 6 South, Range 35 East, N.M.P.M.;

Lot 4 in Section 4, Township 6 South, Range 36 East, N.M.P.M.;

Lots 1, 2, 3, 4 being all of Sections 5, Township 6 South, Range 36 East, N.M.P.M.;

Lot 1 in Section 6, Township 6 South, Range 36 East, N.M.P.M.;

The Northwest Quarter of the Northwest Quarter (NW/4 NW/4) a/k/a Lot 1, the South Half of the Northeast Quarter of the Southwest Quarter, (S/2 NE/4 SW/4), the Southeast Quarter of the Southwest Quarter (SE/4 SW/4), the South Half (S/2) of Lot 3, all of Lot 4 & the Northeast Quarter of the Northeast Quarter (NE/4 NE/4) including land described as Richland Hills Subdivision Blocks 1, 2, 3, 4, 5, 6 & 12 and the Southeast Quarter (SE/4) all in Section 7, Township 6 South, Range 36 East, N.M.P.M.;

All of Section 8, Township 6 South, Range 36 East, N.M.P.M.;

The Northwest Quarter of the Northwest Quarter (NW/4 NW/4) of Section 9, Township 6 South, Range 35 East, N.M.P.M.;

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (45) Grant of Easements between Shannon Kizer, an unmarried person, and Chermac Energy Corporation, an Oklahoma corporation, dated October 27, 2016; as evidenced by that Memorandum of Grant of Easements recorded November 1, 2016 as Document No. 20163594 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

The South Half (S/2) of Section 25, Township 6 South, Range 35 East, N.M.P.M.;

The West Half (W/2) and the Southeast Quarter (SE/4) of Section 26, Township 6 South, Range 35 East, N.M.P.M.;

All of Section 35, Township 6 South, Range 35 East, N.M.P.M. less & except a strip of land 40 feet wide off of the West side of the Northwest Quarter (NW/4) and Southwest Quarter (SW/4);

All of Section 36, Township 6 South, Range 35 East, N.M.P.M.;

The East Half (E/2), the South Half of the Northwest Quarter (S/2 NW/4), the Northeast Quarter of the Northwest Quarter (NE/4 NW/4), the Southwest Quarter (SW/4) of Section 17, Township 6 South, Range 36 East, N.M.P.M.;

The North Half of the Southeast Quarter (N/2 SE/4), the South Half of the Northeast Quarter (S/2 NE/4), the Southeast Quarter of the Southeast Quarter (SE/4 SE/4) of Section 18, Township 6 South, Range 36 East, N.M.P.M.;

The East Half of the Northeast Quarter (E/2 NE/4) Section 19, Township 6 South, Range 36 East, N.M.P.M.;

The North Half (N/2) Section 20, Township 6 South, Range 36 East, N.M.P.M.;

All of Section 21, Township 6 South, Range 36 East,, N.M.P.M.;

The South Half (S/2) Section 22, Township 6 South, Range 36 East, N.M.P.M.;

The South Half (S/2) of Section 23, Township 6 South, Range 36 East, N.M.P.M.;

The Northwest Quarter (NW/4) of Section 25, Township 6 South, Range 36 East, N.M.P.M.;

The North Half (N/2) and the Southwest Quarter (SW/4) of Section 26, Township 6 South, Range 36 East, N.M.P.M.;

The North Half (N/2) of Section 27, Township 6 South, Range 36 East, N.M.P.M.;

The East Half (E/2) of Section 28, Township 6 South, Range 36 East, N.M.P.M.;

Lots 1, 2, the East Half of the Northwest Quarter (E/2 NW/4), The West Half of the Northeast Quarter (W/2 NE/4), the Northwest Quarter of the Southeast Quarter (NW/4 SE/4), the Northeast Quarter of the Southwest Quarter (NE/4 SW/4) of Section 31, Township 6 South, Range 36 East, N.M.P.M.; and

a tract of land in Sections 18, 19, 20, 28, 29 and 30 all in Township 6 South, Range 36 East, N.M.P.M. described as follows: Beginning at the SW/4 of said Section 30, which is marked with a #4 bar & cap & is 30 feet West of a north-south Power Transmission Line; thence N 00° 32' 59" W, 5292.2 feet along the Range Line to a set #4 bar & cap at the NW corner of Section 30; thence continuing N 00° 32'59" West, 5276.0 feet along the Range Line, to a set #4 bar & cap at the NW corner of Section 19; thence continuing N 00°32'59" W, 1319 feet along the Range Line, to a set #4 bar & cap at the NW/4 of Lot 4 Section 18; thence N 89°22'47" E, 3808.6 feet to a set #4 bar & cap at the NE corner of the SW/4 SE/4 of Section 18; thence, S 00°35'02" E, 1319.4 feet to a set #4 bar & cap at the NE corner of the W/2 NE/4 of Section 19; thence S 00°42'02" E, 2639 feet to a set #4 bar & cap at the SE corner of the W/2 NE/4 Section 19; thence N 89°24'02" E, 1321.4 feet to a set #4 bar & cap at the W/4 corner of Section 20; thence 89°24'03" E, 5281.2 feet to a set #4 bar & cap at the E/4 corner of Section 20; thence, S 00°40'06" E, 2640.6 feet along the Section line to a set #4 bar & cap at the SE/4 of Section 20; thence N 89°20'55" E, 2636.1 feet to a set #4 bar & cap at the N/4 corner of Section 28; thence 00°37'52" E, 5275.5 feet to a set #4 bar & cap at the S/4 corner of Section 28; thence, S 89°02'07" W, 2640.4 feet along a fence to a set #4 bar & cap at the SW/4 corner of Section 28; thence S 89°22'52" W, 5275.5 feet along a fence to a set #4 bar & cap at the SW corner of Section 29; thence, S 89°25'24" W, 5152.2 feet along a fence to the point of beginning; this tract subject to Ranch Road "P", running north-south on the west side, and Range Road 33 S running east-west along the north side of Sections 28, 29 & 30.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (46) Grant of Easements between Mack Kizer, a single man, and Chermac Energy Corporation, an Oklahoma corporation, dated October 27, 2016; as evidenced by that Memorandum of Grant of Easements recorded November 1, 2016 as Document No. 20163588 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

All of Section 14, Township 6 South, Range 35 East, N.M.P.M.;

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (47) Grant of Easements between Killion Farms, Inc., and Chermac Energy Corporation, an Oklahoma corporation, dated October 25, 2016; as evidenced by that Memorandum of Grant of Easements recorded November 1, 2016 as Document No. 20163592 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

Lots One (1) and Two (2) and the East Half of the Northwest Quarter (E/2 NW/4) and the Northeast Quarter (NE/4) and the Southeast Quarter (SE/4) of Section 30, Township 5 South, Range 35 East, N.M.P.M.;

The South Half (S/2) of Section 29, Township 5 South, Range 35 East, N.M.P.M.;

The Northeast Quarter (NE/4) and the West Half (W/2) of Section 32, Township 5 South, Range 35 East, N.M.P.M.;

Lots Two (2), Three (3) and Four (4) of Section 6, Township 6 South, Range 36 East, N.M.P.M.;

Lot Two (2) and the North Half (N/2) of Lot Three (3) and the East Half of the Northwest Quarter (E/2 NW/4) and the Northwest Quarter of the Northeast Quarter (NW/4 NE/4) and the North Half of the Northeast Quarter of the Southwest Quarter (N/2 NE/4 SW/4) of Section 7, Township 6 South, Range 36 East, N.M.P.M.;

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (48) Option to Purchase Right of Way and Easement Agreement between Kenneth L. Musick and Lillian M. Musick Revocable Living Trust Agreement dated December 27, 2012 and Chermac Energy Corporation, an Oklahoma corporation, dated June 23, 2016; as evidenced by that Memorandum recorded July 19, 2016 as Document No. 20162382 in Roosevelt County, New Mexico as assigned to Highway Wind, LLC, a New Mexico limited liability company dated October 31, 2016 and recorded November 1, 2016 as Document No. 20163589 in Roosevelt County, New Mexico.

The following tracts of land are included:

South Half (S/2) of Section 4, Township 5 South, Range 35 East, N.M.P.M.;

The North Half (N/2), and Southwest Quarter of (SW/4) of Section 10, Township 5 South, Range 35 East, N.M.P.M.;

Lots 3 and 4, the East Half of the Southwest Quarter (E/2 SW/4) and Southeast Quarter (SE/4) of Section 7, Township 5 South, Range 35 East, N.M.P.M.;

The South Half (S/2) of Section 8, Township 5 South, Range 35 East, N.M.P.M.;

All of Section 9, Township 5 South, Range 35 East, N.M.P.M.

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (49) Option to Purchase Right of Way and Easement Agreement between Chermac Energy Corporation and Highway Wind, LLC, a New Mexico limited liability company, dated November 8, 2016; as evidenced by that Memorandum recorded November 22, 2016 as Document No. 20163861 in Roosevelt County, New Mexico.

The following tracts of land are included:

An 180' wide tract of land with centerline starting point beginning at a point 545' East of the southwest corner of Northeast Quarter (NE/4) of Section 4 Township 5 South Range 35 East, NMPM and thence North approximately 660' to an ending point on the South edge of the Southwestern Public Service Company property located in Northeast Quarter (NE/4) Section 4 Township 5 South Range 35 East, NMPM as evidence by a Warranty Deed dated February 20th, 2015 and filed of record as Document 15-11316 on March 12, 2015,

ALL IN ROOSEVELT COUNTY, NEW MEXICO

- (50) Option to Purchase Right of Way and Easement Agreement between Chermac Energy Corporation and Highway Wind, LLC, a New Mexico limited liability company, dated November 8, 2016; as evidenced by that Memorandum recorded November 22, 2016 as Document No. 20163860 in Roosevelt County, New Mexico.

The following tracts of land are included:

An 180' wide tract of land with centerline starting point beginning at a point 745' East of the southwest corner of Northeast Quarter (NE/4) of Section 4 Township 5 South Range 35 East, NMPM and thence North approximately 660' to an ending point on the South edge of the Southwestern Public Service Company property located in Northeast Quarter (NE/4) Section 4 Township 5 South Range 35 East, NMPM as evidence by a Warranty Deed dated February 20th, 2015 and filed of record as Document 15-11316 on March 12, 2015,

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (51) Wind Lease and Easement Agreement between Cindy Huffman, a/k/a Cynthia Ann Harth and Cindy Harth, a married woman dealing in her sole and separate property, and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,125.000 acres of land, more or less, as follows, to wit:

320.000 acres of land, more or less, being the East Half (E/2) of Section Eight (8), Township Four (4) South of Range Thirty-seven (37) East, N.M.P.M.;

160.000 acres of land, more or less, being the North West Quarter (NW/4) of Section Fourteen (14), Township Four (4) South of Range Thirty-six (36) East, N.M.P.M.;

640.000 acres of land, more or less, being Section Sixteen (16), Township Four (4) South of Range Thirty-six (36) East, N.M.P.M.;

5.000 acres of land, more or less, being a tract of land out of the North East portion of the South East Quarter (SE/4) of Section Fourteen (14), Township Four (4) South of Range Thirty-six (36) East, N.M.P.M.;

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (52) Wind Lease and Easement Agreement between Davis Arch Ranch, LLC, a New Mexico limited liability company, and Lazy D Cattle Company, Inc., a New Mexico corporation, and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,280.000 acres of land, more or less, as follows, to wit:

640.000 acres of land, more or less, being Section Twenty-five (25), Township Three (3) South of Range Thirty-six (36) East, N.M.P.M.;

640.000 acres of land, more or less, being Section Thirty-six (36), Township Three (3) South of Range Thirty-six (36) East, N.M.P.M.;

ALL IN ROOSEVELT COUNTY, NEW MEXICO.

- (53) Wind Lease and Easement Agreement between Davis Arch Ranch, LLC, a New Mexico limited liability company and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

7,794.400 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

267.400 acres of land, more or less, being the West Half (W/2) and a Tract West of Highway 235 of Section Thirty-four (34), Township Three (3) South of Range Thirty-seven (37) East;

160.000 acres of land, more or less, being the North West Quarter (NW/4) of Section Twenty-seven (27), Township Three (3) South of Range Thirty-seven (37) East;

400.000 acres of land, more or less, being the East Half (E/2) and the East Half of the North West Quarter (E/2 of the NW/4) of Section Thirty-one (31), Township Three (3) South of Range Thirty-seven (37) East;

160.000 acres of land, more or less, being the South East Quarter (S/4) of Section Thirty-two (32), Township Three (3) South of Range Thirty-seven (37) East;

160.000 acres of land, more or less, being the North West Quarter (NW/4) of Section Thirty-three (33), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Twenty-four (24), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the East Half (E/2) of Section Thirty-three (33), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Twenty-eight (28), Township Three (3) South of Range Thirty-seven (37) East;

160.000 acres of land, more or less, being the South West Quarter (SW/4) of Section Twenty-two (22), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Twenty-one (21), Township Three (3) South of Range Thirty-seven (37) East;

400.000 acres of land, more or less, being the North Half (N/2) and the North Half of the South West Quarter (N/2 of the SW/4) of Section Nineteen (19), Township Three (3) South of Range Thirty-seven (37) East;

560.000 acres of land, more or less, being the South West Quarter (SW/4), North Half (N/2), and the North Half of the South East Quarter (N/2 of the SE/4) of Section Twenty (20), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Thirteen (13), Township Three (3) South of Range Thirty-six (36) East;

560.000 acres of land, more or less, being the East Half (E/2), North West Quarter (NW/4), and the North Half of the South West Quarter (N/2 of the SW/4) of Section Thirty (30), Township Three (3) South of Range Thirty-seven (37) East;

647.000 acres of land, more or less, being Section Eighteen (18), Township Three (3) South of Range Thirty-seven (37) East;

240.000 acres of land, more or less, being the South East Quarter (SE/4) and the South Half of the South West Quarter (S/2 of the SW/4) of Section Nineteen (19), Township Three (3) South of Range Thirty-seven (37) East;

560.000 acres of land, more or less, being the South Half (S/2) , North East Quarter (NE/4), and the South Half of the North West Quarter (S/2 of the NW/4) of Section Seventeen (17), Township Three (3) South of Range Thirty-seven (37) East;

640.000 acres of land, more or less, being Section Twenty-nine (29), Township Three (3) South of Range Thirty-seven (37) East.

- (54) Wind Lease and Easement Agreement between Davis Caprock Ranch, LLC, a New Mexico limited liability company and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

13,121.070 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

640.000 acres of land, more or less, being the Section Twelve (12), Township Three (3) South of Range Thirty-five (35) East;

320.000 acres of land, more or less, being the East Half (E/2) of Section Thirteen (13), Township Three (3) South of Range Thirty-five (35) East;

320.000 acres of land, more or less, being the South Half (S/2) of Section Seventeen (17), Township Three (3) South of Range Thirty-five (35) East;

80.000 acres of land, more or less, being the South Half of the North West Quarter (S/2 of the NW/4) of Section Fifteen (15), Township Three (3) South of Range Thirty-five (35) East;

80.000 acres of land, more or less, being the North Half of the North West Quarter (N/2 of the NW/4) of Section Fifteen (15), Township Three (3) South of Range Thirty-five (35) East;

640.000 acres of land, more or less, being Section Eleven (11), Township Three (3) South of Range Thirty-five (35) East;

640.000 acres of land, more or less, being Section Ten (10), Township Three (3) South of Range Thirty-five (35) East;

640.220 acres of land, more or less, being Section One (1), Township Three (3) South of Range Thirty-five (35) East;

640.600 acres of land, more or less, being Section Two (2), Township Three (3) South of Range Thirty-five (35) East;

641.160 acres of land, more or less, being Section Three (3), Township Three (3) South of Range Thirty-five (35) East;

640.000 acres of land, more or less, being Section Seventeen (17), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the East Half (E/2) of Section Twenty (20), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-nine (29), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the West Half (W/2) of Section Thirty-Four (34), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Thirty-three (33), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-one (21), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-seven (27), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-eight (28), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-six (26), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Fourteen (14), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Fifteen (15), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-three (23), Township Three (3) South of Range Thirty-six (36) East;

640.000 acres of land, more or less, being Section Twenty-two (22), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the West Half (W/2) of Section Fifteen (15), Township Four (4) South of Range Thirty-six (36) East;

159.770 acres of land, more or less, being the North East Quarter (NE/4) of Section Four (4), Township Four (4) South of Range Thirty-six (36) East;

319.320 acres of land, more or less, being the North Half (N/2) of Section Three (3), Township Four (4) South of Range Thirty-six (36) East.

- (55) Wind Lease and Easement Agreement between Michael Dale Clark and Thelma Ann Clark, husband and wife and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,078.560 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

Tract 1:

480.000 acres of land, more or less, being the North Half (N/2) and South East Quarter (SE/4) of Section Nineteen (19), Township Four (4) South of Range Thirty-seven (37) East, being more particularly described in that certain Warranty Deed dated September 15, 1999, from Bobby Gresham, Personal Representative of the Estate of Verna Mae Thomas, Deceased, as Grantor to Michael D. Clark and T. Ann Clark, husband and wife, as Grantee, recorded in Volume 62, Page 179 of the Deed Records of Roosevelt County, New Mexico.

Tract 2:

158.000 acres of land, more or less, being the 160.00 acres of the South West Quarter (SW/4) of Section Thirty (30), Township Four (4) South of Range Thirty-six (36) East, LESS AND EXCEPT 2.00 acres being more particularly described in that certain Warranty Deed dated January 28, 1977, from J. K. Marrs, et al, as Grantor to Mike D. Clark and Thelma Ann Clark, husband and wife, as Grantee, recorded in Volume 136, Page 913 of the Deed Records of Roosevelt County, New Mexico.

Tract 3:

280.560 acres of land, more or less, being out of the East Half (E/2) of Section Eleven (11), Township Five (5) South of Range Thirty-six (36) East, being more particularly described in that certain Warranty Deed dated April 18, 2016, from Scott Tweedy and Janay Tweedy

as Grantor to Michael Dale Clark and Thelma Ann Clark, as Grantee, recorded in instrument number 20161260 of the Deed Records of Roosevelt County, New Mexico.

Tract 4:

160.000 acres of land, more or less, being the South West Quarter (SW/4) of Section Nineteen (19), Township Four (4) South of Range Thirty-seven (37) East being more particularly described in that certain Warranty Deed dated January 29, 1980, from J. D. Thomas and Marjorie L. Thomas, husband and wife, as Grantor to Mike D. Clark and Thelma Ann Clark, husband and wife, as Grantee, recorded in Volume 141, Page 339 of the Deed Records of Roosevelt County, New Mexico.

- (56) Wind Lease and Easement Agreement between Terry Varnell and Jimmie Lou Varnell, husband and wife, individually and on behalf of the Terry and Jimmie Lou Varnell Irrevocable Trust and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

956.000 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

320.000 acres of land, more or less, being the North Half (N/2) of Section Twelve (12), Township Four (4) South of Range Thirty-four (34) East;

320.000 acres of land, more or less, being the North Half (N/2) of Section Seven (7), Township Four (4) South of Range Thirty-five (35) East;

160.000 acres of land, more or less, being the South East Quarter (SE/4) of Section Five (5), Township Four (4) South of Range Thirty-five (35) East;

156.000 acres of land, more or less, being a tract of land out of Section One (1), Township Four (4) South of Range Thirty-five (35) East.

- (57) Wind Lease and Easement Agreement between Texas L. Belcher and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1749.720 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

223.000 acres of land, more or less, being the South East Quarter (SE/4) and North East Quarter of the South West Quarter (NE/4 of the SW/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the North Half (N/2) of Section Twenty-two (22), Township Four (4) South of Range Thirty-six (36) East;

160.000 acres of land, more or less, being the North West Quarter (NW/4) of Section Eighteen (18), Township Four (4) South of Range Thirty-seven (37) East;

454.720 acres of land, more or less, being a tract of land out of Section Eleven (11), Township Four (4) South of Range Thirty-six (36) East being more particularly described in that certain Warranty Deed dated December 28, 2000, from Lola Greathouse Trust, as Grantor to Texas L. Belcher, as Grantee, recorded in Volume 73, Page 847 of the Deed Records of Roosevelt County, New Mexico.

160.000 acres of land, more or less, being the South West Quarter (SW/4) of Section Eighteen (18), Township Four (4) South of Range Thirty-seven (37) East;

320.000 acres of land, more or less, being the North Half (N/2) of Section Thirteen (13), Township Four (4) South of Range Thirty-six (36) East;

112.000 acres of land, more or less, being a tract of land out of Section Thirteen (13), Township Four (4) South of Range Thirty-six (36) East being more particularly described in that certain Warranty Deed dated January 29, 2015, from Evelyn Deanna Dickson Trust, as Grantor to Texas L. Belcher, as Grantee, recorded in Document 20150294 of the Records of Roosevelt County, New Mexico.

- (58) Wind Lease and Easement Agreement between Thomas P. Clark and Karen E. Clark, husband and wife and Sagamore Wind, a Delaware limited liability company, dated January 9, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

320.000 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

320 acres of land, more or less, being the North Half (N/2) of Section Thirty (30), Township Four (4) South of Range Thirty-six (36) East, being more particularly described in that certain Warranty Deed dated March 13, 1985, from Mike D. Clark and Thelma Ann Clark, husband and wife, as Grantor to Tom P. Clark and Karen E. Clark, husband and wife, as Grantee, recorded in Volume 149, Page 372 of the Deed Records of Roosevelt County, New Mexico.

- (59) Wind Lease and Easement Agreement between Clarence Calvin Locke and Carolyn Locke, husband and wife, individually and on behalf of the Locke family Trust; and Lillian Rammelkamp, a married woman dealing in her sole and separate property and Sagamore Wind, a Delaware limited liability company, dated January 31, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

355.000 acres of land, more or less, situated in Roosevelt County, New Mexico, as follows, to wit:

160.000 acres of land, more or less, being the North West Quarter (NW 1/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

40.000 acres of land, more or less, being the South West Quarter of the South West Quarter (SW/4 of SW/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

40.000 acres of land, more or less, being the North East Quarter of the South West Quarter (NE/4 of SW/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

35.000 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

35.000 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

22.500 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

22.500 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East.

- (60) Wind Lease and Easement Agreement between Belcher Land, LLC and Sagamore Wind, a Delaware limited liability company, dated January 31, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1921.370 acres of land, more or less, situated in Roosevelt County, New Mexico, as follows, to wit:

242.000 acres of land, more or less, being Lots 1, 2, 3 and 4 of the East Half (E/2) and the South West Quarter (SW/4) of Section Thirty-one (31), Township Three (3) South of Range Thirty-seven (37) East;

320.000 acres of land, more or less, being the East Half (E/2) of Section Thirty-four (34), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the West Half (W/2) of Section Thirty-five (35), Township Three (3) South of Range Thirty-six (36) East;

320.000 acres of land, more or less, being the South Half (S/2) of Section Three (3), Township Four (4) South of Range Thirty-six (36) East;

80.000 acres of land, more or less, being Lot 4 of the South East Quarter of the South West Quarter (SE/4 of the SW/4) of Section Thirty (30), Township Three (3) South of Range Thirty-seven (37) East;

4.137 acres of land, more or less, being a tract of land out of Section Two (2), Township Four (4) South of Range Thirty-six (36) East;

635.233 acres of land, more or less, being all, less 4.147 acres, of Section Two (2), Township Four (4) South of Range Thirty-six (36).

- (61) Wind Lease and Easement Agreement between Dennis and Colleen Tollett, husband and wife, and Sagamore Wind Energy, LLC, a Delaware limited liability company, dated February 13, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,334.870 acres of land, more or less, being situated in Roosevelt County, New Mexico, as follows, to wit:

460.720 acres of land, more or less, being the West Half Short (W 1/2) and lots 1,2,3 and 4 of Section Ten (10), Township Four (4) South of Range Thirty-seven (37) East;

10.000 acres of land, more or less, being a tract of land out of the North East Quarter of the North East Quarter of the North East Quarter (NE 1/4 NE 1/4 NE 1/4) of Section One (1), Township Four (4) South of Range Thirty-six (36) East;

309.970 acres of land, more or less, being a tract of land out of the East Half (E 1/2) of Section One (1), Township Four (4) South of Range Thirty-six (36) East;

234.180 acres of land, more or less, being the South West Quarter Short (SW 1/4) and lots 5 and 6 of Section Three (3), Township Four (4) South of Range Thirty-seven (37) East;

320.000 acres of land, more or less, being the South Half (S 1/2) of Section Six (6), Township Four (4) South of Range Thirty-seven (37) East.

- (62) Wind Lease and Easement Agreement between Clarence Calvin Locke and Carolyn Locke, husband and wife, individually and on behalf of the Locke Family Trust, and Sagamore Wind, a Delaware limited liability company, dated February 13, 2017; as evidenced by that Memorandum of [] recorded [] as Document No. [] in Roosevelt County, New Mexico.

The following tracts of land are included:

62.500 acres of land, more or less, situated in Roosevelt County, New Mexico, as follows, to wit:

40.000 acres of land, more or less, being the North West Quarter of the South West Quarter (NW 1/4 of SW 1/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East;

22.500 acres of land, more or less, being a TRACT of land out of the North East Quarter (NE 1/4) of Section Twelve (12), Township Four (4) South of Range Thirty-six (36) East.

- (63) Wind Lease and Easement Agreement between The Patsy Ruth Terral Recovable Living Trust – patsy Ruth Terral, Trustee, and Sagamore Wind Energy, LLC, a Delaware limited liability company, dated [February 16], 2017; as evidenced by that Memorandum of [] recorded [] as Document No. [] in Roosevelt County, New Mexico.

The following tracts of land are included:

868.78 acres more or less situated in Roosevelt County, New Mexico, as follows, to wit:

SECTION 10, TOWNSHIP-06S, RANGE-37E, N/2NE/4: 80.000 ACRES (ROOSEVELT COUNTY APN #:4-100-000-008-76800)

SECTION 11, TOWNSHIP-06S, RANGE-37E, N/2NW/4: 80.000 ACRES (ROOSEVELT COUNTY APN #:4-200-000-008-76800)

SECTION 03, TOWNSHIP-06S, RANGE-37E, LOTS 1, 2: 84.000 ACRES (ROOSEVELT COUNTY APN #:4-000-000-008-75600)

SECTION 02, TOWNSHIP-06S, RANGE-37E, LOTS 3,4(LESS N.300'): 64.780 ACRES (ROOSEVELT COUNTY APN #:4-000-000-008-75100)

SECTION 35, TOWNSHIP-05S, RANGE-36E, W/2, SE/4, S/2NE/4: 560.000 ACRES (ROOSEVELT COUNTY APN #:4-000-000-008-75000)

- (64) Wind Lease and Easement Agreement between The Darrell Caviness and Paula Caviness Revocable Trust, and Sagamore Wind Energy, LLC, a Delaware limited liability company, dated February 16, 2017; as evidenced by that Memorandum of [_____] recorded [_____] as Document No. [_____] in Roosevelt County, New Mexico.

The following tracts of land are included:

1,438.52 acres more or less situated in **Roosevelt** County, New Mexico, as follows, to wit:

SECTION-21, TOWNSHIP-5S, RANGE -36E, W2, W/2E/2 W/2W/2E/2, : 560 ACRES
(ROOSEVELT COUNTY APN #:4-000-000-008-22900)

SECTION-19, TOWNSHIP-5S, RANGE-37E, N/2NE4: 80 ACRES (ROOSEVELT
COUNTY APN #:4-000-000-008-54104)

SECTION-19, TOWNSHIP-5S, RANGE-37E, N/2NW4: 80 ACRES (ROOSEVELT
COUNTY APN #:4-000-000-008-54105)

SECTION-19, TOWNSHIP-5S, RANGE-37E, S/2NE4: 80 ACRES (ROOSEVELT
COUNTY APN #:4-000-000-008-54108)

SECTION-18, TOWNSHIP-5S, RANGE-37E, ALL (less 1.48 acres in NE/4): 638.520
ACRES (ROOSEVELT COUNTY APN #:4-000-000-008-23301)

SCHEDULE 4.15
PERMITS

(i) None.

(ii) None.

(iii) (a) Site Permit,

(b) State Regulatory Approval, and

(c) those Permits listed on Schedule 6.6(b) to the extent required for the further development and construction of the Project.

SCHEDULE 4.16
ENVIRONMENTAL MATTERS

None.

SCHEDULE 4.21
WIND DATA

Energy Estimate Summary as provided October 20, 2016 in the data room
Met Tower Commissioning Forms as provided October 20, 2016 in the data room
MET Tower locations as provided October 20, 2016 in the data room
Raw Data for Met towers as provided October 20, 2016 in the data room
Met Tower logger data and pictures as provided October 28, 2016 in the data room
Validated Data for Met towers as provided October 27, 2016 in the data room
Energy Estimate Summaries as provided January 31, 2017 in the data room

**SCHEDULE 4.22
INSURANCE**



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
12/19/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Aon Risk Services Central, Inc. Chicago IL Office 200 East Randolph Chicago IL 60601 USA	CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): (800) 363-0105	
	E-MAIL ADDRESS:	
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED Invenergy Wind Development North America LLC One South Wacker Drive, suite 1900 Chicago IL 60606 USA	INSURER A: Federal Insurance Company 20281	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

Holder Identifier :

COVERAGES CERTIFICATE NUMBER: 570064782698 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC <input type="checkbox"/> OTHER:			35848841	06/01/2016	06/01/2017	EACH OCCURRENCE	\$1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,000
							MED EXP (Any one person)	\$25,000
							PERSONAL & ADV INJURY	\$1,000,000
							GENERAL AGGREGATE	\$2,000,000
							PRODUCTS - COMP/OP AGG	Included
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident)	
							BODILY INJURY (Per person)	
							BODILY INJURY (Per accident)	
							PROPERTY DAMAGE (Per accident)	
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION			79851261	06/01/2016	06/01/2017	EACH OCCURRENCE	\$10,000,000
							AGGREGATE	\$10,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						PER STATUTE OTH-ER	
							E.L. EACH ACCIDENT	
							E.L. DISEASE-EA EMPLOYEE	
							E.L. DISEASE-POLICY LIMIT	

Certificate No : 570064782698

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Re: Sagamore Wind Project: Evidence of Coverage.

CERTIFICATE HOLDER Southwestern Public Service Company 414 Nicollet Mall, 401-04 Minneapolis MN 55401-1927 USA	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
--	--



**SCHEDULE 6.6(b)
CERTAIN DEVELOPMENT WORK**

Sagamore Wind Energy Center							
	Agency	Item	Permit/Needed Action	Requirement	Seller	Buyer	Notes
1.0 FEDERAL	Environmental Protection Agency (EPA) in coordination with the State Regulatory Authority	1.1	Phase I Environmental Site Assessment (which shall not be dated earlier than 180 days prior to the Closing Date)	A report prepared for a real estate holding that identifies potential or existing environmental contamination liabilities. No submittal required to EPA	X		
		1.2	Spill Prevention Control and Countermeasure Plan (SPCC)	Develop and implement SPCC Plans		X	
		1.3	National Pollutant Discharge Elimination System Stormwater Permit	Obtain NPDES construction stormwater permit and SWPPP		X	
	Federal Communications Commission (FCC)	1.4	Microwave Study	Determine if needed	X		
		1.5	National Telecommunications and Information Administration (NTIA) Filing	Determine if needed	X		
	Federal Emergency Management Agency (FEMA)	1.6	Flood Plain Designations	Determine areas within 100 year flood plain for financing; no submittal required to FEMA	X		

		1.7	Floodplain Development Permitting	Develop and submit Floodplain Development Permit, if required		X	
Federal Energy Regulatory Commission (FERC)		1.8	Exempt Wholesale Generator Certificate (EWG)	Self Certification		X	
		1.9	Qualifying Facilities (QF) Certification	Self Certification		X	
		1.10	Market-Based Rate Authorization (MBA)	Determine if MBA is needed		X	
Federal Land Manager (BLM, USBR, Forest Service)		1.11	Right-of-Way Crossing, if applicable	Right-of-Way grant over Federal lands		X	N/A
National Historic Preservation Act		1.12	Federal Section 106, Class I Literature Review / Class II Architectural Survey/ Class III Cultural Field Survey	Section 106 of the National Historic Preservation Act (NHPA) may be invoked by a Federal Agency if the Project requires federal land, funding, or permits. Seller to complete preliminary Class I literature review of National and State registered sites, and Class II or Class III field survey for preliminary turbine, collection line, and access road layout. Submit all data and reports to Buyer in a timely manner. No submittal to National	X		

				Historic Preservation Act required.			
U.S. Army Corps of Engineers (USACE)	1.13	Wetland Delineation	Perform desktop review and preliminary field wetland delineation per 1987 Corps Wetland Delineation Manual and Regional Supplements to determine extent of USACE jurisdiction, quantify impacts based on the preliminary turbine, collection line, and access road design (only the intersection between preliminary design and identified wetland features will be delineated),	X			
	1.14	Final Wetland Delineation and Documentation of Impacts	Perform any additional field wetland delineations per 1987 Corps Wetland Delineation Manual and Regional Supplements as necessary due to final design changes, and document avoidance during construction.		X		
	1.15	Jurisdictional Determination	Determine eligibility for a Letter of No Jurisdiction		X		

				based on limited wetland impacts.			
		1.16	Preconstruction Notice (PCN)	Submit PCN for wind farm which includes facility construction, expansion or modification, if required.		X	
		1.17	Federal Clean Water Act Section 404 and Section 10 Permit(s)	Required for the discharge of dredged or fill material into waters of U.S. Minimal levels of fill may be covered under existing General Permits/Letters of Permission		X	
		1.18	Conservation / Grassland / Wetland Easement and Reserve Program Filing	Coordinate filings and notifications, as required. Approvals shall not be needed.	X		
	U.S. Department of Agriculture	1.19	Farm Service Agency (FSA) Conservation / Grassland / Wetland Easement and Reserve Program (CRP) Releases and Consents	Obtain all CRP land location and contract data, to include CRP-1, Appendix CRP-1, and Conservation Plan. Make preliminary determination with landowner regarding whether land can remain in CRP and commence process as appropriate.	X		
		1.20	FSA Mortgage Subordinations & Site-Specific Environmental Assessments	If FSA mortgage is in place on parcels. Mortgage subordinations to be addressed in the title	X		

				process but nothing to be submitted to the Dept of Ag.			
U.S. Fish and Wildlife Service (USFWS)	1.21	Communications and Data	<ul style="list-style-type: none"> •Submit pre-construction wildlife surveys and associated data (if requested) to USFWS in a timely manner; include Buyer on all communication •Communicate with USFWS during all project stages, as per Land-Based Wind Energy Guidelines 	X			
	1.22	Wetland and Grassland Easements	Identify any wetland or grassland easements purchased by USFWS from landowners	X			
	1.23	Wetland and Grassland Easement Permit	A permit needed to describe location of easement through wetlands and measures to ensure that construction, operation and maintenance will only temporarily drain or fill easement wetlands		X	N/A?	

		1.24	Land-Based Wind Energy Guidelines Tier 1 Preliminary site evaluation (Eagle Conservation Plan Guidance Stage 1)	<ul style="list-style-type: none"> • Landscape level assessment of habitat for species of concern • Request data sources for existing information and literature • Communicate results of surveys, including reports, or other associated data (if requested) to Service field office and Buyer in a timely manner • Draft applicable section(s) of BBCS for Tier 1 	X		
		1.25	Land-Based Wind Energy Guidelines Tier 2: Site characterization (Eagle Conservation Plan Guidance Stage 1)	<ul style="list-style-type: none"> • Assess potential presence of species of concern, including species of habitat fragmentation concern • Assess potential presence of plant communities present on site that may provide habitat for species of concern • Assess potential presence of critical congregation areas for species of concern • One or more reconnaissance level site visit by biologist 	X		

				<ul style="list-style-type: none"> • Communicate results of site visits and provide associated results, including reports or other associated data (if requested) to Service field office and Buyer in a timely manner • Provide general information about the size and location of the project to the Service and whether fragmentation is likely to occur • Draft applicable section(s) of BBCS for Tier 2 			
		1.26	Land-Based Wind Energy Guidelines Tier 3: Field studies and impact prediction (Eagle Conservation Plan Guidance Stage 2)	<ul style="list-style-type: none"> • Discuss extent and design of field studies to conduct with the Service • Conduct biological studies including, fall and spring eagle migration (if deemed needed based on results of avian use surveys), raptor nest, bat acoustic, prey resource, lesser prairie chicken, and avian use surveys, the duration and intensity of which will be determined through communication with the Service. 	X		

				<ul style="list-style-type: none"> • Conduct additional biological studies for threatened, endangered, and species of concern based on preliminary study findings and USFWS, NMDGF recommendations, if required • Communicate results of surveys, including reports or other associated data (if requested) to Service field office in a timely manner • Evaluate risk to species of concern from project construction and operation • Identify ways to mitigate potential direct and indirect impacts of building and operating the project <p>No approval required from the USFWS</p> <ul style="list-style-type: none"> • Draft applicable section(s) of BBCS for Tier 3 			
		1.27	Bald and Golden Eagle and/or Threatened and Endangered Species Incidental Take Permit, based on results found in Tier 3 Study	A general conditional authorization for incidental take by certain hazards of wind farms to birds		X	IF APPLICABLE

		1.28	Tier 4: Post construction studies to estimate impacts	<ul style="list-style-type: none"> • Discuss extent and design of post-construction studies to conduct with the Service • Conduct post-construction studies to assess fatalities and habitat-related impacts • Communicate results of all studies to Service field office in a timely manner • If necessary, discuss potential mitigation strategies with Service • Maintain appropriate records of data collected from studies • Draft applicable section(s) of BBCS for Tier 4 		X	
--	--	------	---	--	--	----------	--

		1.29	Tier 5: Other post-construction studies and research	<ul style="list-style-type: none"> • Communicate with the Service about the need for and design of other studies and research to conduct with the Service, when appropriate, particularly when impacts exceed predicted levels • Communicate with the Service about ways to evaluate cumulative impacts on species of concern, particularly species of habitat fragmentation concern • Conduct appropriate studies as needed • Communicate results of studies with the Service • Identify potential mitigation strategies to reduce impacts and discuss them with theService • Draft applicable section(s) of BBCS for Tier 5 		X	
Federal Aviation Administration (FAA)		1.30	Notice of Proposed Construction or Alteration	Determination of No Hazard to Air Navigation needed for each structure over 200 feet tall via form 7460-1.	X		

		1.31	Notice of Actual Construction (Form 7460-2	File 7460-2 within 5 days after the structure reaches its greatest height.		X	
	U.S. Department of Defense	1.32	Federal airways and airspace review near military bases	If the proposed facilities are near military bases	X		
	U.S. Department of Transportation	1.33	Utility Line Crossing License	Needed if transmission/collection crosses federal highway		X	
State							
	NM Department of Transportation	2.1	Highway Crossings/turning lanes/traffic control installations	Required for facilities crossing over or under highways, turning lanes, traffic control devices and highway entrances		X	
	NM Public Regulation Commission	2.2	Site Location Permit/Transmission Line Approval/CCN/Right-of-way in excess of 100' without land owner approval	Approval only required for construction of any plant designed for or capable of operation at a capacity of 300 MW or more for the generation of electricity for sale to the public within or without NM, and construction of transmission lines, designed for or capable of operations at a nominal voltage of 230 kV or more, to be constructed in connection with and to transmit electricity from such a plant.	X		

	New Mexico State Engineer	2.3	Ground Water and Surface Water Diversion Permit	If water for the site will be provided by a new ground water well or surface water diversion, a permit will be required.		X	
	New Mexico Environment Department	2.4	Air Quality Source Registration or Permit	Depending on the anticipated hours of operation, types of tanks, and emission levels of those generators, either a source registration or a permit could be required, Title V or PSD could also be implicated. Any contractor who would be mixing and pouring concrete foundations would need to have its own air quality permit for its concrete batch plant and any related equipment that would be used on site.		X	
		2.5	Hazardous Waste Generator Identification Number	The federal resource Conservation and Recovery Act requires all persons who generate, transport, recycle, treat, store, or dispose of hazardous waste to notify EPA or the authorized state program of the waste activities.		X	

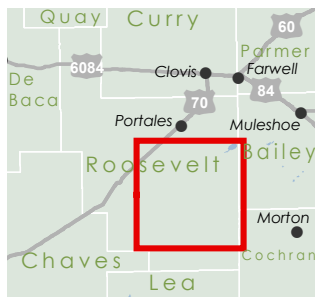
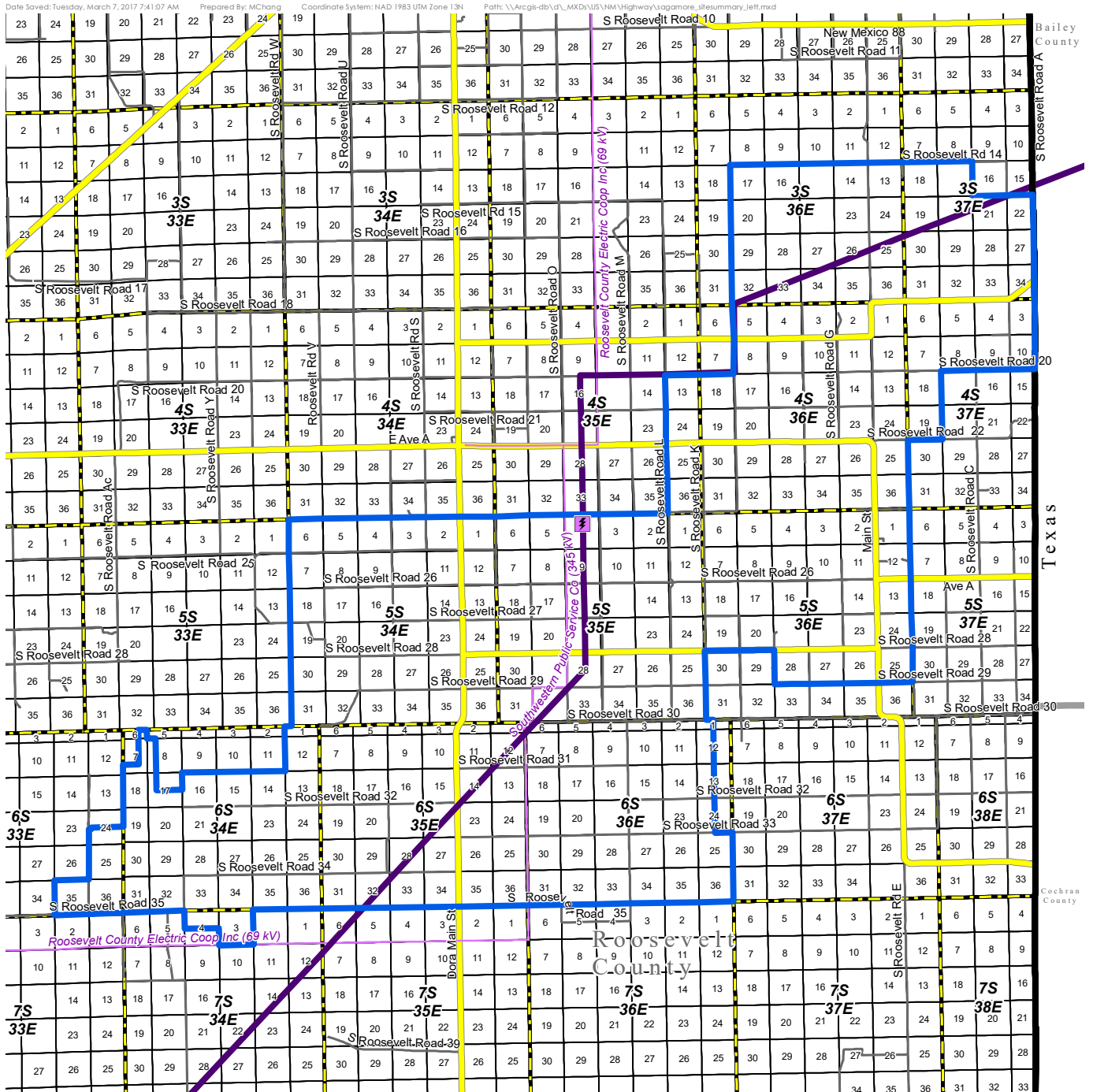
		2.6	Solid Waste Permit	If waste will be disposed of in a permitted landfill, no permit required. If waste is to be disposed of on-site, a permit may be required.		X	
		2.7	Septic Tank Permit/Liquid Waste Disposal Permit	If there will be toilet facilities on site that use a septic system, rather than being connected to municipal sewer, a septic permit is required.		X	
	New Mexico State Historic Preservation Office and Cultural Properties Review Committee	2.8	Cultural and Historic Resources Review of State and National Register of Historic Sites and Archeological Survey	Complete Class I literature review and Class II or Class III field survey for preliminary turbine, collection system, and access road layout	X		
		2.9	Cultural Properties Review Committee	May be implicated if there are cultural resources that will be impacted, or unmarked burials encountered during construction.		X	
		2.10	Submittal of Findings	Provide results of preliminary Class I literature review and Class II or Class III cultural field survey to SHPO and Buyer for notification purposes and confirmation of knowledge of all state	X		

				registered sites in a timely manner.			
	New Mexico Department of Game and Fish	2.11	Salvage Permit			X	If applicable
		2.12	Communication and Data	<ul style="list-style-type: none"> •Provide results of all pre-construction wildlife surveys, including reports, or other associated data to NMDGF when requested from the agency; include Buyer on all communication • Provide preliminary turbine, collection line, and access road layout for review and comments; include Buyer on all communication •Communicate with NMDGF during all project stages, as per USFWS' Land-Based Wind Energy Guidelines •Gain input NMDGF on state threatened, endangered, and species of concern 	X		
	New Mexico Energy, Minerals and Natural Resources Department	2.13	Communication and Data	Submit preliminary turbine, collection line, and access road layout for review and comments; include Buyer on all communication	X		

	State of New Mexico	2.14	Building permit	Typically, the contractor pulls the necessary building permits. State Construction Industries Division would issue building permits in Roosevelt County.		X	
COUNTY							
	Roosevelt County Floodplain Administrator	3.1	Flood Plain Development Permit	Ordinance 2015-01 Flood Damage Prevention Ordinance requires flood plain development permits for development within FEMA-designated flood hazard areas.		X	
	Roosevelt County	3.2	County Subdivision Approval	Roosevelt County Subdivision Regulation contains a series of exemptions, including one based on parcels being at least 140 acres and another that allows division into 2 parcels every 5 years without subdivision approval. The exemptions must be filed for by filing a claim of exemption with the County Manager ahead of the division. The County Manager must act within		X	If applicable

				10 business days after receipt of the claim of exemption and all required supporting information or the claim is deemed approved.			
	Roosevelt County	3.3	County Road Permits	The Roosevelt County Road Policy Handbook (2013) requires application to the County for installation of: (1) cattle guards; and (2) culverts. The Roosevelt County website provides an application form for disruption of roadbed for county right-of-ways.		X	

SCHEDULE 6.6(a)(iii)
PROJECT BOUNDARY



Legend

- Crossroads Substation
- Project Area
- Transmission Line**
- Under 100 kV
- 345 - 500 kV
- Road Classification**
- US/State Route
- Local Road



Project Area - Expected Nameplat Capacity

Sagamore Wind Energy Project | Roosevelt County, New Mexico

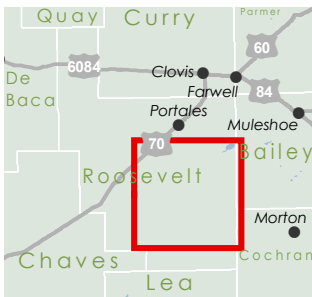
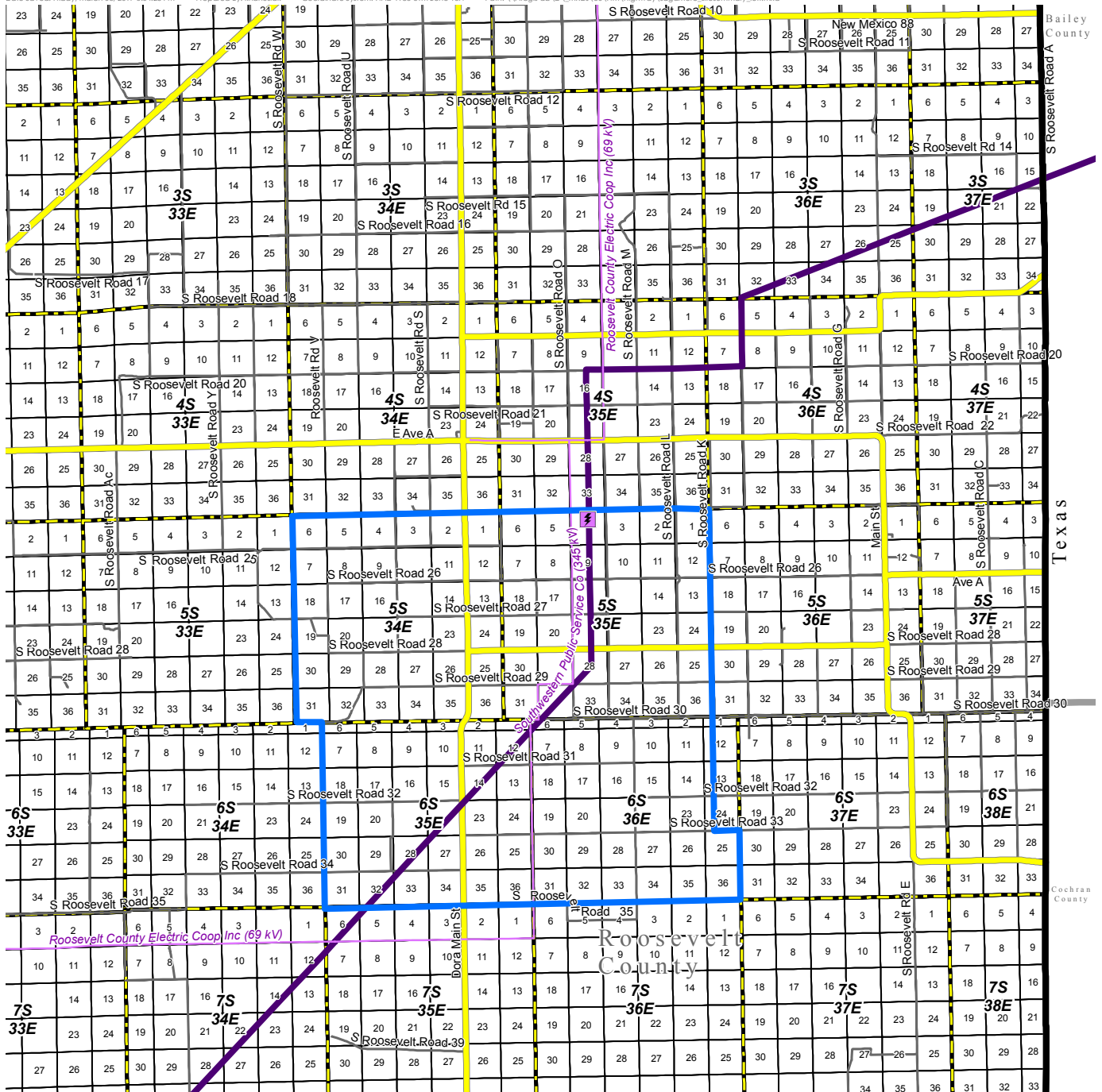
Rev. 01

March 07, 2017



SCHEDULE 6.6(a)(iii)(2)
OPTION BOUNDARY

Date Saved: Friday, March 03, 2017 4:04:28 PM Prepared By: khanusak Coordinate System: NAD 1983 UTM Zone 13N Path: \\Arcgis-ds\DV_MXD\US\NM\Highway\Sagamore_sifsummary_left.mxd



Legend

- Crossroads Substation
- Project Area
- Transmission Line
 - Under 100 kV
 - 345 - 500 kV
- Road Classification**
 - US/State Route
 - Local Road





Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 1

Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report

December 2020

*Prepared for Xcel Energy and the
New Mexico Attorney General by:*

Souder, Miller & Associates

3409 N. Grimes Street
Hobbs, New Mexico 88240



Acknowledgements



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 2

The Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report was produced by Souder, Miller & Associates (SMA) with the assistance, support, and participation of representatives of Xcel Energy, Wanzek Construction, Inc., and the Sagamore Advisory Group. SMA would like to specially thank the following for their contributions.

Xcel Energy Sagamore Wind Farm Project Team

Brian Hudson	<i>Project Manager</i>
Raiford Daniel	<i>Project Commercial Manager</i>
Mike McLeod	<i>NM Regional Manager</i>
David Essex	<i>Clovis Area Manager</i>
Mark Lytal	<i>Dir. Regional Capital Projects</i>

Wanzek Construction, Inc.

Bruce Hensley	<i>Project Manager</i>
Ryan Janowicz	<i>Asst. Project Manager</i>

Xcel Energy Sagamore Advisory Group

Robert Lundin	<i>NM Attorney General's Office</i>
Cholla Khoury	<i>NM Attorney General's Office</i>
Chuck Noble	<i>Coalition for Clean Affordable Energy</i>
Stephanie Dzur	<i>Coalition for Clean Affordable Energy</i>
Steve Michel	<i>Western Resources Clean Energy Program</i>

Submitted by:

Souder, Miller & Associates
3409 North Grimes Street
Hobbs, NM 88240

Russell Doss, P.E.	<i>Project Manager</i>
Rose Doyle, PMP	<i>Asst. Project Manager</i>
Sonja Jamilla, M.S.	<i>Chief Information Officer</i>
Daniel Rodriguez	<i>IT Coordinator</i>
Joe Thomas	<i>Onsite Coordinator</i>
Tod Phinney, P.E.	<i>Client Manager</i>

Submitted to:

Mr. Brian Hudson
Xcel Energy Project Manager



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 3

Abbreviations -

BOP	Balance of Plant
CAR	Cost Analysis Report
ESA	Endangered Species Act
DISIS	Definitive Interconnection System Impact Study
Gen Tie line	Generation Tie line
GIA	Generation Interconnection Agreement
GWh	Gigawatt hour
Invenergy	Invenergy, LLC
IRS	Internal Revenue Service
kV	Kilovolt
kW	Kilowatt
LPC	Lesser Prairie Chicken
MW	Megawatt
NMDOT	New Mexico Department of Transportation
O&M	Operations and Maintenance
PSA	Purchase and Sale Agreements
PRC	New Mexico Public Regulation Commission
PTC	Production Tax Credits
RFP	Request for Proposal
SMA	Souder Miller and Associates
SPP	Southwest Power Pool, Inc.
SPS	Southwestern Public Service Company, a New Mexico corporation
Vestas	Vestas-American Wind Technology, Inc.
Xcel Energy	Xcel Energy Inc.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 4

Table of Contents

EXECUTIVE SUMMARY	7
DEVELOPING NM RENEWABLE ENERGY CONTRACTORS AND SUPPLIERS	7
BENEFIT TO NEW MEXICO FOR THE SAGAMORE WIND FARM PROJECT.....	9
PREPARING THE FUTURE RENEWABLE ENERGY WORKFORCE.....	14
RECOMMENDED NM FIRMS FOR FUTURE RENEWABLE ENERGY PROJECTS.....	16
RENEWABLE ENERGY WORKFORCE RECOMMENDATIONS.....	16
INTRODUCTION AND NM BOP CHALLENGE	19
SAGAMORE WIND FARM PROJECT OVERVIEW	21
SAGAMORE WIND FARM ACCESS ROAD AND TURBINE LAYOUT.....	23
PRELIMINARY WORK TYPES AND WORKFORCE IDENTIFIED FOR THE PROJECT	25
CONTRACTOR AND SUPPLIER COORDINATION	26
CONTRACTOR AND SUPPLIER OUTREACH PLAN.....	26
<i>Vendor Data Compilation</i>	<i>26</i>
<i>Outreach Activities.....</i>	<i>26</i>
VENDOR REGISTRATION AND TRACKING.....	28
VENDOR VETTING	28
WANZEK FINAL PREQUALIFICATION REVIEW AND PROCUREMENT PROCESS.....	29
SAGAMORE WIND FARM DASHBOARD.....	30
NM RESIDENT FIRM WORK TOWARD BOP GOAL.....	30
ADDITIONAL BENEFITS TO NEW MEXICO FROM THE SAGAMORE PROJECT	31
BARRIERS ENCOUNTERED TO MEETING THE BOP GOAL.....	36
NM WIND FARM WORKFORCE OVERVIEW	40
ROADWAY CONSTRUCTION	40
ROADWAY AND CONCRETE AGGREGATE SUPPLY	40
FOUNDATION EXCAVATION, FOUNDATION REBAR PLACEMENT, AND FOUNDATION POURING.....	41
CONCRETE SUPPLY	41
ELECTRICAL MATERIALS SUPPLY.....	42
345 kV OVERHEAD TRANSMISSION LINE INSTALLATION.....	42
34.5 kV ELECTRICAL WIRING AND FIBER OPTIC WIRING INSTALLATION	43
ELECTRICAL SUBSTATION CONSTRUCTION	44
O&M BUILDING CONSTRUCTION	45
FENCING AND GATES.....	46
TRUCKING.....	46
CONSTRUCTION MATERIAL TESTING	47
SITE SAFETY MANAGEMENT	47
NM LABOR.....	47
RENTAL CONSTRUCTION EQUIPMENT.....	48
OTHER TASKS INCLUDING FUEL PROVISION, SANITARY SERVICES, ETC.	48
NM WIND FARM WORKFORCE SUMMARY	48
NM WORKFORCE NEEDS FOR FUTURE RENEWABLE ENERGY PROJECTS.....	49
INTRODUCTION.....	49
RENEWABLE ENERGY WORKFORCE NEED	49
WIND AND SOLAR ENERGY WORKFORCE SKILLS NEEDED.....	50



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 5

NM RENEWABLE ENERGY EDUCATION PROGRAMS	51
<i>Mesalands Community College</i>	51
<i>Clovis Community College</i>	52
<i>Central New Mexico Community College</i>	52
<i>Santa Fe Community College</i>	53
<i>New Mexico State University – Alamogordo</i>	54
<i>Navajo Technical University – Crownpoint</i>	55
<i>Eastern New Mexico University – Roswell</i>	55
<i>New Mexico Junior College</i>	56
<i>San Juan Community College</i>	56
<i>Western New Mexico University</i>	57
<i>University of New Mexico</i>	57
<i>New Mexico Tech</i>	58
RENEWABLE ENERGY WORKFORCE EDUCATION RECOMMENDATIONS.....	58
RENEWABLE ENERGY WORKFORCE APPRENTICESHIP PROGRAMS	59
<i>Electrical Apprenticeship Programs</i>	59
<i>Substation Electrician Apprenticeship Programs</i>	60
<i>Electrical Lineman Training Programs</i>	60
<i>Electrical Lineman Apprenticeship Programs</i>	60
<i>Heavy Equipment Operator Apprenticeship Program</i>	61
<i>Ironworker Apprenticeship Program</i>	61
<i>Cement Mason Apprenticeship Program</i>	61
<i>Laborer Apprenticeship Program</i>	62
<i>National Center for Construction Education and Research (NCCER)</i>	62
RENEWABLE ENERGY WORKFORCE APPRENTICESHIP TRAINING RECOMMENDATIONS	62
RENEWABLE ENERGY WORKFORCE RECOMMENDATIONS	65
APPENDIX.....	67
LIST OF RECOMMENDED CONTRACTORS AND SUPPLIERS FOR FUTURE RENEWABLE ENERGY PROJECTS ...	67
ATTORNEY GENERAL OFFICE LETTERS AND RESPONSES	67
2017 SOLAR TRAINING AND HIRING INSIGHTS REPORT.....	67
2020 NEW MEXICO RENEWABLE ENERGY TRANSMISSION AND STORAGE STUDY	67
2020 NM CHAMBER OF COMMERCE – “DRIVING NEW MEXICO’S FUTURE”	67



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 6

Engineer of Record

This Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report was prepared under the supervision and direction of the undersigned, whose seal as a Professional Engineer, licensed to practice in the state of New Mexico, is affixed below.

12/29/20

Russell Doss, P.E.
N.M.P.E. License No. 8828

Date



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 7

Executive Summary

An agreement was entered into between the State of New Mexico Attorney General, SPS d/b/a Xcel Energy, the Coalition for Clean Affordable Energy and Western Resource Advocate regarding the construction of the Sagamore Wind Farm Project, a 522-megawatt wind generating plant and associated facilities located in Roosevelt County, New Mexico, scheduled to begin commercial operation in 2020.

The parties agreed that it was in the public interest and their mutual interest to identify, utilize, and develop qualified New Mexico Resident Businesses when reasonably possible.

The work performed by New Mexico Resident Businesses and vendors provide New Mexico with the opportunity to develop the expertise needed to be a leader in renewable energy development, without increasing costs for the Sagamore Wind Project.

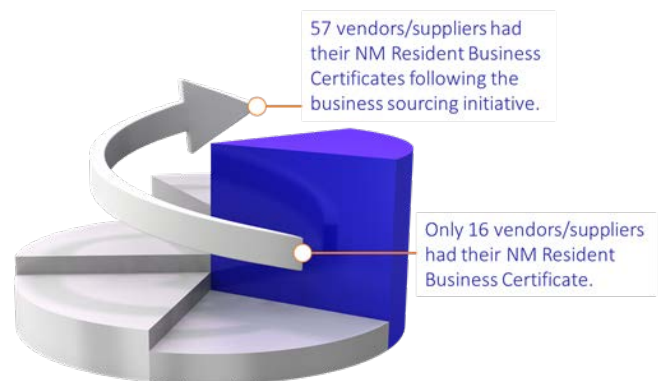
SPS hired the Business Sourcing Advisor, Souder, Miller and Associates (SMA), to implement the terms of the above referenced agreement. The primary purpose of the Advisor was to assist the Wind Farm General Contractor, Wanzek Construction, to identify and use cost-effective New Mexico Resident businesses and vendors. A secondary purpose was that the New Mexico Resident businesses and vendors who work on the Sagamore Wind Project will expand New Mexico's energy project expertise.

Finally, the Business Sourcing advisor was to reach out to New Mexico educational institutions to review the state of renewable energy workforce education and coordinate potential educational training additions and strategies that would result in an increased NM renewable energy workforce to construct future renewable energy solar and wind projects. This report is intended to describe the actions taken to accomplish the terms of the agreement and to document the results of those actions.

Developing NM Renewable Energy Contractors and Suppliers

The Business Sourcing Advisor prepared an Outreach Plan to identify and outreach to New Mexico businesses and vendors who could potentially provide renewable energy related services for the Sagamore Wind Farm Project.

Through the entire business and vendor registration, prequalification, and New Mexico Resident certification process, a total of eighty-four New Mexico contractors and suppliers were identified, expressed interest, and were considered for utilization on the Sagamore Wind Farm Project.

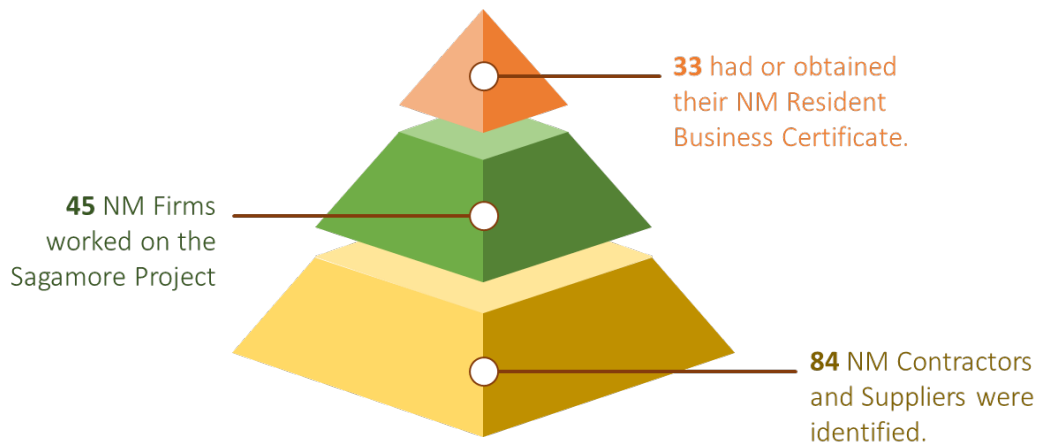




Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 8

Initially, the business and vendor identification process identified only sixteen (16) businesses and vendors that held a New Mexico Business Certification. A significant part of the Business Sourcing Advisor’s work was to assist the New Mexico businesses and vendors obtain the New Mexico Resident Business Certification. As the project construction was nearing completion, a total of fifty-seven (57) businesses and vendors had their NM Resident Business Certification.

Following the Wanzek final prequalification and work bidding process, forty-five New Mexico Firms provided work or supplies for the Sagamore Wind Farm Project. However, only thirty-three of these firms either had or worked to obtain their NM Resident Certificate for their work to count toward the BOP Goal. Several of the firms that did not pursue certification were small firms that did not see the need for certification even though they were informed they could be included on a list of New Mexico Resident Certified Contractors and Suppliers recommended for Future Renewable Energy Projects.



The list of New Mexico Resident Certified Contractors and Suppliers recommended for Future Renewable Energy Projects is found in the Appendix. This list contains the names of contractors and suppliers who worked on the Sagamore Wind Farm project and those who were prequalified by the Business sourcing advisor to work on the project. Due to the “fast track” nature of the project or other reasons, some contractors were not selected for work on the project by the general contractor.

The production capacities of the contractors on the list will vary. Some contractors will be able to provide excellent service for average size projects, while they may not have the capacity to perform on large projects. It is recommended that the smaller firms work to expand or consider connecting with other firms to “Joint Venture” and bid on the larger renewable energy projects in future years.

It should also be noted that safety records for each contractor will vary from year to year. It is recommended that updated production capacity and safety information be checked for each firm on the list prior to considering for future renewable energy project work.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 9

Benefit to New Mexico for the Sagamore Wind Farm Project

The project agreement described a goal to provide 30% of the Balance of Plant Construction from New Mexico Resident firms. The main barrier that prevented meeting 100% of the BOP goal was related to delayed approval of the SPP Generator Interconnection Agreement and the firm project completion deadline which resulted in a construction time requirement of less than one year for this \$900 million project.

As a result, the project had a “fast track” schedule for the turbine foundation construction, electrical connection wiring installation, transmission line construction and electrical substation construction. This fast track schedule required work production rates that were in excess of what could be provided by existing large New Mexico construction firms. Since New Mexico firms did not have the capacity to perform those work items, Wanzek had to “self-perform” that work. As a result, the work available for New Mexico firms to potentially perform was drastically reduced.

CHALLENGE

This fast-track schedule required work production rates that were in excess of what could be provided by existing large New Mexico construction firms.

The goal of 30% of the balance of plant (“BOP”) costs, before this work was to be “self-performed” by Wanzek, was communicated to the Business Advisor as approximately \$45 million to \$50 million since the bid BOP costs from Wanzek for the Sagamore Project were lower than original cost estimates.

After considering the amount of work proposed to be self-performed by the contractor under the project’s revised “fast track” schedule, the 30% BOP goal calculated for remaining work that could be provided by NM firms was agreed by Xcel Energy, Wanzek and SMA to be approximately \$30 million.

As reported on the Sagamore Wind Farm Project dashboard, 87% of the full \$30 million goal was achieved. New Mexico Resident Contractors and Suppliers on this Wind Farm Project provided a total of \$26.07 million of services and products. As noted earlier, forty-five New Mexico firms gained renewable energy experience by performing work or providing services on the Sagamore Wind Farm project although only thirty-three of those firms had or obtained their NM Resident Firm Certificate and were able to be counted toward the BOP Goal.

It would have been desirable if more work had been provided by NM contractors so they could have gained more experience in wind farm construction, but that was not possible given the schedule. The barriers encountered toward fully reaching the BOP Goal are discussed in another section of the report.

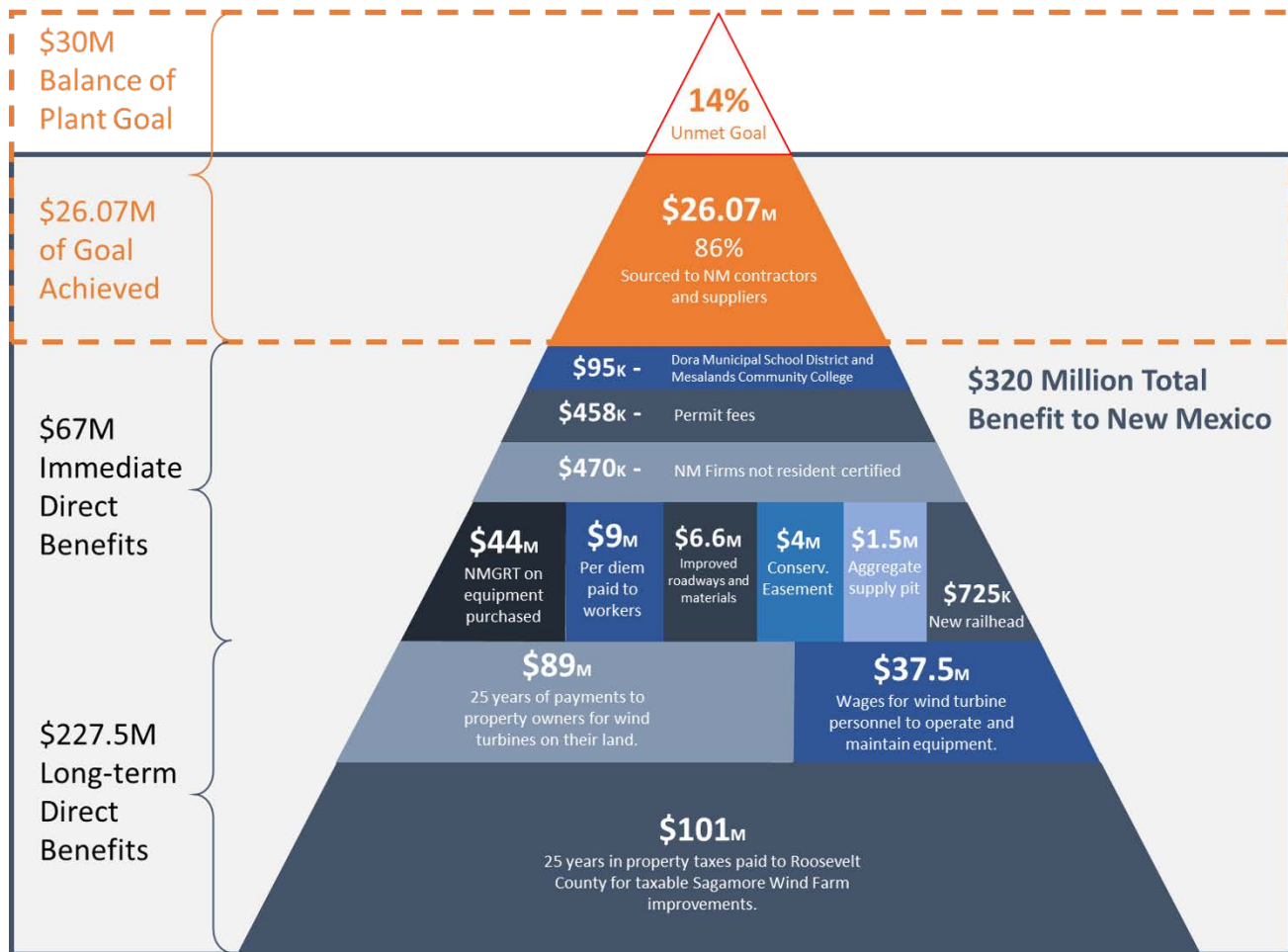
Although the agreement between Xcel Energy and the Attorney General’s Office was about workforce development and not about economic benefit to the State of New Mexico, the economic benefit to the State should be considered.

As noted earlier in this section, with the project bids received by Xcel Energy, the maximum 30% BOP goal and benefit to New Mexico firms could potentially have been \$50 million. The amount of benefit received by New Mexico firms was just over \$26 million.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 10

This could be construed as a \$24 million benefit loss to New Mexico firms, however, as the benefits for the entire Sagamore Windfarm Project are considered, an additional \$294 million of benefits to the State of New Mexico were identified as a result of this project. In total, over \$320 million in benefits to New Mexico are a result of the Sagamore Wind Farm Project.



The three largest benefits to New Mexico will be from the following sources:

- 1 **\$101 million (approximately) in property taxes** - The largest benefit of the Sagamore Wind Farm Project that will continue for the next twenty-five years is the amount of property taxes paid to Roosevelt county for the taxable Sagamore Wind Farm improvements.
- 2 **\$89 million (approximately) for landowner payments over the next twenty-five years** - The second, long term benefit for the Roosevelt County residents are the landowner payments that will accrue to property owners over the next twenty-five years as a result of wind turbines being located on their land.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 11

3

\$37.5 million (approximately) in payroll - The third long term benefit for the Roosevelt County area is the addition of 30 full time Wind Turbine Personnel that will be hired to operate and maintain the Sagamore Wind Farm. The average salary for these workers will be in the \$40,000 to \$60,000 range. The estimated total payroll per year for these new employees is estimated at \$1.5 million per year, which over a twenty-five year project term has a value of approximately \$37.5 million.

The amounts for the three benefits listed above were not included on the Dashboard report of “Additional Benefits to New Mexico” because none of those items were realized at the time of construction but will be a future benefit.

An additional \$67 million in benefits provided to New Mexico as a direct result of the construction of this Wind Farm Project. These benefits are detailed as follows:

- **\$44 million from New Mexico Gross Receipts Taxes** - The largest immediate financial benefit to the State of New Mexico was from the New Mexico Gross Receipts taxes paid on the Wind Turbines and other equipment purchased directly for the Sagamore Wind Farm project by Xcel Energy. This is a significant contribution during a time when oil/gas revenue and retail/restaurant and other related revenues were significantly declining due to Covid-19 restrictions. The full \$44 million will be received by the State shortly, but the amount paid to date is \$40,020,816.
- **\$9,002,811.72 of workers’ per diem spent at local businesses** - The second highest immediate financial benefit to New Mexico businesses was from the money spent on housing, meals, and other expenses by the out-of-state work workers on the project. These funds were paid to businesses in the Clovis and Portales area such as the hotels and restaurants in this area when their business was also greatly decreased during Covid-19 restrictions.
- **New Lesser Prairie Chicken habitat** - An exciting benefit to New Mexico provided by Xcel Energy with this project is the creation of a new Lesser Prairie Chicken (LPC) Habitat on a ranch immediately south of the Sagamore Wind Farm Project site. The ranch is approximately 10,500 acres in a remote part of southeastern New Mexico, the heart of LPC territory, owned by Mack Kizer, a long-time cattle rancher with an appreciation for wildlife.

In addition to funding the creation of the new LPC Habitat, Xcel Energy also worked to eliminate or relocate 135 potential Wind Turbines planned to be located on the southern edge of the Sagamore Wind Farm property and instead construct them on the northern portion of the Wind Farm property, away from the LPC Habitat.

- **\$4,000,000 to fund conservation easements** - Xcel Energy provided funding the purchase of conservation easements from the landowner and the implementation of a series of management activities to improve LPC habitat on the ranch. Because the “chicken” was de-listed in 2016, the purchase of the credits was completely voluntary on the part of Xcel Energy, and intended to help offset the impact on LPC habitat from the development of its Sagamore wind project nearby.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 12

Xcel Energy is considered one of the “greener” utility companies with a goal to reduce carbon emissions by 80% by 2030 and to be carbon neutral by 2050. By purchasing the conservation bank credits voluntarily, they would like to set a precedent for other wind companies developing in New Mexico and other western states.

- **\$89,614.90 donation to the Dora Municipal School District** - Wanzek provided a very generous donation to purchase computers for the Dora Municipal School District. The Dora Municipal School District has a student population of 253, so this donation is a tremendous positive impact for the Dora School System.
- **\$6,000 donation to Mesalands Community College** - Xcel Energy’s donation to the Wind Energy Program at Mesalands Community College will help Mesalands in their efforts to expand the renewable energy workforce in New Mexico. Since 2008, Mesalands Community College in Tucumcari, NM has been the primary Wind Energy Technology Institution in New Mexico. Mesalands provides degree and certificate level of instruction on Wind Energy Technology with their own Wind Turbine.
- **\$725,000 valued railhead and unloading facility** - In our very large state, transportation of materials and supplies is very important. Although rail lines may reach many areas, without the construction or railhead unloading facilities, needed materials may not be able to be unloaded in the areas they are needed. To have the wind turbine components delivered from Colorado to New Mexico by rail, a new railhead unloading facility was necessary. Following a review by Vestas, it was determined that it was most cost effective to construct the new railhead unloading facility adjacent to the four lane State Road 18 halfway between Hobbs and Lovington. The value of this new railhead unloading facility in Lea County provided by Vestas was \$725,000 and it will continue to be available for future use by a variety of industries.
- **\$1,591,000 valued aggregate pit** - In the same manner, the Sagamore Wind Farm Project could not have been constructed without the construction of a new pit to supply roadway aggregate for the project. The cost of construction and amenities of the new pit was included in the unit pricing for the aggregate. However, the pit will remain in operation after the project is complete. The value of the benefit for future Roosevelt County projects related to this new pit and remaining aggregate source was calculated to be \$1,591,000.
- **\$6,309,000 in County road improvements** - During the construction of the Sagamore Wind Farm project, it was determined that approximately 53 miles of unimproved Roosevelt County roads would need to be used for access by heavy equipment and large trucks. Xcel Energy included funds to improve these county roads as part of the construction process. The improvement of these formerly unpaved roadways to a condition with compacted base course and grading will remain for County resident use long after the project is completed.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 13

Approximately halfway through the construction of the Sagamore Wind Farm project, it was determined that some safety concerns were being encountered with large trucks meeting each other on the relatively narrow two-lane county roads. To address this concern, a “one way” traffic plan was developed to allow the trucks to avoid meeting in this manner. However, the “one way” traffic plan required use of additional Roosevelt County roads that were not previously proposed to be used by the Sagamore traffic.

- **\$350,000 in roadway materials** - Although the roadways were already improved, Xcel Energy provided a donation to the Roosevelt County Road Department for roadway repair materials for any additional road improvements desired by Roosevelt County.
- **\$470,147.22 to New Mexico companies without a NM Resident Firm Certificate** - Several New Mexico companies provided services and materials for the Sagamore Wind Farm project that did not pursue NM Resident Firm Certification. Although the funds paid for their services did not count toward the BOP goal, the companies still received payment for their work that benefited these New Mexico companies and their employees. Although these firms were not NM Resident Certified, they still received the workforce experience benefit of working on this Wind Farm Project.
- **\$458,032.92 for CID Permit/Inspections fees and utility payments** - The final entry on the Sagamore Dashboard under “Additional Benefits to New Mexico” included funds paid by the Sagamore Wind Farm general contractor to the State of New Mexico for the CID Permit/Inspections and several NM utility companies for utilities during the project construction. This amount did not qualify as consideration toward the BOP goal.
- **234% increase in NMGRT in Roosevelt County from prior year** - It was noted earlier that Xcel Energy paid a large amount of New Mexico Gross Receipts taxes associated with the construction of the Sagamore Wind Farm Project. During the construction, an article was published in the Hobbs Newspaper (9/3/20) that showed the impact that Covid-19 had on the NMGRT receipts of various counties in New Mexico from April-June 2020 as compared to April-June 2019. Almost all of the county NMGRT percentage changes were plus or minus 15%. Lea County was down 39% (due to Covid and Oil) and Eddy County was down 17%. The most interesting county was Roosevelt County where the NMGRT was up 234% from last year. This was obviously due to the Sagamore Project construction NMGRT.

In summary, in addition to the \$26 million of work performed and materials supplied on the Sagamore Wind Farm Project, over \$294 million in benefits from the Sagamore Wind Project are identified to New Mexico that begin now and will continue over the next twenty-five years. This is a total of over \$320 million in benefits to New Mexico as a result of the Sagamore Wind Farm Project.

ECONOMIC BENEFITS

Although the \$294 million of **Additional Benefits** were not counted toward the BOP goal, but they all provided a very strong positive economic benefit to the State of New Mexico.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 14

Preparing the future Renewable Energy Workforce

New Mexico already has several contractors that can provide work in the categories needed for Wind Farm construction in NM. The weakness is that for the high production work categories, the majority of the NM firms cannot meet the production rates required for “fast track” wind farm projects.

Existing construction and supply firms will need to expand their capacity if they want to perform work for large wind farms being constructed on a “fast track” basis. For existing firms to expand, they will need to have employees skilled in these construction areas. There is already a significant shortage of electrical labor in NM that is required for both Wind and Solar Farm projects.

CAPACITY CHALLENGE

NM firms cannot meet the production rates required for “fast track” wind farm construction projects.

The Business Sourcing Advisor was asked to develop information that can be used by universities, junior colleges, technical colleges, and schools regarding the type of skills needed for the wind energy industry. Research was performed to determine which New Mexico schools are providing education or training for both the wind and solar portions of the Renewable Energy category and to determine the level of education and training being provided. Additional research was performed regarding the wind and solar industry to determine key workforce needs that could be addressed by the educational and apprenticeship institutions.

Workforce skills needed to expand the Wind and Solar Energy Industry include the following:

- Wind turbine technology,
- Turbine foundation construction,
- Wind turbine installation,
- Tower safety,
- Turbine operations and maintenance,
- Photovoltaic system components,
- Photovoltaic systems installation and connection,
- Electrical connection line construction,
- Transmission line construction,
- Electrical substation construction,
- Monitoring and communications technology,
- Mechanical systems,
- Electrical theory,
- Power generation and distribution,
- Hydraulics,
- Controls,
- Digital electronics, and
- Other related skills.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 15

In the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network included in the appendix, it was reported that 2/3 of surveyed solar industry respondents identified **three topics** that would be most valuable to them for developing Photovoltaic Technician I crew members. Following discussions with some Electrical Contractors, they also noted these courses would be beneficial for their new electrical crew hires.

ENERGY COURSEWORK NEEDS

1. Electricity Basics, including basic electrical principals and common electrical system components;
2. Photovoltaic System Components, including the ability to identify and correctly handle solar system components;
3. Photovoltaic System installation and Connection, including basic knowledge of system components and basics of installation/connection of a system.

SMA contacted schools of higher education and apprenticeship programs that could benefit the future wind and solar farm construction workforce in New Mexico. These educational and apprenticeship programs have been informed of these construction worker needs so they can tailor their training programs to produce graduates who have the skills needed in the identified solar and wind farm construction areas. **Several educational institutions have agreed to add the additional identified photovoltaic instruction to train new workers for Solar Farms as discussed.**

During communication with Educational Institutions offering courses in Basic Electrical Training, adding photovoltaic courses to their programs was a key topic. The results of those discussions and discussions regarding wind farm workforce needs are included in the report section on NM Renewable Energy Education Programs.

The information in this report is intended to be used by the Educational Institutions and NM Apprenticeship programs to increase the level of training and education being provided in New Mexico to help build a larger base of contractors and skilled workforce needed for future renewable energy projects.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 16

Recommended NM Firms for Future Renewable Energy Projects

Part of the work identified for this report is to prequalify and recommend New Mexico firms for future renewable energy projects. Listed in the Appendix of this report are the names of the New Mexico firms recommended for future renewable energy projects.

It should be noted that a key component of the prequalification process for New Mexico Contractors is their company safety statistics. Although the firms listed have been recommended for future renewable energy projects at this time, their company safety statistics will change every year.

SAFETY RECORD

NM Contractor's safety statistics should be updated annually.

It is recommended that firms who use this list of recommended firms receive updated company safety information each year to make sure their safety requirements for subcontractors are met.

Renewable Energy Workforce Recommendations

In addition to the solar energy coursework recommended to the educational institutions noted earlier in this report, there are additional actions needed to expand the New Mexico Renewable Energy Workforce. **Although several renewable energy education and apprenticeship programs are presently in operation, they have not been able to provide the additional renewable energy workforce needed for the construction of the future renewable energy projects identified in this report.**

The following recommendations are made to help develop the existing renewable energy workforce and to make the existing renewable energy workforce educational and training programs more effective.

1. **Promote and incentivize project schedule that accommodates the capacity of NM contractors** - Work with renewable energy companies as they undergo PRC reviews to plan the size and construction schedule for their proposed wind and solar projects so New Mexico firms can provide work on a production level that meets their capability. (Possibly provide incentives for them to adjust construction schedules if needed.)
2. **Proactive communication with NM Contractors** - Contact large New Mexico renewable energy construction contractors and inform them in advance of upcoming renewable energy projects. If the size or schedule of the project is too large for them, encourage them to use their time before the project bids to identify construction partners they can enter into a joint venture agreement with to construct the project together.
3. **Incentivize employers to develop workforce through educational and apprenticeship programs** - Provide additional employer incentives for contractors to make increased use of the renewable energy educational and apprenticeship programs to increase the workforce for Solar and Wind Renewable Energy projects.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 17

4. **Implement strategies presented in the “Driving New Mexico’s Future” 2020 report** - The New Mexico Chamber of Commerce released their 2020 report entitled, “Driving New Mexico’s Future”. This report is included in the appendix and contains a section with several “Specific Strategies” that could be tailored to increasing the New Mexico Renewable Energy Workforce.

The strategies and comments are referenced and included below in order of priority:

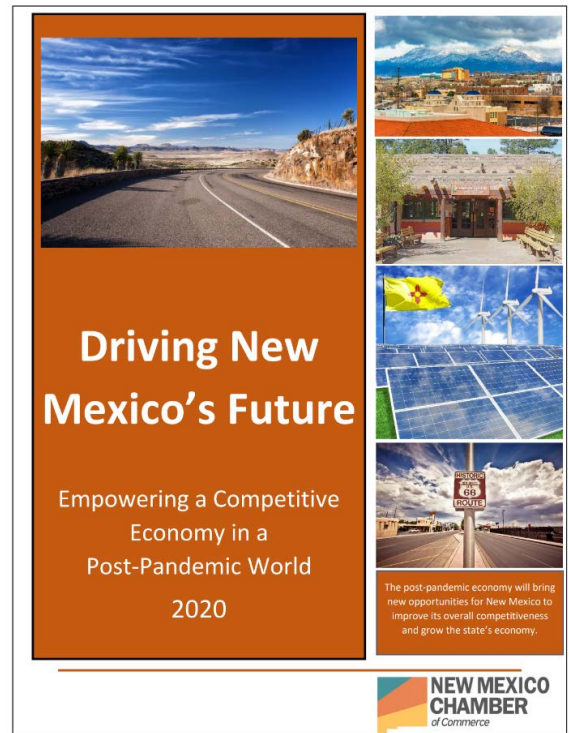
a. **Strategy #7, Page 19** - Replicate Arkansas and South Carolina’s “Be Pro Be Proud”, a program designed to change high school students’ and parents’ perceptions about technical careers. This is a mobile workshop that travels to all high schools around the state. This program and mobile workshop could be used to inform high school students about the opportunities in the renewable energy industry.

b. **Strategy #1, Page 16** – Create and fund a talent recruitment program to attract young professionals. For our purposes, we are not interested in attracting professionals from other areas but attracting our own young people in New Mexico with a coordinated social media program as listed in this strategy to inform them of the opportunities in the renewable energy industry. Emphasis on the benefits of remaining in New Mexico and taking advantage of the opportunities as noted in this strategy is also important to include.

c. **Strategy #5, Page 18** – Create Scholarships for first-generation college students. In addition to the focus of this strategy, scholarships could also be created for first generation students who would like to attend educational institutions that offer renewable energy training.

d. **Strategy #8, Page 19** – Create a Grant Tuition Program for Community College Students pursuing a degree in a STEM field that agree to remain in New Mexico for a specified number of years. This strategy could be very effective for students who would like to pursue an associate degree in a renewable energy field and agree to work in that field for approximately three years.

e. **Strategy #4, Page 17** – Provide a specific state income tax exemption for military retirement pensions. In the 2017 Solar Foundation Training Report (see appendix), it was reported that there is a severe shortage of applicants for solar energy installation positions.





Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 18

There is a U.S. Department of Energy Program called the Solar Ready Vets to help exiting veterans connect with Solar energy jobs. The Solar Energy Industries Association (SEIA) found that many veterans learn crafts and technical skills that can benefit the solar industry during their time in active duty. They also have workforce assets beyond technical skills including the ability to operate on their own and effectively coordinate as part of a team. Veterans should be identified as a very good source for the future renewable energy workforce.

f. **Strategy #6, Page 18** – Target Workforce Training and job placement for ex-offenders. This would be another potential source for future renewable energy workers. The Indiana HIRE program provides training and additional support services to allow ex-offenders to connect with a job placement opportunity and a mentor. This program has been very successful with a 3-month retention rate of 97%. This program could be used to supplement the renewable energy field.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 19

Introduction and NM BOP Challenge

Southwestern Public Service Company, a New Mexico Corporation, (SPS) d/b/a Xcel Energy began working toward the development of the Sagamore Wind Farm after a diligent investigation as to whether it could add wind generation in its eastern New Mexico service area and provide significant cost savings to customers while taking advantage of Federal Production Tax Credits (PTC). The Sagamore Wind project was selected because of its location as a high quality, viable site for wind generation development. The Sagamore Wind project was proposed as a 522-megawatt wind generating plant with associated facilities located in Roosevelt County, New Mexico.

SPS d/b/a Xcel Energy then developed and executed a Purchase and Sale Agreement (PSA) with Invenergy, LLC to acquire the wind development rights for the Sagamore Wind Project. Under the PSA, Invenergy was required to deliver a construction-ready site, including responsibility for securing state, local and federal permits along with any other necessary approvals or clearances for completing the development of the Sagamore Wind Farm.

A key component of the project was obtaining the necessary approvals for the Generator Interconnection Rights to allow delivery of the Wind Farm energy to the Southwest Power Pool (SPP) transmission grid. The Sagamore Wind Farm Project improvements were proposed to require a right-of-way (ROW) width of approximately 180 feet across primarily private land which required review and approval by the New Mexico Public Regulation Commission (PRC).

The Sagamore Wind Project would also require a detailed study and approval by the Southwest Power Pool along with the determination of the fee to tie into the SPP transmission grid. Invenergy applied in November 2016 to the SPP to begin the review process as soon as the project was determined to be feasible. However, approximately twenty companies were pursuing Production Tax Credits and applied for SPP project/grid connection review and approval at the same general time.

When the SPP published the Phase 1 DISIS review results in August 2018, the Sagamore Wind Project was among twelve other companies in line. Additionally, the DISIS grid interconnect cost estimate for the Sagamore project included with Phase 1 DISIS review results showed extremely high interconnect costs.

It is important to note that prior to the Sagamore Wind Project Application, the SPP had historically reviewed two grid connection applications per year. When they received over twenty applications, the SPP was overwhelmed and could not process that many applications or perform the required reviews in a timely manner.

In 2017, Sagamore Wind Energy LLC applied to the New Mexico Public Regulation Commission for location approval and ROW width determination for the Sagamore Wind Energy Facility. At that time, Sagamore Wind Energy LLC was a direct, wholly owned subsidiary of Invenergy Wind Energy North America, LLC and both of those entities were subsidiaries of Invenergy LLC. The plan for the Sagamore Wind Project was that it would be built, owned, and operated by SPS d/b/a Xcel Energy. SPS d/b/a Xcel Energy would acquire Sagamore after Invenergy had met all the PSA development requirements and the certificate of convenience and necessity (CCN) was approved by the PRC in a separate case.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 20

In 2018, an agreement was entered into between the State of New Mexico Attorney General, SPS d/b/a Xcel Energy, the Coalition for Clean Affordable Energy and Western Resource Advocate regarding the construction of the Sagamore Wind Farm Project.

The parties agreed that it was in the public interest and their mutual interest to identify, utilize, and develop qualified New Mexico Resident Businesses when reasonably possible. A goal of 30% of the applicable Balance of Plant (BOP) costs was identified as desirable to be performed by NM Resident Firms or hired New Mexico labor. A stipulation placed on the pursuit of this goal was the proposed use of NM Resident Firms must be cost limited so no cost increases would be realized for the Sagamore Wind Project as a result of the use of NM Resident Firms.

The work performed by New Mexico Resident Businesses and vendors was proposed to provide New Mexico with the opportunity to develop the expertise needed to be a leader in renewable energy development, without increasing costs for the Sagamore Wind Project.

SPS hired the Business Sourcing Advisor, Souder, Miller and Associates (SMA), to implement the terms of the above referenced agreement. The primary purpose of the Advisor was to assist the Wind Farm General Contractor, Wanzek Construction, to identify and use cost-effective New Mexico Resident businesses and vendors. A secondary purpose was that the New Mexico Resident businesses and vendors who work on the Sagamore Wind Project will expand New Mexico's energy project expertise.

In April 2019, the SPP posted the Phase 2 DISIS revised review results for the Sagamore Wind Project. At that time, the SPP still did not have a generator interconnect cost estimate that would be feasible for the project to proceed. In September 2019, Xcel Energy reported that the SPP had given Phase 3 DISIS approval for the project but had not finalized the generator interconnect cost for the generator interconnection agreement. In October 2019, Xcel Energy decided to proceed with the project because they believed the final Generator Interconnect fee would be in a feasible range for the project.

The original Sagamore Wind Farm Project Schedule submitted in the PRC application showed construction mobilization to occur in April 2019 and all roadway and access road construction to be completed by November 2019. The Wind Turbine Foundations, two substations and all electrical communication wiring (over five million feet of wiring) were also scheduled to be complete in January 2020.

However, because of the Generation Interconnect review delays, the roadway work was not able to begin until November 2019 and the Wind Turbine Foundation work was not able to begin until December 2019. Because of these delays, Wanzek was required to perform the Wind Farm Construction work on a "fast track" schedule to meet the December 2020 deadline.

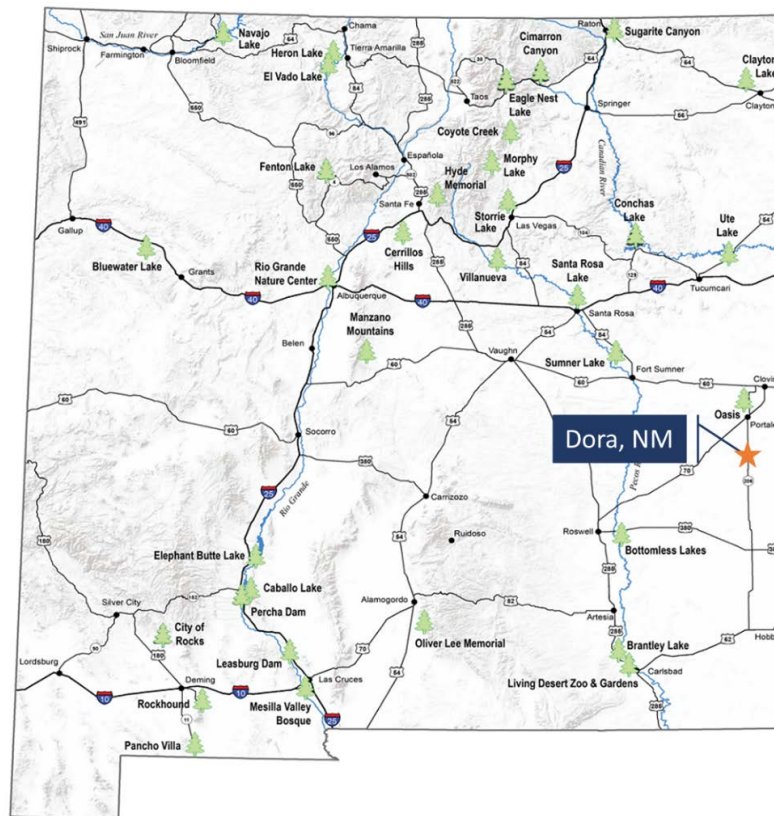
The final Generator Interconnect agreement was signed in February 2020. If Xcel Energy had not given advance approval to Wanzek to begin the construction prior to receiving the final interconnect costs, the project would not have been able to meet the required completion schedule.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 21

Sagamore Wind Farm Project Overview

The Sagamore Wind Project is a 522-MW facility located on approximately 100,000 acres of land just South of Dora in Roosevelt County, New Mexico. Dora, NM is located approximately 14 miles south of Portales on NM Highway 206 and has a population of 133 residents (2010 Census). For the Sagamore Wind Project, SPS installed 240 Vestas wind turbines including 26 model V110 (2.0 MW) wind turbines and 214 model V116 (2.2 MW) wind turbines to produce a total of 522 MW. Each turbine tower will be approximately 80 meters from the ground to the nacelle where the blades are connected.



Dora, NM Location Map

The Sagamore Wind Farm Site infrastructure included access roads, wind turbine foundations, electrical cable collection systems, collection system substations and an O&M Building. Wind Farm generation output is tied into the SPP transmission system with a Generation Tie line from the Sagamore Wind Project collector station to the Point of Interconnection at the Crossroads substation.

The Sagamore Wind Farm Project was advantageously located near substations that would allow interconnection at a sufficient injection point on the Southwest Power Pool (“SPP”) transmission grid at a reasonable cost. In particular, the Sagamore Wind Project South Substation was located approximately 7 miles from the Crossroads substation.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 22

Second, the topography where the Sagamore Wind Project is located makes the site well-suited for new, large scale wind development. The Project's proximity to successful wind farms operating in the region supported the Project's ability to successfully harness the area's strong wind energy resource and provided SPS with wind resources experience in this region, including access to extensive data and forecasting capabilities.

Third, the selection of the Sagamore Wind Project site allowed SPS to partner with Invenergy, an industry leader and well-established wind power generation company on this Project.

Finally, this site selection also made it possible for the New Mexico Land Conservancy to work with a host of partners for nearly two years to complete its first US Fish & Wildlife Service (USFWS)–sanctioned Lesser Prairie Chicken (LPC) conservation bank adjacent to the south end of the Sagamore Wind Farm Project Site.

SITE ADVANTAGES

1. Proximity to substations with sufficient energy injection capacity.
2. Topography suitable for large-scale wind project
3. Site location encouraged SPS-Invenergy partnership

Xcel Energy purchased \$4,000,000 of credits from the proposed conservation bank to fund the purchase of conservation easements from the landowner and the implementation of a series of management activities to improve LPC habitat on the ranch. Because the "chicken" was de-listed in 2016, the purchase of the credits was *voluntary* on the part of Xcel Energy, and intended to help offset the impact on Lesser Prairie Chicken habitat from the development of its Sagamore wind project nearby. Xcel Energy also voluntarily relocated several of the wind turbines from the southern end of the project site to the northern end to provide additional clearance from the new LPC habitat.

The Sagamore Wind Farm will generate enough renewable energy to power nearly 194,000 homes. This one project could provide power for almost 20% of the homes in New Mexico.

The project construction began with access road construction commencing in November 2019 followed closely by Turbine Foundation Construction in January 2020. Construction of the high voltage transmission line and the underground electrical cable connection wiring began in March 2020. In April 2020, delivery and installation of the Wind Turbine Components began followed closely by construction of the Collection System Substations and the Wind Farm Operations and Maintenance Building.

The transmission line and the first substation were both energized in September and the second substation was energized in mid-October. Over five million feet of underground electrical connection lines were installed for this project and that work was completed early November 2020.

Wind turbine erection work for all 240 towers was completed on November 11, 2020. The wind turbine walk downs were completed by the end of November and the final commissioning, testing and SCADA work was completed in December. The project was fully completed prior to December 31, 2020.

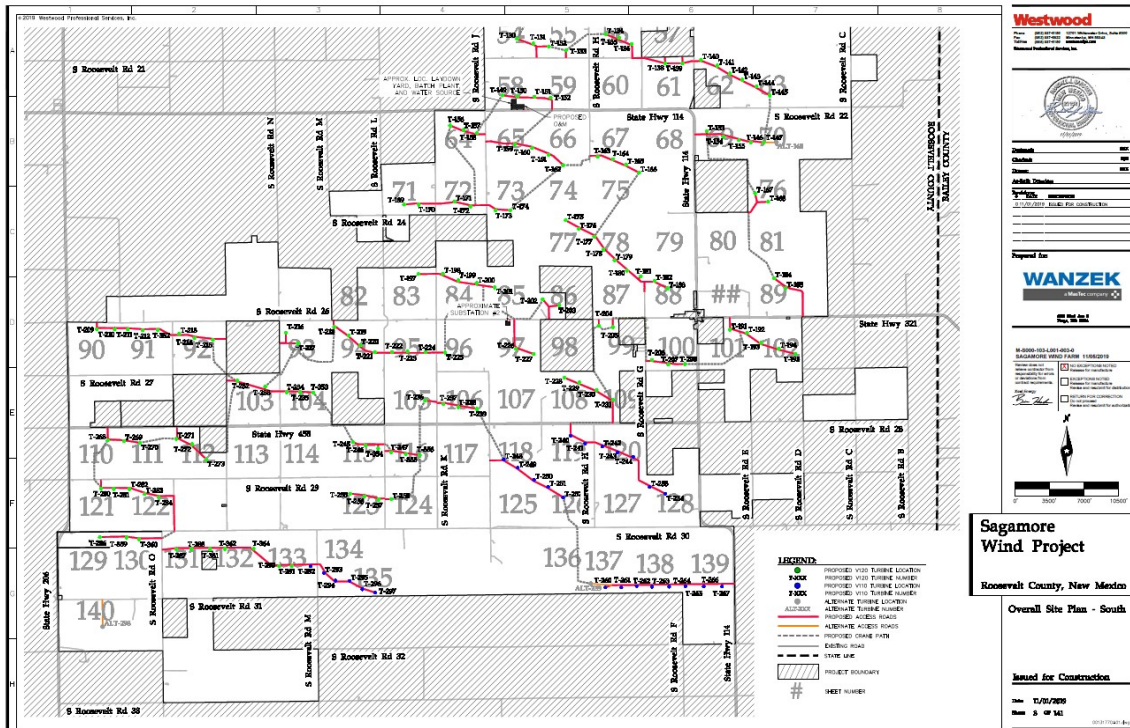
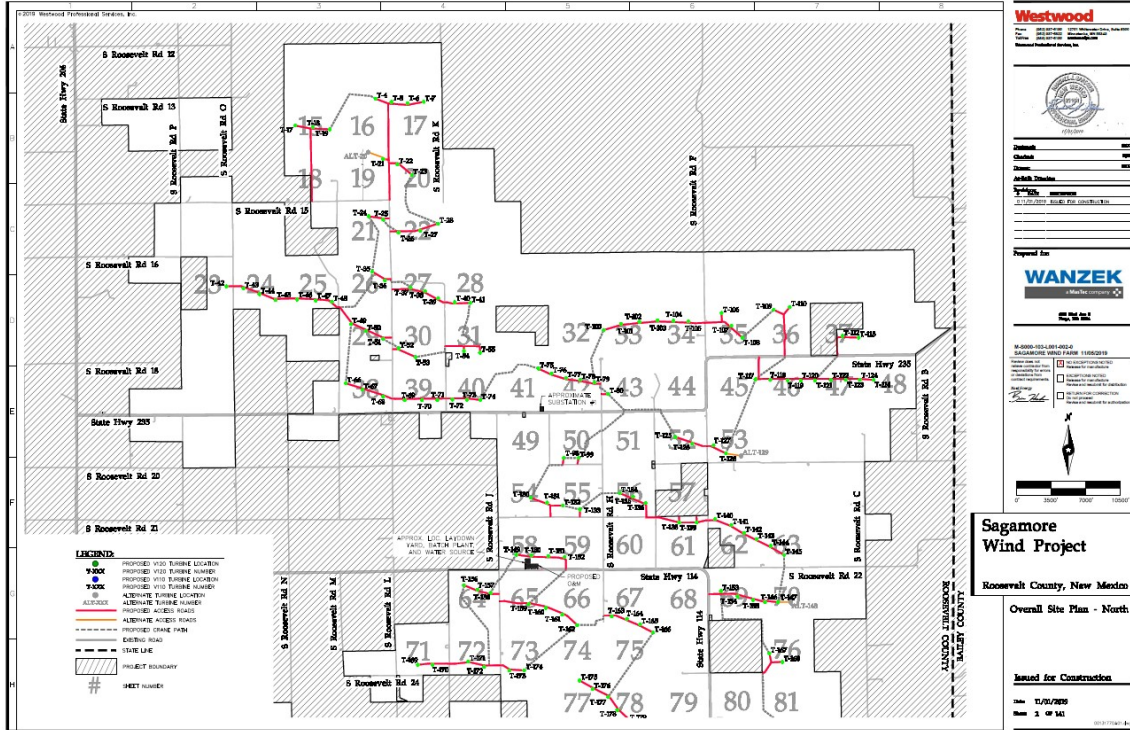


Last blade being installed – November 11, 2020

Sagamore Wind Farm Access Road and Turbine Layout

The 100,000-acre Sagamore Wind Farm Access Road and Turbine Layout are shown on the following page.

Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 24





Preliminary Work Types and Workforce Identified for the Project

The Scope of Work for the Business Sourcing Advisor noted that the sub-contractor and vendor Balance of Plant Costs may include but are not limited to the items listed on Attachment 1 to the Scope of Work (“SOW”) description, as well as: construction of roads and foundations; installation of electrical work; supporting site quality management; supporting site safety management; rail unloading; procurement; general site inspection and maintenance; and other tasks.

Prior to the first Team meetings with Xcel Energy and Wanzek, SMA identified several work areas where we believed NM contractors would have the experience and capacity to provide significant work on the Sagamore Wind Farm Project. The work/supply category list we preliminarily identified for NM firms included the following:

- Roadway construction and roadway aggregate supply,
- Foundation excavation, foundation rebar placement, and foundation pouring,
- Concrete supply and concrete aggregate supply,
- Electrical materials purchased,
- 34.5 kV electrical wiring and fiber optic wiring installation,
- 345 kV overhead transmission line installation,
- Electrical substation construction,
- O&M building construction,
- Gates/fencing,
- Trucking,
- Construction material testing,
- Site safety management,
- Site security,
- NM labor,
- Rental construction equipment, and
- Other small tasks including fuel provision.

Initial discussions with the General Contractor showed they were open to NM firms performing these work categories provided that the NM firms met the stringent safety regulations, were certified as NM resident firms, and could provide the extremely high production capacity required for this “fast track” project.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 26

Contractor and Supplier Coordination

The primary purpose of the Business Sourcing Advisor work was to identify and use cost-effective New Mexico Resident Businesses and vendors for the Sagamore Wind Farm Project. SMA followed a four part process to accomplish this work. First, a Contractor and Supplier Outreach Plan was prepared and implemented. Contractors and vendors responding to the outreach plan registered on the SMA Sagamore Web Portal that allowed tracking of the contractor and supplier information.

Vendor vetting then proceeded for the contractor and suppliers who registered on the web portal and the NM Resident firms who were prequalified were then forwarded to Wanzek for their final qualification process. These prequalified vendors were discussed with Wanzek at each monthly Team meeting to track the work procurement process and make sure the New Mexico firms were given fair consideration for performance of the work.

Contractor and Supplier Outreach Plan

The Contractor and Supplier Outreach Plan began with a Vendor Data Compilation process and continued with a detailed list of outreach activities. The outreach activities were designed to inform the New Mexico Contractors and suppliers of the potential work associated with the Sagamore Wind Farm Project and to get them to register on the Sagamore Contractor and Supplier Web Portal. At this same time, information was also sent out to attract potential NM workers who might like to be hired by Wanzek for the work.

Vendor Data Compilation

The Business Sourcing Adviser began this work by compiling a list of known contractors gathered from a variety of sources. First, a pre-qualified list of NM contractors was requested from Xcel Energy and Wanzek/Mastec. SMA then researched to obtain a list of licensed NM contractors. Then SMA attempted to obtain a list of NM resident businesses, but this information was denied by the State of NM.

In order to determine what type of contractors and suppliers would be needed for this wind farm project, Wanzek was contacted and requested to provide a list of services, skills, and materials that would be needed on a typical wind project. As noted earlier, the intent of this work was not just to attract contractors and suppliers, but also attract NM workers who might be interested in being hired by Wanzek to perform portions of the work.

SMA reviewed the Vendor Data list and contacted the firms that could potentially provide the services or materials that would be needed for the project. These firms were encouraged to register on the SMA contractor and supplier web portal. These vendors along with others that neglected to register on the SMA web portal were tracked in a spreadsheet during the Vendor Vetting process.

Outreach Activities

The outreach activities began with the identification of organizations with good contacts to contractors and suppliers. Two of the main organizations identified were the NM Association of General Contractors (AGC) and the Associated Contractors of New Mexico (ACNM).



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 27

A “Prequalification Invitation” notice that included a description of the Sagamore Wind Farm Project was prepared and sent to both the ACNM and AGC for placement in their newsletters in the Summer 2019.

The “Prequalification Invitation” language distributed was as follows:

Souder Miller and Associates is working with Xcel Energy to attract NM Resident contractors and suppliers for the construction of a projected 522 MW Sagamore Wind Project, approximately 17 miles SW of Portales, with construction to begin in the fall of 2019. Primary work/supply modules include county road construction, aggregate, wind turbine foundation excavation, foundation rebar supply and assembly, concrete supply and foundation construction, trenching, conduit and wiring installation, O&M Building, Substation construction, testing, inspection, equipment supply, fuel, rental equipment, trucking, seeding, and other related items. Interested contractors and suppliers please begin the pre-qualification process by visiting the following portal: <https://www.soudermiller.com/sagamore> Please address questions by email to sagamore@soudermiller.com

Prequalification Invitation notices were also advertised in the legal section of the classified ads of the Albuquerque, Clovis, Portales, Roswell and Hobbs newspapers. The EDC’s and Chamber of Commerce’s in Albuquerque, Clovis, Portales, Roswell and Hobbs were contacted, and the notice was also placed in their newsletters and weekly digital notices.

The Prequalification Invitation notice was also sent to the trucking association and NMIDEA, EPCOG and SNMEDD for sharing on their digital newsletters.

Following the prequalification invitation notice that was sent to the ACNM for their newsletter, SMA coordinated an “in person” presentation on the topic at the May 23, 2019 ACNM event in Albuquerque. An additional formal presentation regarding the project overview and prequalification invitation was made at the annual ACNM conference on July 26, 2019.

These presentations also included information reviewing the typical services, skills, and materials that were proposed to be needed on the project along with a review of the bidding process to give information regarding how Wanzek will be preparing the bid packages and how they will be announced and distributed.

The Prequalification Invitation notice was also sent to Regional Plan Rooms (Builders News, Construction Reporter and Dodge) for placement in the notices for their members.

Between the notices that were distributed, the “in person” presentations, and the direct outreach to contractors and suppliers from the initial vendor compilation process, we believe the majority of contractors and suppliers who would be interested in a project of this type were made aware of the upcoming work.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 28

Vendor Registration and Tracking

After the Prequalification Invitation advertisements were distributed, it was reported at the July 15, 2019 Xcel Energy/Wanzek team meeting that SMA had received nineteen initial Contractor and Supplier Registrations on the Web Portal. Ultimately, thirty five contractors and suppliers registered on the SMA Web Portal. Following registration, each company was contacted to verify or obtain information that they did not provide on their initial registration process.

The registration process requested the following information for each firm:

- Company name, contact person, address, phone and email
- Contractor's License number and classifications
- If known, NM Resident Preference number
- Check list of services/skills/materials they could provide
- Company Safety information
- Company Bonding Capacity
- Information about the company size
- Information about the company production capacity

Additional information obtained from the contractor and supplier calls and emails was entered into the Web Portal Registration page and a separate spreadsheet was created to track each contractor and supplier for basic and additional information obtained during the Vendor Vetting process. As the work began, Wanzek identified other New Mexico Firms they would like to use, and these companies were added to the Tracking spreadsheet for the Vetting process. It should also be noted that additional NM firms who were contacted directly by SMA were entered into the Tracking Spreadsheet, even though many of them neglected to register on the SMA web portal.

Vendor Vetting

Although Wanzek was open to use New Mexico contractors and suppliers, they were very firm about their requirements that the NM firms meet their stringent safety requirements and also have the capacity and experience to perform the work. SMA contacted each potential contractor and supplier on the Vendor Tracking spreadsheet to obtain the below information necessary to complete the vetting process.

Non-negotiable requirements on part of Wanzek/Xcel Energy

1. Safety record
 - a. EMR less than 1.0
 - b. TRIR 3 year/DART 3-year data less than industry average
 - c. No OSHA recordable incidents
2. Years in business and work experience
3. Financials (bonding capacity)
4. Experience
5. Production capacity
6. Policies (Drug Free, Safety Policy, etc.)



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 29

Of the thirty five contractors and suppliers that registered on the SMA Web Portal, six firms did not meet the minimum safety requirements and six firms discontinued the prequalification process by not providing the necessary information to determine if they met the minimum requirements. One out of state firm skipped the SMA prequalification process since they could not become a New Mexico Resident Firm.

Twenty-two NM Resident firms that were deemed to meet Wanzek's minimum requirements listed above were directed to Wanzek's Website to formally complete the Wanzek pre-qualification process, as requested by Wanzek.

This list of twenty-two prequalified firms was also provided directly to the Wanzek Project Team personnel at each monthly meeting and the firms were discussed with Wanzek for consideration of inclusion into the bidding process. Wanzek personnel agreed to contact these firms to check on production rates, available bonding capacity, expertise and experience.

Wanzek Final Prequalification Review and Procurement Process

As noted above, each month Wanzek was sent an updated list of contractors and suppliers who were verified by SMA to have met the Wanzek minimum requirements and were directed to apply for full Wanzek prequalification through the Wanzek Website. Wanzek agreed to review the contractors and suppliers applying for full Wanzek Prequalification. Qualified NM vendors would then be contacted by Wanzek to submit bids on applicable work.

This list of NM contractor and suppliers was also discussed at the monthly Xcel Energy and Wanzek Team meetings to review the progress of Wanzek Contractor Prequalification and determine if NM Resident Contractors and suppliers were being contacted to provide bids and potentially work on the project.

In the early stages of the construction work, twenty-two firms had been pre-approved through the SMA process and had been referred to the Wanzek Website for full prequalification. Another six firms were identified to Wanzek as "Pending Referral" or "Non-referred" firms that Wanzek may still be interested in contacting for potential work. Of the twenty-two firms referred, twelve firms were selected by Wanzek for project work or material supply. Of the additional six firms identified for potential work, one of those firms was used for project.

As the construction project continued, Wanzek needed additional work and supplies so they reached out to other New Mexico firms who had not participated in the SMA registration or prequalification process. As these firms were contracted, Wanzek provided a list of the firms to SMA to determine if they were potentially able to be certified as New Mexico Resident Firms. SMA listed these firms on the tracking sheet and continued to work with them toward NM Resident Certification through the construction process.

It should be noted that ninety-seven companies were tracked on the tracking sheet and fifty-seven firms ultimately were certified as NM Resident Firms. Of those fifty-seven firms, thirty-three NM Resident firms performed work or supplied materials for the project. To report on the progress of Wanzek's hiring of NM firms toward the BOP Goal, the Sagamore Wind Farm Dashboard was created.

Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 30

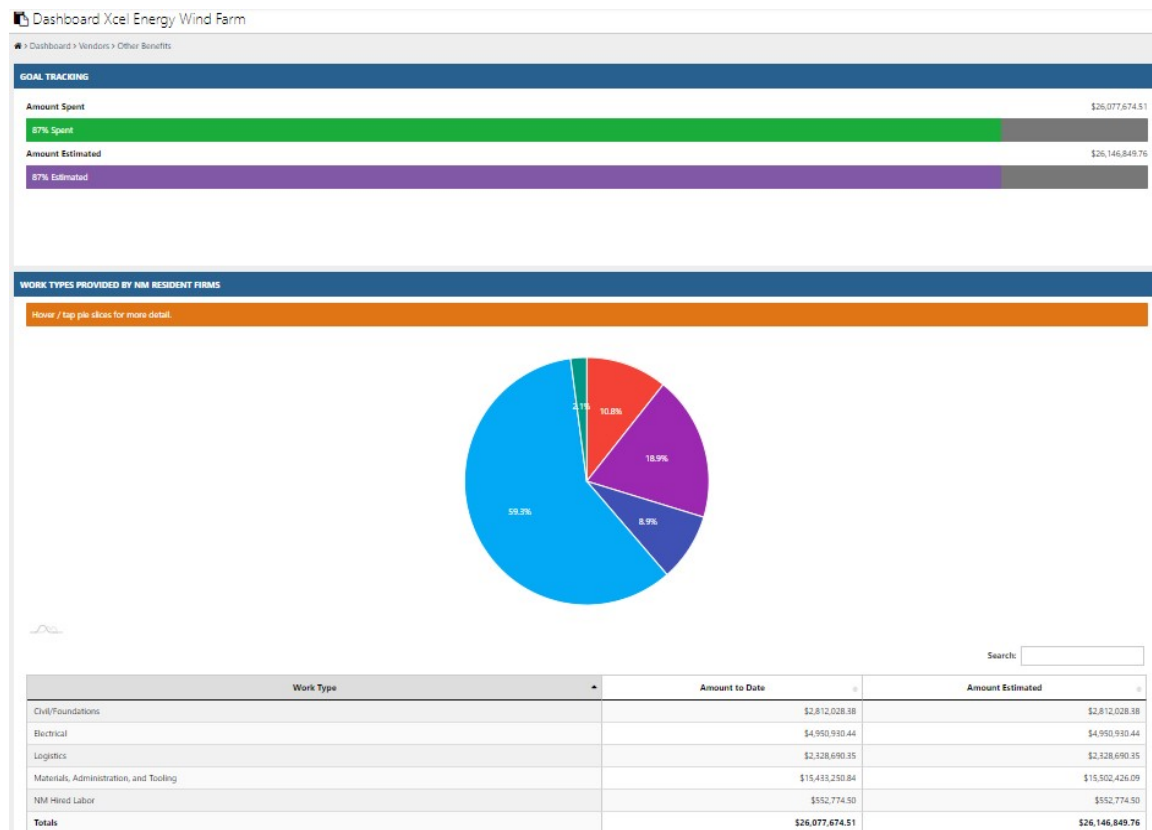


Sagamore Wind Farm Dashboard

As discussed with Xcel Energy, Wanzek and the Attorney General’s Office personnel at the beginning of the project, SMA created a live Dashboard to record and report the work amounts performed by NM Resident contractors and Suppliers on the Sagamore Wind Farm Project.

NM Resident Firm work toward BOP Goal

The first section of the dashboard reported on the work types and value of the Sagamore Wind Farm work, materials or services provided by NM Resident firms. The work types included Civil/Foundations; Electrical; Logistics; Materials, Administration and Tooling; and NM Hired Labor. The top of this section reported the amount of work performed to date toward the BOP Goal and also the total estimated amount of work that was proposed to be performed toward the BOP Goal.



The Xcel Energy Sagamore Wind Farm Dashboard was created and placed online at the beginning of the project work and credentials were sent to each member of the Sagamore Wind Farm Advisory Group so they could view the up-to-date progress at any time they desired. This dashboard was updated within 24 hours of new expenditures being reported to SMA by Xcel Energy. This dashboard was reviewed and discussed at each monthly Sagamore Wind Farm Advisory Group meeting and each Xcel Energy/Wanzek/SMA Team meeting.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 31

As can be seen, 61% of the NM Resident services toward the Balance of Plant goal consisted of materials supplied, administration and tooling. Approximately 19% of the NM work toward the BOP goal was in the Electrical Category and almost 9% of the NM work was provided in the “logistics” category that included trucking of materials used on the project. Although an out of state firm was hired by Wanzek to hire the trucking companies, all of the trucking on this project was performed by NM Resident Trucking companies.

Civil/Foundations work, including construction of the O&M building, was almost 11% of the work and work provided by New Mexico Residents accounted for 2.1% of the total BOP amount.

It would have been desirable if more work had been provided by NM contractors so they could have gained more experience in wind farm construction, but that was not possible. The Barriers encountered toward fully reaching the BOP Goal are discussed in another section of the report.

However, as noted on the dashboard, 87% of the goal was reached as over \$26.07 million of services and products were provided by New Mexico Resident Contractors and Suppliers on this Wind Farm Project.

A related goal given to the Business Sourcing Advisor was to increase the future renewable energy workforce for solar and wind farms in New Mexico. Sections included later in this report identify very good progress toward increasing the New Mexico Renewable Energy Workforce.

Additional Benefits to New Mexico from the Sagamore Project

Along with the \$26.07 million of work performed and materials supplied on the Sagamore Wind Farm Project, there was a large amount of “Additional Benefits” provided to NM” that were not counted toward the BOP Goal.

The largest benefit of the Sagamore Wind Farm Project that will continue for the next twenty-five years is the amount of property taxes paid to Roosevelt county for the taxable Sagamore Wind Farm improvements. **This amount was calculated to be approximately \$101 million.**

The second, long term benefit for the Roosevelt County residents are the landowner payments that will accrue to property owners over the next twenty-five years as a result of wind turbines being located on their land. **The total amount calculated for these landowner payments for the next twenty-five years is over \$89 million.**

The third long term benefit for the Roosevelt County area is the addition of 30 full time Wind Turbine Personnel that will be hired to operate and maintain the Sagamore Wind Farm. The average salary for these workers will be in the \$40,000 to \$60,000 range. The estimated total payroll per year for these new employees is estimated at \$1.5 million per year. With a twenty-five year project term, **the value of this payroll to this region is approximately \$37.5 million.**

The benefit amount for the three items listed above were not included on the Dashboard report of “Additional Benefits to New Mexico” because none of those items were realized at the time of construction but would be a future benefit. **A figure of over \$67 million of Additional Benefits will be provided to New Mexico as a direct result of the construction of this Wind Farm Project.** These benefits are detailed as follows:



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 32

The largest immediate financial benefit to the State of New Mexico was from the New Mexico Gross Receipts taxes paid on the Wind Turbines and other equipment purchased directly for the Sagamore Wind Farm project by Xcel Energy. **The total amount for the Sagamore Wind Farm related NMGRT is \$44 million and is a direct addition to the New Mexico State revenue** at this time when oil/gas revenue and retail/restaurant and other related revenues were significantly declining due to Covid-19 restrictions. The full \$44 million will be received by the State shortly, but the amount paid to date is \$40,020,816.

The second highest financial benefit to New Mexico businesses was from the money spent on housing, meals, and other expenses by the out-of-state work workers on the project. **The per diem amount paid to the workers of these firms totaled \$9,002,811.72.** These funds were paid to businesses in the Clovis and Portales area such as the hotels and restaurants in this area when their business was also greatly decreased during Covid-19 restrictions.

An exciting benefit to New Mexico provided by Xcel Energy with this project is the creation of a new Lesser Prairie Chicken (LPC) Habitat on a ranch immediately south of the Sagamore Wind Farm Project site. The ranch is approximately 10,500 acres in a remote part of southeastern New Mexico, the heart of LPC territory, owned by Mack Kizer, a long-time cattle rancher with an appreciation for wildlife.

Most of the new LPC Habitat consists of native intact prairie that is currently being grazed by cattle. In conjunction with RiverBank, Mack Kizer will be implementing short and long-term management plans that will improve the grasslands for the birds. Revenue from the Xcel Energy purchase will also fund restoration projects to further support LPC populations onsite.

Xcel Energy provided \$4,000,000 to fund the purchase of conservation easements from the landowner and the implementation of a series of management activities to improve LPC habitat on the ranch. Because the “chicken” was de-listed in 2016, the purchase of the credits was completely voluntary on the part of Xcel Energy, and intended to help offset the impact on LPC habitat from the development of its Sagamore wind project nearby.

In addition to funding the creation of the new LPC Habitat, Xcel Energy also worked to eliminate or relocate 135 potential Wind Turbines planned to be located on the southern edge of the Sagamore Wind Farm property and instead construct them on the northern portion of the Wind Farm property, away from the LPC Habitat.

Xcel Energy is considered one of the “greener” utility companies with a goal to reduce carbon emissions by 80% by 2030 and to be carbon neutral by 2050. By purchasing the conservation bank credits voluntarily, they would like to set a precedent for other wind companies developing in New Mexico and other western states.

In addition to the donations provided by Xcel Energy during this project, **Wanzek also provided a very generous donation of \$89,614.90 to purchase computers for the Dora Municipal School District.** The Dora Municipal School District has a student population of 253, so this donation is a tremendous positive impact for the Dora School System.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 33

Another donation provided by Xcel Energy during the Sagamore Wind Farm work was a **\$6,000 donation to the Wind Energy Program and Mesalands Community College**. This donation will help Mesalands in their efforts to expand the renewable energy workforce in New Mexico. Mesalands Community College in Tucumcari New Mexico is the primary Wind Energy Technology Institution in New Mexico. Mesalands presently provides degree and certificate level of instruction on Wind Energy Technology with their own Wind Turbine and began their Wind Energy program in 2008.

In our very large state, transportation of materials and supplies is very important. Although rail lines may reach many areas, without the construction or railhead unloading facilities, needed materials may not be able to be unloaded in the areas they are needed. To have the wind turbine components delivered from Colorado to New Mexico by rail, a new railhead unloading facility was necessary. Following a review by Vestas, it was determined that it was most cost effective to construct the new railhead unloading facility adjacent to the four lane State Road 18 halfway between Hobbs and Lovington. **The value of this new railhead unloading facility in Lea County provided by Vestas was \$725,000** and it will continue to be available for future use by a variety of industries.

In the same manner, the Sagamore Wind Farm Project could not have been constructed without the construction of a new pit to supply roadway aggregate for the project. The cost of construction and amenities of the new pit was included in the unit pricing for the aggregate. However, the pit will remain in operation after the project is complete. The value of the **benefit for future Roosevelt County projects related to this new pit and remaining aggregate source was calculated to be \$1,591,000**.

During the construction of the Sagamore Wind Farm project, it was determined that approximately 53 miles of unimproved Roosevelt County roads would need to be used for access by heavy equipment and large trucks. Xcel Energy included funds to improve these county roads as part of the construction process. The improvement of these formerly unpaved roadways to a condition with compacted base course and grading will remain for County resident use long after the project is completed. The value of these **improved Roosevelt County Roads funded by Xcel Energy is approximately \$6,309,000**.

Approximately halfway through the construction of the Sagamore Wind Farm project, it was determined that some safety concerns were being encountered with large trucks meeting each other on the relatively narrow two lane county roads. To address this concern, a "one way" traffic plan was developed to allow the trucks to avoid meeting in this manner. However, the "one way" traffic plan required use of additional Roosevelt County roads that were not previously proposed to be used by the Sagamore traffic.

Although the roadways were already improved, Xcel Energy provided a donation to the Roosevelt County Road Department for roadway repair materials for any additional road improvements desired by Roosevelt County. This **donation of roadway materials to Roosevelt County by Xcel Energy totaled \$350,000**.

Several New Mexico companies provided services and materials for the Sagamore Wind Farm project that did not pursue NM Resident Firm Certification. Although the funds paid for their services did not count toward the BOP goal, the companies still received payment for their work that benefited these New Mexico companies and their employees.

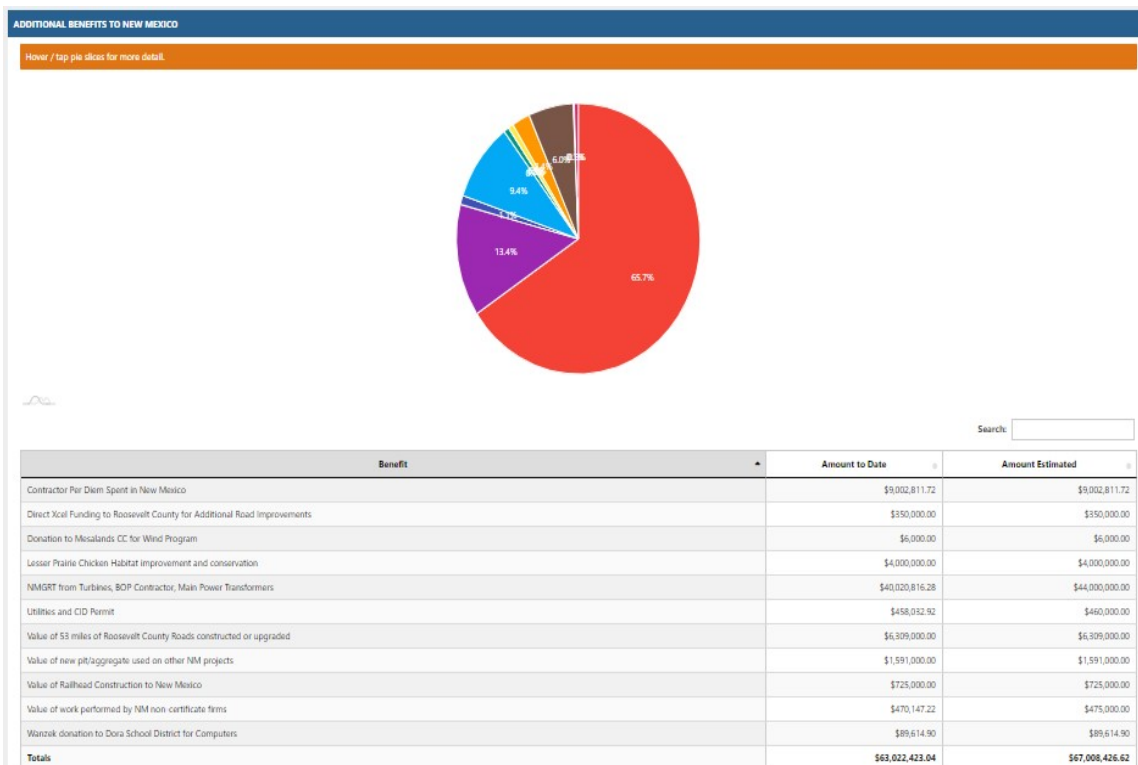


BENEFITS FROM NM COMPANIES not NM RESIDENT CERTIFIED

The funds paid to New Mexico companies that did not have their NM Resident Firm Certificate totaled \$470,147.22. Although these firms were not NM Resident Certified, they still received the workforce experience benefit of working on this Wind Farm Project.

The final entry on the Sagamore Dashboard under “Additional Benefits to New Mexico” included funds paid by the Sagamore Wind Farm general contractor to the State of New Mexico for the CID Permit/Inspections and several NM utility companies for utilities during the project construction. The **State of Mexico CID and the NM utility companies received this benefit of \$458,032.92**. This amount was not able to be counted toward the BOP goal.

Shown below is the Sagamore Dashboard indicating these “Additional Benefits to New Mexico”.



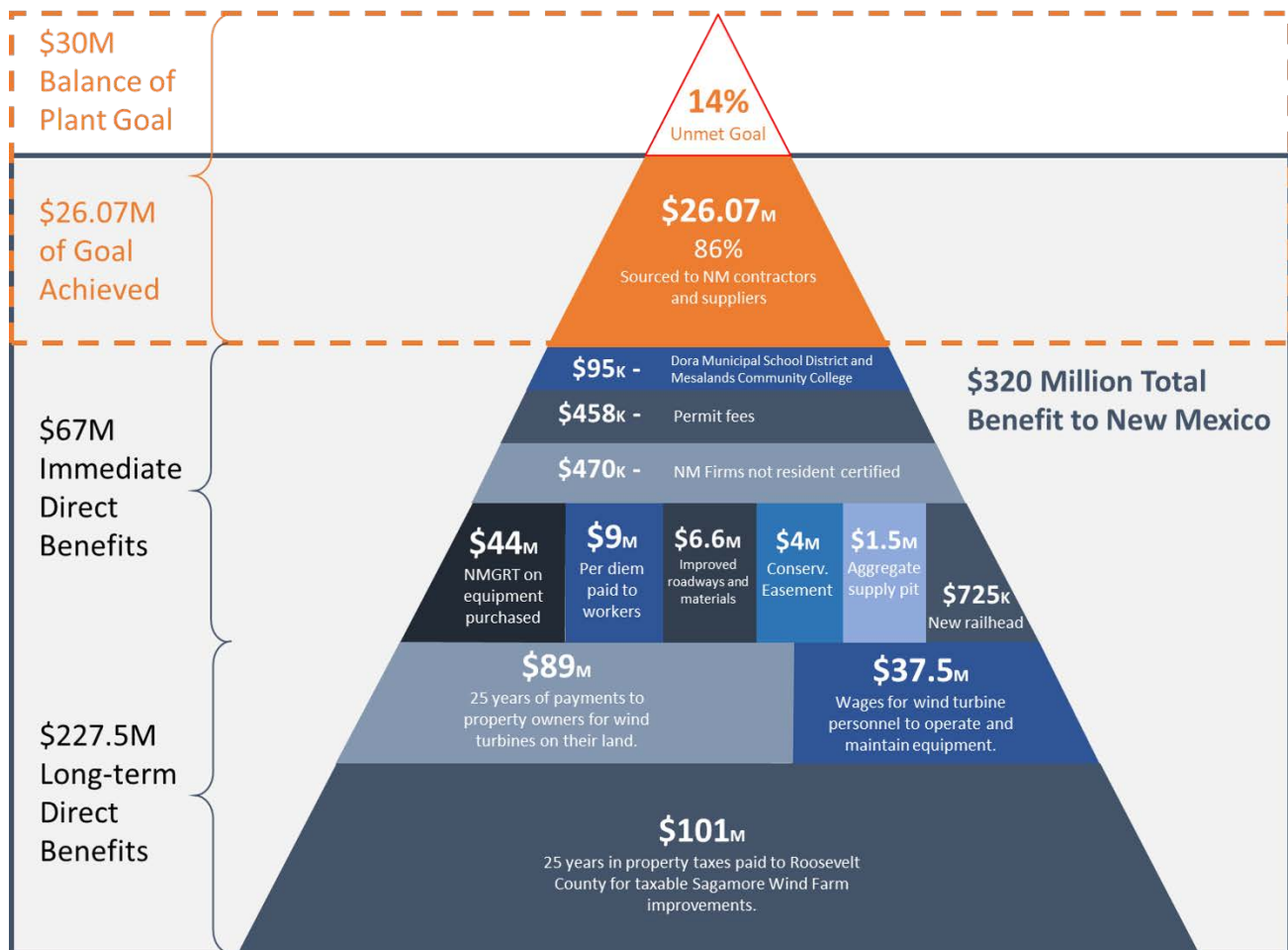
It was noted earlier that Xcel Energy paid a large amount of New Mexico Gross Receipts taxes associated with the construction of the Sagamore Wind Farm Project. During the construction, an article was published in the Hobbs Newspaper (9/3/20) that showed the impact that Covid-19 had on the NMGRT receipts of various counties in New Mexico from April-June 2020 as compared to April-June 2019. Almost all of the county NMGRT percentage changes were plus or minus 15%. Lea County was down 39% (due to Covid and Oil) and Eddy County was down 17%. **The most interesting county was Roosevelt County where the NMGRT was up 234% from last year. This was obviously due to the Sagamore Project.**



Xcel Energy Sagamore Wind Farm
 Business Sourcing Advisor
 Final Report
 Page | 35

In summary, along with the \$26.07 million of work performed and materials supplied on the Sagamore Wind Farm Project, **over \$67 million of immediate Additional Benefits** were provided to New Mexico and **over \$101 million of long-term property tax benefits, \$89 million in New Mexico landowner payments and \$37.5 million of new payroll** will be a future benefit to New Mexico as a result of this Sagamore Wind Farm Project.

These Additional Benefits were not counted toward the BOP goal, but they all provided a very strong additional positive economic benefit of over \$294 million to the State of New Mexico.





Barriers Encountered to Meeting the BOP Goal

The project had to have a “fast track” schedule for the turbine foundation construction, electrical connection wiring installation, transmission line construction and electrical substation construction. This fast track schedule required work production rates that were in excess of what could be provided by existing large New Mexico construction firms. Covid-19 restrictions also created a hindrance for timely material delivery and construction practices, but those hindrances were largely able to be mitigated.

MAIN BARRIER

The main barrier that prevented meeting 100% of the BOP goal was related to delayed approval of the SPP Generator Interconnection Agreement and the firm deadline for project completion which resulted in a construction time requirement of less than one year for this \$900 million project.

At the beginning of discussions with Xcel Energy and Wanzek, the SMA team identified several work areas where we believed NM contractors would have the experience and capacity to provide significant work on the Sagamore Wind Farm Project. The work/supply category list we preliminarily identified for NM firms is as follows:

- Roadway construction and roadway aggregate supply,
- Foundation excavation, foundation rebar placement, and foundation pouring,
- Concrete supply and concrete aggregate supply,
- Electrical materials purchased,
- 34.5 kV electrical wiring and fiber optic wiring installation,
- 345 kV overhead transmission line installation,
- Electrical substation construction,
- O&M building construction,
- Gates/fencing,
- Trucking,
- Construction material testing,
- Site safety management,
- Site security,
- NM labor,
- Rental construction equipment, and
- Other small tasks including fuel provision.

Initial discussions with the General Contractor showed they were open to NM firms performing these work categories provided that the NM firms met their stringent safety regulations, were certified as NM resident firms, had wind farm expertise and experience, and could provide the extremely high production capacity required for this “fast track” project.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 37

We worked aggressively to identify several roadway contractors and turbine foundation contractors and were able to get them certified as NM Resident Firms. As we encountered firms that did not have the production capacity or wind farm experience required for this “fast track” project, we identified other firms that were also attempting to perform work in their work category and asked them to consider a “Joint venture” to join the production capacities and workforce of the two firms to be able to accomplish the “fast track” work with experienced supervisors. However, in each case where this was recommended, the contractors declined to work together.

As we were finalizing the prequalification process for a few roadway and turbine foundation construction firms, we were informed by Wanzek that they would be “self-performing” these work items, including the road construction, foundation excavation, and foundation rebar and concrete placement. Wanzek evaluated the referred NM firms and determined they did not have the wind farm experience and production capacity to complete those items correctly and on the required schedule.

We had originally estimated that the approximate price to construct the roadways (including supply of roadway aggregate) to be approximately \$9 million. Since the general contractor would be constructing the roadways with their own crews, only the roadway aggregate (with trucking) was able to be purchased from NM Resident Firm White Rock Crushing with trucking provided by NM Resident Trucking firms Double D and Overtork, for a total of \$4.44 million.

We had also estimated that the total foundation excavation, rebar placement and concrete pouring work at approximately \$35 million. With the general contractor providing this work, concrete aggregate procurement was the last component of the foundation scope that could possibly be sourced from a New Mexico resident firm.

As noted earlier, this project was required to be a “fast track” project because of the shortened construction time allowed between the delayed time frame for the Southwest Power Pool generation interconnection approval and the requirement to have the project fully complete and operational prior to December 31, 2020.

To complete this work schedule for 240 turbine foundations, the contractor schedule required to have 15 turbine foundations, excavated, compacted, rebar placed and poured each week. This is a rate of three 400 cubic yard foundations each day. When we contacted the NM firms who could perform this type of work, they did not have the capacity to perform that high rate of production on this foundation construction. Since there is not an option to perform the work on a slower pace, the general contractor was needed to perform that foundation work.

The general contractor pursued bids on the supply of concrete for the foundations from NM and out of state firms and the out of state firm had a substantially better price. Utilization of an out of state firm was approved by Xcel Energy since the use of the NM firm would increase the price of the work.

However, we asked the general contractor if they would get a price from a NM Resident firm for the supply of concrete aggregate. They found the Janes Gravel Company of Melrose NM that could provide concrete foundation aggregate. Janes Gravel Company was able to receive their New Mexico Resident Certificate and was paid over \$8.75 million that counted toward the BOP goal.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 38

When this wind farm project oversight work began, we were told by NM sources that there were no NM firms that could provide the 345 kV overhead transmission line required for this project. We found three relatively small firms that appeared to be able to perform this work valued at roughly \$9 million.

However, when we discussed the “fast track” construction schedule and their existing workload, one firm could not meet the safety requirements, one firm pulled out because of their heavy existing workload and the final firm was disqualified by the general contractor because they did not have the experience and capacity to perform the work on the “fast track” schedule. When we reviewed the general contractors concerns with the last firm, we concurred so no NM firms provided work on the Transmission Line construction.

Regarding the proposed electrical substation construction, SMA was able to locate one electrical contracting firm in Alamogordo that met the safety requirements and appeared to have the production capacity to perform the substation construction work. However, they did not receive their NM Resident Contractors Certificate and were not able to be used at that time.

Because of the lack of qualified NM transmission line contractors, Wanzek needed to perform this work themselves. Wanzek also used an out of state firm to construct the electrical substations, since no NM Resident Firms were available. It should be noted that after the transmission line work was completed by Wanzek, we found a firm, MMR, that constructs major transmission line projects in New Mexico.

MMR has offices in Hobbs and Albuquerque but will not be able to be certified as a Resident NM Contractor until 2022 because they purchased their Hobbs site in 2019 and they must have three years at that site to qualify. However, they are a highly qualified firm and presently have the contract for the installation of the New Mexico Spirit Wind Transmission Line for Pattern Energy. MMR will be listed as a pre-qualified contractor for future renewable wind and solar farm transmission line construction projects in this report.

During the construction contractor research for installation of the 34.5 kV electrical wiring and fiber optic wiring, we found one New Mexico Resident Firm, Shalom Equipment, LLC, that had installed hundreds of miles of electrical multi-conduit in NM using the Wanzek preferred plowing method and also had good experience with the Tre-Foil installation technique. Shalom not only would have been able to perform this work with the production rates required, but they also owned the New Mexico license to rent or sell the plowing implement that is required for use by other firms to do this work.

When Wanzek reviewed the Shalom proposal, Wanzek noted that although Shalom had installed hundreds of miles of multi-conduit on electrical projects in New Mexico and had good experience using the tre-foil technique, they had never specifically worked on “Wind Farm” projects before. The price for their bid was also slightly over the price of another out of state bidder. Although Shalom agreed to reduce their price so no cost increase would be realized, Wanzek did not agree to let them work on this project. The value of this wind farm 34.5 kV electrical communication wiring work was estimated at slightly over \$5,000,000.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 39

However, it was interesting that Wanzek invited Shalom to submit a bid on another wind farm multi-conductor plowed installation project that they were preparing to construct. Shalom is licensed and qualified to perform this electrical multi-conductor plowing work for renewable energy projects and will be listed as a pre-qualified contractor for use on future wind and solar farm projects.

Because of Wanzek's requirement for direct "Wind Farm" experience, the electrical multi-conductor plowing work was performed by an out of state contractor. However, this contractor used M Electric, a NM resident firm as a consultant during the work, which added \$121,700 toward the BOP goal. CCI of Alamogordo, NM was also hired by Wanzek to install the Fiber Optic wiring at a cost of \$272,000 and they are a New Mexico Certified Resident Contractor.

Regarding the O&M building construction estimated at \$1 million and the electrical substation construction estimated at \$4 million, we also identified potential firms to bid that work, but the initial firms dropped out because of their existing workload and inability to construct the improvements in the time required. Wanzek used an out of state firm to as the building contractor, but they were able to hire several NM Resident contractors to perform subcontractor work for that building facility. Earl Purcella Construction of Roswell provided \$279,000 of work on the O&M Building, but they have not yet acquired their NM Resident Contractors Certificate.

Wanzek also used an out of state contractor to build the two electrical substations, but a total value of \$3.7 million of electrical equipment for the substations and other electrical facilities was purchased from Border States Electrical Supply in Albuquerque. Over \$15 million of supplies/support were provided by NM Resident Firms.

Several questions were referred to the Business Sourcing Advisor from the New Mexico Attorney General's office regarding Wanzek's decision to "self-perform" much of the work and the barriers that were encountered to meeting the BOP goal. Rather than including all that correspondence in the body of this report, those letters and responses are included in their entirety in the appendix of this report.

Because of the "fast track" schedule requirement and the strict "wind farm" experience requirement, NM firms were not able to be used for over \$50 million worth of work on the project. Although this is discouraging on the surface, if future renewable energy projects are planned and constructed on a normal schedule instead of the "fast track" schedule required for this project, many New Mexico contractors will be able to perform work on future renewable energy projects. However, NM Resident Firms did provide over \$26 million toward the remaining \$30 million BOP goal.

Included in the next section is an overview of the existing New Mexico Contractors and Workforce as compared to the required workforce for construction of wind farms. Also, as noted earlier, the list of recommended New Mexico contractors and suppliers for the future renewable energy project workforce is included in the appendix to this report.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 40

NM Wind Farm Workforce Overview

One of the tasks delineated for the Business Sourcing Advisor scope of work was to report on the strengths and weaknesses of the New Mexico Workforce required for construction of Wind Farms.

Several work areas were identified for Wind Farm Construction Projects. As noted in previous sections, the most significant weakness of the New Mexico Wind Farm Construction Workforce is the lack of capacity to construct “fast track” wind farm projects and the lack of specific experience on wind farm projects.

Following is an analysis of the strengths and weaknesses of the New Mexico Workforce Contractors and Suppliers available for each work or supply category.

Roadway Construction

New Mexico is very strong in the Roadway Construction workforce category as there are a large number of New Mexico Roadway Contractors that can provide access roadway construction or repair for wind and solar farm projects.

Three large NM Roadway Construction Firms and three medium sized Roadway Construction firms were interested in the Sagamore roadway work. One of the production requirements for this “fast track” project was the firms needed to be able to construct approximately 60 miles of county road and access road in a five-month period. Two of the large firms were able to provide this production rate and meet the minimum standards. For the Sagamore project, both K. Barnett of Clovis and Mountain States Constructors, Inc., of Albuquerque registered on the SMA website and were referred to Wanzek as SMA prequalified companies. K. Barnett was selected to perform the county roadway repair work for the project.

The New Mexico Department of Transportation (NMDOT) keeps an updated list of Contractors on their website that are prequalified to perform work for the NMDOT. K. Barnett of Clovis and Mountain States Constructors, Inc., of Albuquerque are on the list of NMDOT prequalified contractors. Any of the roadway contractors listed on the NMDOT prequalification list ([Prequal List.pdf \(state.nm.us\)](#)) would be qualified to work on wind and solar projects.

Roadway and Concrete Aggregate Supply

New Mexico is also very strong in the Roadway and Concrete Aggregate supply category as there are a large number of aggregate suppliers in New Mexico that can provide roadway aggregate or concrete foundation aggregate for wind and solar farm projects.

For the Sagamore project, the Janes Company of Melrose provided over \$8 million of concrete foundation aggregate and White Rock Crushing of Portales provided over \$2 million of roadway aggregate on this eastern New Mexico project. For future renewable projects around the State, any of the prequalified NMDOT roadway contractors can be contacted to inquire as to their aggregate sources. Sources will easily be able to be found.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 41

Foundation Excavation, Foundation Rebar Placement, and Foundation Pouring

New Mexico has a weakness in this category when considering extremely large “fast track” wind farm projects. Although New Mexico has several firms that could provide foundation excavation, foundation rebar placement and pouring of the concrete foundations for Wind Turbine Projects, none of the firms had the very high production capacity to meet the production requirements of this “fast track” project.

Six firms registered on the SMA site and stated they could perform the concrete foundation work. However, only three of the firms returned the information requested to be able to be considered for the SMA prequalification process. When the information was reviewed, it was determined that none of those three firms had the capacity to construct fifteen foundations per week, as required by Wanzek.

The firms were contacted to see if they would like to join with another contractor to complete the work as a “joint venture” project, but none of the firms responded. Shortly after, Wanzek announced they would be “self-performing” the wind turbine foundation work to be able to meet the “fast track” schedule.

Three very large New Mexico Resident Contractors have good capacity to construct wind turbine foundations and each should be able to provide a bid on future wind farm projects provided that they have a reasonable construction schedule. Bradbury Stamm Construction of Albuquerque has a \$300M bonding capacity and may have the largest production capacity. RMCI, Inc. of Albuquerque has a \$30M bonding capacity and AUI, Inc. of Albuquerque has a \$50M bonding capacity.

If a future wind farm project has a high production requirement that cannot be changed, it is recommended that these three firms be given advance notice to consider a “Joint Venture” proposal submittal with one of the other firms. If a wind farm project surfaces that has a less aggressive construction schedule, one of these firms could provide this type of foundation construction.

Concrete Supply

New Mexico also has a weakness in this category when considering extremely large “fast track” wind farm projects. Although New Mexico has several firms that could supply concrete for wind turbine foundations, only one of the firms that preregistered on the SMA site had the very high production capacity to meet the concrete supply requirements of this “fast track” project.

Five firms registered on the SMA site and stated they could perform the concrete foundation work. However only two firms, Southwest Concrete Construction and RMCI, Inc., returned the information requested to be able to be considered for the SMA prequalification process. When the information was reviewed, it was determined that only RMCI, Inc. had the capacity to supply the 1,200 Cubic yards per day to construct fifteen foundations per week, as required by Wanzek.

RMCI, Inc. was contacted by Wanzek to submit a bid for the concrete supply. However, when the prices were received, the price of RMCI for the concrete was higher than the bid submitted by the out of state firm. Because the use of New Mexico firms could not increase the price of the project, the out of state firm was selected to provide the concrete. But it should be reiterated that although the out of state firm provided the concrete, the concrete aggregate was fully provided by a New Mexico firm.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 42

For future renewable projects around the State, any of the prequalified NMDOT roadway contractors can be contacted to inquire as to their concrete supply sources. Each contractor will have a list of concrete supply firms and these firms can be contacted to see if they would be able to supply the concrete volumes needed, or joint venture with another supply firm. Most of these concrete supply firms should also be listed on the NMDOT prequalified firms list. If a wind farm or solar project surfaces that has a less aggressive construction schedule, several of the firms on the NMDOT prequalified firms list could provide concrete with reasonable production rates.

Electrical Materials Supply

New Mexico is also very strong in the electrical materials supply category as there are several large suppliers in New Mexico that can provide electrical material for wind and solar farm projects. For the Sagamore project, Border States Supply of Albuquerque provided over \$3.7 million of electrical materials for the Sagamore Wind Farm construction. Border States would also be able to provide sufficient electrical materials for renewable projects around the State.

345 kV Overhead Transmission Line Installation

The New Mexico Workforce has a weakness in this area because there are few NM firms that can perform Transmission line installation on extremely large “fast track” wind farm projects. Three electrical firms registered on the SMA website and stated they were able to perform the 345 kV Overhead Transmission Line installation. Two of the firms completed the SMA prequalification process and were referred to Wanzek for consideration of the 345kV Transmission line work. One firm decided not to complete the SMA prequalification process. Bixby Electric, Inc. of Albuquerque and THECO from Corrales were the two firms referred to Wanzek for bid consideration.

After review, Wanzek believed that the two firms did not have the firm size and capacity to perform the work production rates required for the project or the ability to perform the work to Wanzek’s work standards. Wanzek also specifically questioned their bonding capacity as compared to their present workload.

After the initial referrals had already been made, Elite Communication of Las Lunas, NM was also identified as a potential source for OH Transmission line construction. They stated they were already prequalified with Wanzek and had worked for them previously. Their last project was an \$11 M Overhead Transmission line. Elite did not have their NM Resident Contractor Certificate and did not complete the prequalification process, but their name was given to Wanzek for possible consideration while the prequalification process was ongoing. After review of the three firms, Wanzek awarded the bid to an out of state firm.

Although Theco, Bixby and Elite Communication were not determined to be large enough to provide the “fast track” transmission line installation rates required by Wanzek, they should still be included on the list of NM contractors for future renewable energy project transmission lines provided they can pursue a “Joint Venture” with another firm, or the proposed construction schedule is less aggressive.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 43

Also, during the prequalification process, Mr. Donny Simon with Alpha Technologies was working with SMA to begin the prequalification information gathering process. Mr. Simon has the NM Electrical license to install transmission lines and is very experienced. Alpha Technologies then decided to stop the prequalification process. Mr. Simon has worked with Shalom construction on several large electrical projects in the past. Mr. Simon is leaving Alpha Technologies and after January 1, 2021, will again be working under his K&S Electric company name. I have been informed that K&S Electric is planning to work on future NM renewable energy transmission line projects on a “Joint Venture” basis with Shalom. For this reason, K&S Electric and Shalom will also be included on the list for Future NM renewable energy Transmission Line work.

During the preparation of this Workforce Analysis, it came to our attention that MMR, a large New Mexico Electrical Firm had just been awarded the 165 mile Spirit Wind Transmission Line by Pattern Energy. Although MMR has offices in both Albuquerque and Hobbs, they have not been working in New Mexico sufficient time to obtain the NM Resident Contractor Certification. MMR noted they own their office in Hobbs and will continue in that office to acquire the NM Resident Contractor Certification by 2022. However, in the interest of giving a true snapshot of the Renewable Energy Electrical Transmission Line Workforce in New Mexico, MMR will be included in the list of recommended contractors.

Again, it should be reiterated that there is a shortage of licensed electricians of all types in New Mexico. In the Educational Workforce development section of this report, the need for developing new licensed electricians to increase the electrical workforce for both wind and solar renewable projects is a priority.

34.5 kV Electrical Wiring and Fiber Optic Wiring Installation

The New Mexico Workforce has a weakness in this area, but only because there is only one known NM firm that can provide the specific tre-foil plowing installation technique required for the installation of the 34.5 kV electrical wiring. Five electrical firms registered on the SMA website and stated they were able to perform electrical connection wiring and fiber optic wiring installation. Three of the firms completed the SMA prequalification process and were referred to Wanzek for consideration of the 34.5kV electrical wiring and fiber optic work. Two firms decided not to complete the SMA prequalification process.

After review, Wanzek determined that the three firms did not have the firm size and capacity to perform the work production rates required for the project, or the ability to perform the work to Wanzek’s work standards, or specific wind farm experience.

After further discussion with Wanzek, they clarified that they wanted an electrical firm that could “plow” in the multi-conduit line using the tre-foil installation procedure and specific equipment. Both Bixby Electric, Inc. of Albuquerque and THECO from Corrales did not have this equipment or experience with this process.

However, it was verified that Shalom from Hobbs, NM owns the specific equipment needed and had experience installing this type of electrical conduit using the specific Tre-Foil installation method preferred. They had also worked extensively in the Sagamore wind farm area previously and could easily meet the “fast track” schedule required for the wiring installation.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 44

Wanzek did approve Shalom to submit a bid, but found their bid was slightly higher than the out of state contractor bidding against them. Although Shalom offered to negotiate their bid price downward so Wanzek would not incur any additional costs, Wanzek then noted that although Shalom could do the required work process, they had never specifically worked on a wind farm project. Wanzek then awarded the bid to the out of state firm. The out of state firm hired a NM Resident Contractor, M Electric of Albuquerque to provide technical assistance to them for this work.

However, it is interesting to note that although Wanzek did not approve Shalom to work on the Sagamore project, they asked them to submit a bid on another wind farm electrical wiring project in Texas using the same process. It is clear that Shalom is qualified and experienced to do this 34.5kV electrical wiring work using the Tre-Foil process and they are listed as a recommended firm for future wind and solar farm construction work in New Mexico. As noted above, M Electric worked on this project and is a large firm who also specializes in solar projects. They will also be listed as a recommended firm for this portion of the work.

Wanzek did not ask any of the referred electrical firms for a bid on the fiber optic line installation, but instead contacted CCI, an electrical firm from Alamogordo, NM who was associated with Yucca Telecom that would be providing the fiber optic service. CCI was able to be qualified as a Certified NM Resident Contractor and they did provide the fiber optic installation on the Sagamore Project.

CCI will be listed as a recommended firm for fiber optic line installation on future wind and solar farm construction work in New Mexico. Shalom and K&S Electric are also highly qualified and experienced to provide fiber optic line installation and they will also be included on the list for this work. Mr. Simon, mentioned in the previous section as working for K&S Electric in January, is presently working for Wanzek on fiber optic work in Encino, NM.

It should be noted that there is a shortage of licensed electricians of all types in New Mexico. In the Educational Workforce development section of this report, the need for developing new licensed electricians to increase the electrical workforce for both wind and solar renewable projects is a priority.

Electrical Substation Construction

The New Mexico Workforce has a weakness in this area because there are no NM firms that can construct Electrical Substations on extremely large “fast track” wind farm projects. Three electrical firms registered on the SMA website and stated they were able to perform Electrical Substation installation. Two of the firms completed the SMA prequalification process and were referred to Wanzek for consideration of the substation installation work. One firm did not meet the Wanzek safety requirements. Bixby Electric, Inc. of Albuquerque and THECO from Corrales were the two firms referred to Wanzek for substation bid consideration.

After review, Wanzek believed that the two firms did not have the firm size and capacity to perform the work production rates required for the project or the ability to perform the work to Wanzek’s work standards. Wanzek also specifically questioned their bonding capacity as compared to their present workload.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 45

One additional substation construction firm, Southwestern Electrical Contracting of Alamogordo, was found by SMA and they began to complete the SMA prequalification process. They met the safety requirements and had good substation experience but had not yet received their NM Resident Contractor's Certificate. While they were waiting for certification, they were referred to Wanzek for substation bid consideration. However, we found out in January 2020 that Wanzek had awarded the substation work to an out of state firm in November 2019 prior to this referral.

Although Theco, Bixby and Southwestern Electrical were not determined to be large enough to provide the "fast track" substation construction schedule required by Wanzek, they should still be included on the list of NM contractors for future renewable energy project substations provided they can pursue a "Joint Venture" with another firm. If a wind farm project surfaces that has a less aggressive construction schedule, one of these firms could provide this type of substation construction.

As noted earlier, there is a shortage of licensed electricians of all types in New Mexico. In the Educational Workforce development section of this report, the need for developing new licensed electricians to increase the electrical workforce for both wind and solar renewable projects is a priority. Additional Electricians are needed in the New Mexico Workforce to install electrical wiring, transmission lines and constructing substations.

O&M Building Construction

The New Mexico Workforce has a slight weakness in this area because there are few NM firms that can construct O&M Buildings on extremely large "fast track" wind farm projects when taking into account their existing workload.

Three building firms registered on the SMA website and stated they were able to perform O&M Building construction. One of the firms completed the SMA prequalification process and were referred to Wanzek for consideration of the O&M Building construction. One firm did not complete the SMA prequalification process and the other firm did not meet the safety requirements. RMCI, Inc. of Albuquerque was the firm referred to Wanzek for O&M Building bid consideration.

After review, Wanzek believed that RMCI did not have the firm size and capacity to perform the O&M Building construction on the schedule required for the project.

On additional building construction firm, Consolidated Metal Buildings (CMB) of Clovis, was found by SMA and they began to complete the SMA prequalification process. Although they had not completed their SMA prequalification process, their name was given to Wanzek for initial contact while the prequalification process continued. CMB did not complete the prequalification process.

After evaluating this firm and RMCI, Inc., Wanzek then awarded the bid to the out of state firm. However, Wanzek stated they would do everything they could to hire local building subcontractors to work on the Building. Wanzek did hire some NM Resident Contractors to perform significant work on the O&M Building.

Privett Electric of Portales was awarded large contracts for electrical work on the O&M Building and the Sagamore Project yard that totaled \$857,689. Kam Tech Plumbing was also awarded a contract for plumbing work on the O&M building that totaled \$383,432. Both of these firms were Certified New Mexico Resident Contractors.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 46

Although RMCI, Inc. was determined not large enough to provide the “fast track” O&M Building construction schedule required by Wanzek, they should still be included on the list of NM contractors for future renewable energy project O&M Buildings if a wind or solar farm project surfaces that has a less aggressive construction schedule.

It should also be noted that New Mexico has large metal building contractors in every area of the state, and this should be considered a New Mexico Workforce strength for renewable energy projects with reasonable construction schedules. These building contractors construct metal buildings of every size, complexity, and cost.

Although few metal building contractors were interested in the Sagamore O&M building, it is believed that they were just very busy with the construction of other buildings in their respective areas. When new wind or solar farms are encountered that need large O&M Buildings constructed on a reasonable construction schedule, it should not be hard to find a New Mexico Firm to construct buildings of this type for them.

Fencing and Gates

The New Mexico workforce for construction of Fencing and Gates should be considered a strength. Two firms, Red River Construction Company of Red River, NM and Tri-West Fence of Bernalillo, NM registered on the SMA web portal and both were prequalified and referred to Wanzek following the investigation.

Wanzek selected the New Mexico Resident firm Red River Construction company to perform the project fencing in an amount of over \$1.45 million. Both Red River and Tri-West Fence will be listed on the recommended list of fencing firms for use on future renewable energy projects.

However, as noted previously for future renewable projects around the State, any of the prequalified NMDOT fencing contractors can be contacted to request a bid.

Trucking

The New Mexico workforce for trucking of materials for renewable energy projects should be considered a slight strength. Three trucking firms registered on the SMA web portal and all three were prequalified and referred to Wanzek following the investigation.

However, all three of these trucking firms were small and Wanzek needed a trucking logistics firm to manage, schedule and oversee all the details of the material delivery process. Accordingly, Wanzek hired an out of state firm, Matmown, to provide all the trucking logistics needed.

During the project, Matmown was able to identify additional local trucking firms to assist with the material delivery. Eastern New Mexico Trucking firms were able to provide all the material delivery for the Sagamore Project. Matmown worked with Overtork to provide local coordination of the trucking firms and \$1.776 million was paid to this NM Resident Firm who then distributed funds to several other NM Trucking firms who assisted them.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 47

However, each area of the state has their own local trucking firms. Depending on which region that new renewable energy projects are proposed, local trucking firms should be able to be drawn from the surrounding area. But in each case, a trucking logistics firm will need to be identified to coordinate the trucking logistics. During research of NM trucking logistics firms, SMA was not able to identify a NM firm that could provide the volume of trucking logistics needed for this Sagamore Wind Farm project.

Construction Material Testing

New Mexico is strong in the Construction Material Testing Category for large renewable projects and these firms are located around the state, but usually only in larger population areas. For this project, two construction material testing firms, Southwest Engineering Inc. of Las Cruces and Pettigrew and Associates of Hobbs, registered on the SMA site and stated they could perform the material testing work for the Sagamore project. Because of the high volume of testing needed, each firm would be required to set up a remote testing lab at the Sagamore site.

Both firms returned the information requested to be able to be considered for the SMA prequalification process and both firms were recommended to Wanzek for bid consideration. We were very disappointed that Wanzek did not contact either firm because they had a previous agreement with an out of state firm and wanted to continue using them for the Sagamore Project.

However, both Southwest Engineering Inc. and Pettigrew and Associates will be listed as being recommended for future renewable energy projects. It should be reiterated that the New Mexico Department of Transportation (NMDOT) keeps an updated list of Geotechnical Testing Firms on their website that are prequalified to perform work for the NMDOT. ([Prequal List.pdf \(state.nm.us\)](#)) Any of the large geotechnical testing firms listed on the NMDOT prequalification list would be qualified to provide geotechnical material testing work on wind and solar projects.

Site Safety Management

Although no firms registered on the SMA website, one firm was found and used for the Sagamore Wind farm project to provide site safety management. Because of this one firm located in Albuquerque with the capacity to work all over the state, this work item should be considered a strength.

Southwest Safety Services of Albuquerque was hired to provide different types of safety services on this project. An overall amount of \$552,466 was paid to them for this work. Southwest Safety Services will be listed as a recommended firm for Safety Services on future renewable energy projects.

NM Labor

One of the goals of this project was to hire New Mexico Residents to work for Wanzek or other contractors on the Sagamore Wind Farm Project. Wanzek proposed to hold job/career fairs in the Portales/Clovis area. A Job Fair was held at the Portales Best Western hotel on November 21, 2019 from 4:00 to 7:00 pm. The event was publicized in the newspaper, Facebook and through the Chambers of Commerce as well as Xcel Energy providing advertisement through their channels.

It was reported that eighty-five people attended the November Job Fair in Portales. Fifty-three people were interviewed, and seven New Mexico people were hired. In addition to these seven New Mexico Resident hires, two more New Mexico people were hired at a later time.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 48

The New Mexico Residents hired to work for Wanzek on this project included three laborers, one leadman, one Foreman, one equipment operator, and three Field Engineers. The average salary for these positions was \$5,200 per month. The total amount of NM Resident labor used for the Sagamore Wind Farm Project was \$552,774.50.

Wanzek expressed disappointment that more New Mexico residents could not be found to hire but noted the majority of applicants did not have the qualifications needed to perform the work. In the New Mexico Renewable Energy Apprenticeship section of this report, several recommendations are made to increase the New Mexico Resident workforce for future renewable energy projects.

Rental Construction Equipment

New Mexico is also very strong in the construction rental equipment category as there are a large number of suppliers in New Mexico that can provide construction rental equipment for wind and solar farm projects. For the Sagamore project, United Rentals of Hobbs provided \$1.35 million of rental equipment and Worldwide Machinery of Hobbs provided \$769,000 of rental equipment for this Eastern New Mexico project. For future renewable projects around the State, these firms could easily provide construction rental equipment for large wind and solar farm projects.

Other Tasks including Fuel Provision, Sanitary Services, etc.

In the Sagamore Wind Farm Project area, many firms were identified to provide supplemental services needed for the project including Fuel, water, sanitary services, incidental supplies and equipment, waste disposal services, uniforms, temporary offices, and other items. The majority of these firms were able to be certified as New Mexico Resident Firms. For future renewable energy projects, it is anticipated that the provision of these services is a strength, and they will be available in most areas around the state.

NM Wind Farm Workforce Summary

New Mexico already has several contractors that can provide work in the categories needed for Wind Farm construction in NM. The weakness is that for the high production work categories, the majority of the NM firms cannot meet the production rates required for “fast track” wind farm construction projects.

Existing construction and supply firms will need to expand their capacity if they want to perform work for large wind farms being constructed on a “fast track” basis. For existing firms to expand, they will need to have employees skilled in these construction areas. There is already a shortage of labor in Southeastern New Mexico due to the labor needs of the oil and gas industries.

As part of the Business Sourcing Advisor work for Xcel Energy, SMA contacted schools of higher education and apprenticeship programs that could benefit the future wind farm construction workforce in New Mexico. These educational and apprenticeship programs have been informed of these construction worker needs so they can tailor their training programs to produce graduates who have the skills needed in the identified construction areas. The results of those contacts are reported in the next section of this report. This document can also be circulated to the New Mexico Association of General Contractors to notify them of these wind farm construction firm needs and opportunities for firm expansion.



NM Workforce Needs for Future Renewable Energy Projects

Introduction

The Business Sourcing Advisor was asked to develop information that can be used by universities, junior colleges, technical colleges, and schools regarding the type of skills needed for the wind energy industry. Research was performed to determine which New Mexico schools are providing education or training for both the wind and solar portions of the Renewable Energy category and to determine the level of education and training being provided.

The information in this report is intended to be used by the Educational Institutions to increase the level of training and education being provided in New Mexico to help build a larger base of contractors and skilled workforce needed for future renewable energy projects.

However, as noted in the recommendations portion of this section, Higher Education Institutions on their own are not sufficient to help build a base of contractors and skills needed for future wind projects. For this reason, contact was also made with NM Apprenticeship programs that could provide other types of Wind Farm and Solar Construction Workforce development. The Apprenticeship Training information and recommendations are included following the Renewable Energy Education section of this report.

Renewable Energy Workforce Need

The United States needs a skilled and qualified wind energy workforce to produce domestic clean power. The Bureau of Labor Statistics estimates that wind turbine service technicians will be the fastest growing job in a decade with 108% growth rate. The Mesalands Community College website estimates there will be a need for 170,000 Wind Turbine Technicians in the United States by 2030.

In 2019, New Mexico legislated renewable energy goals for investor-owned utilities to be 50% by 2030, 80% by 2040, and 100% by 2045. Xcel Energy has committed to meet the NM goal and has also established a carbon reduction goal of 80% by 2030 and to be 100% carbon free by 2050 for all of their operating areas. In order to meet these New Mexico goals, many more renewable energy projects will be needed.

An October 2020 webinar, hosted by the State Land Office, brought together industry representatives and government officials to discuss a surge in wind development underway in New Mexico, along with the state's potential to become one of the largest suppliers of wind and other clean energy throughout the West.

During the webinar, it was noted that Pattern Energy's Western Spirit Wind Development project represents about a \$1.5 billion investment that will generate some 1,000 construction jobs over the next year and more than 150 permanent jobs, according to the company.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 50

That project is only one of Pattern's projects planned for New Mexico. Sarah Webster, Pattern's vice president for investor and government relations, stated they expect to build a total of 4,000 MW of wind generation here in the coming years, representing an \$8 billion investment. "We are just at the beginning in New Mexico," Webster told participants in the webinar.

The Solar Energy Industries Association stated in their NM State Solar Spotlight that there are presently 1,068 MW of Solar installed in New Mexico representing a \$2 billion investment and supporting 2,021 Solar Jobs. They project an additional 1,979 MW to be installed in the next five years.

DEMAND FOR SOLAR WORKFORCE

The *2017 Solar Training and Hiring Insights Report* from the Solar Training Network showed New Mexico to have the second highest nationally ranked National Demand Score for Solar Workforce in terms of projected solar workforce needs, difficulty of hiring workers, and available training providers.

This is confirmed by the NM Department of Workforce Solutions that shows Solar Photovoltaic Installers to be the fastest growing occupation in New Mexico, with 112.6% growth.

Wind and Solar Energy Workforce Skills needed

Workforce skills needed to expand the Wind and Solar Energy Industry include the following:

- Wind turbine technology,
- Turbine foundation construction,
- Wind turbine installation,
- Tower safety,
- Turbine operations and maintenance,
- Photovoltaic system components,
- Photovoltaic systems installation and connection,
- Electrical connection line construction,
- Transmission line construction,
- Electrical substation construction,
- Monitoring and communications technology,
- Mechanical systems,
- Electrical theory,
- Power generation and distribution,
- Hydraulics,
- Controls,
- Digital electronics, and
- Other related skills.

In the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network referenced in the previous section, it was reported that 2/3 of surveyed solar industry respondents identified **three topics** that would be most valuable to them for developing Photovoltaic Technician I crew members. Following discussions with some Electrical Contractors, they also noted these courses would be beneficial for their new electrical crew hires.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 51

The three topics are as follows:

1. Electricity Basics, including basic electrical principals and common electrical system components;
2. Photovoltaic System Components, including the ability to identify and correctly handle solar system components;
3. Photovoltaic System installation and Connection, including basic knowledge of system components and basics of installation/connection of a system.

During communication with Educational Institutions offering courses in Basic Electrical Training, adding photovoltaic courses to their programs was a key topic. The following section is a summary of the NM Renewable Energy Education Programs.

NM Renewable Energy Education Programs

Mesalands Community College

Mesalands Community College in Tucumcari is the primary Wind Energy Technology Institution in New Mexico. It presently provides degree and certificate level of instruction on Wind Energy Technology. Mesalands began their Wind Energy program in 2008 and awarded their first certificates in 2009.



Mesalands offers an Associate of Applied Science Degree as a two-year program that requires a minimum of 60 credits with 39 credits in the Wind Energy Technology Field of Study. This degree program also includes actual wind turbine training experience as they climb and perform maintenance and repair on a 1.5 MW General Electric ESS Wind Turbine owned by the college.

Mesalands also offers an Applied Science Certificate that requires a minimum of 32 credits with a minimum of 23 credits in the Wind Energy Technology Field of Study. This certificate program also includes the same wind turbine training experience to climb and perform maintenance and repair on the 1.5 MW General Electric ESS Wind Turbine as the Associates degree program requires.

Mesalands presently has approximately 35 students in the combined Wind Energy Technology Associates degree and certificate programs. Approximately 20 graduates each year have received the Associates degree or certificate since the program began in 2009.

Course topics in both programs include studies in electricity, hydraulics, mechanics, and electronics. New graduates and certificate recipients are provided with well-rounded technology skills to easily find employment in the Wind Energy Field or related fields, as they desire.

Although Mesalands does not provide internship programs to students, several recruiters contact the students with job and/or internship opportunities. Many students receive internships prior to graduation in the summer months between the spring and fall instruction periods. Internships assist students in obtaining a full-time career after graduation.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 52

Some New Mexico Industry and Educational leaders, such as Sandia and UNM, have also worked with Mesalands to use their turbine facility in some wind turbine research projects. Mesalands indicated they are also presently working on expanding their Renewable Energy Training program to include a Solar Electricity degree and certificate program. They are working to construct a solar farm and start a hybrid grid with a hybrid controller. It is hoped that the program can begin next year.

Clovis Community College

Clovis Community College (CCC) offers a Certificate of Completion in Industrial Technology and a Certificate of Completion in Wind Energy. They also offer an Associate of Applied Science in Industrial Technology with a concentration in Wind Energy.



In addition to several wind energy courses, a summer practicum is also offered that allows students to climb the wind tower at Mesalands Community College and gain actual wind turbine experience. This program also includes training on principles of electricity, principles of electronics, process control and power generation systems. These courses are also beneficial for students who would like to pursue training in Solar installation.

CCC has approximately 16 students in their Wind related Technology programs. However, the demand for workers in the Clovis area causes a significant number of the students to leave the program and join the workforce. CCC would like to expand their renewable energy program and has been searching for an additional instructor for over six months.

A copy of the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network was sent to CCC along with additional information detailing the workforce needs for the renewable solar industry. Additional discussions were held with CCC regarding the potential of adding Photovoltaic training to their programs. CCC was very interested in adding Photovoltaic training as recommended, but as noted earlier, any proposed expansion is dependent on hiring an additional instructor.

Central New Mexico Community College

Central New Mexico Community College (CNM) in Albuquerque has the most developed Solar Photovoltaic Education Program in New Mexico. It presently provides degree and certificate level instruction on Electrical Trades with a Photovoltaic concentration.



CNM offers an Associate of Applied Science Degree in Electrical Trades with a Photovoltaic Concentration as a two-year program that requires a minimum of 69 credits with 47 credits in the Photovoltaic and Electrical Fields of Study.

CNM also offers a Photovoltaics Certificate program that requires a minimum of 40 credits in three terms with 12 credits in Photovoltaic coursework and an additional 24 credits in Electrical coursework. This certificate program has been accepted by the NM Construction Industries Division as two years of experience toward the four-year experience requirement for the four-year experience requirement for the State of New Mexico Journeyman Electrical Certificate (JB98).



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 53

This certificate would allow graduates to begin work with a Solar Installation Contractor and move quickly through the beginning and intermediate Photovoltaic Technician levels PV1, PV2, and PV3 to prepare to be a Photovoltaic Crew leader after receiving their Journeyman Electrical License.

As referenced earlier in this section, the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network identified one electrical and two photovoltaic training topics that would be most valuable to them for beginning Photovoltaic Technician I crew members. When reviewing the CNM coursework available, their courses would provide this specific training that could “fast track” students into entry level photovoltaics installation or entry level electrical contractor employment if desired.

CNM presently has approximately 15 students in the combined Solar Energy Technology Associates degree and certificate programs. Approximately 10 graduates each year have received the Associates degree or certificate since the program began in 2009.

CNM indicated they are also presently working on expanding their Photovoltaics Training program. Last year they constructed a 1.3 MW Solar Farm on their west side campus and this year they will be adding a large-scale solar class that will allow “hands on” training using that Solar Farm installation.

Santa Fe Community College

Santa Fe Community College (SFCC) in Santa Fe has been a leader in Sustainable Technologies instruction. It presently provides degree and certificate level instruction on Sustainable Technologies with a concentration in Solar and Photovoltaics. SFCC also reported that they have an extensive solar farm on their campus that provides 65% of the energy used by the campus. This solar farm allows “hands on” training during their solar and photovoltaics coursework.



The SFCC Associate of Applied Science Degree in Sustainable Technologies with a Photovoltaic Concentration is a two-year program that requires a minimum 19 credits in the Photovoltaic and general solar Fields of Study. SFCC also offers a Solar Energy Certificate program that requires a minimum of 32 credits with 7 credits in Photovoltaic coursework and an additional 19 credits in electrical and general solar coursework.

As referenced earlier in this section, the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network identified one electrical and two photovoltaic training topics that would be most valuable to them for beginning Photovoltaic Technician I crew members. When reviewing the SFCC coursework available, their courses would provide this specific training that could “fast track” students into entry level photovoltaics installation or entry level electrical contractor employment if desired.

SFCC presently has approximately 9 students in the combined Solar Energy Associates degree and certificate programs. However, the demand for workers in the Santa Fe area causes a significant number of the students to leave the program and join the workforce on this “fast track” path.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 54

SFCC also indicated they are presently constructing a “microgrid” installation on the campus and they are proposing to add a “distributed energy and microgrid systems” program to the coursework this year.

New Mexico State University – Alamogordo

The New Mexico State University branch in Alamogordo (NMSU-A) provides Alternative Energy degree and certificate level instruction that includes wind and solar related courses. Their primary objective is to prepare graduates for entry-level positions in the renewable energy industry while a secondary goal is to provide the student with the basic course work necessary to pursue the Engineering Technology and Surveying Engineering bachelor programs at NMSU main campus in Las Cruces, if desired.



NMSU-A offers an Associate of Applied Science Degree in Renewable Energy Systems Technology as a two-year program that requires a minimum of 62 credits with 32 credits in the Photovoltaic, Solar, Wind and Electrical Fields of Study. This program also includes a 4-credit renewable energy internship.

NMSU-A also offers a Photovoltaic Entry Level – Grid Tie Certificate program that requires a minimum of 21 credits with 11 credits in Photovoltaic coursework and an additional 8 credits in Electrical coursework.

As referenced earlier in this section, the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network identified one electrical and two photovoltaic training topics that would be most valuable to them for beginning Photovoltaic Technician I crew members. When reviewing the NMSU-A coursework available, their courses would provide this specific training that could “fast track” students into entry level photovoltaics installation or entry level electrical contractor employment if desired.

THE NMSU-A Associates degree program and certificate programs are unique in New Mexico in that they both include a course in NABCEP (North American Board of Certified Energy Practitioners) Entry-Level Exam Review and the OSHA 10-hour construction hazard identification course. As noted in the *2017 Solar Training and Hiring Insights Report*, several solar installation companies require the OSHA 10 hour class to become entry level or second level Photovoltaic installation technicians. In addition, the report notes that several companies require either a journeyman electrical license or NABCEP Certification to become a Photovoltaic Crew Leader. By acquainting students with NABCEP Certification, they can begin the process to become NABCEP Certified.

This certificate would allow graduates to begin work with a Solar Installation Contractor and move quickly through the beginning and intermediate Photovoltaic Technician levels PV1, PV2, and PV3 to prepare to be a Photovoltaic Crew leader after receiving their Journeyman Electrical License or NABCEP Certification.

NMSU-A presently has less than 5 students in the combined Renewable Energy Systems Associates degree and Photovoltaic certificate programs. It should be noted that the Wind Turbine training provided at NMSU-A is generally focused on home wind systems and not industrial turbine installations.

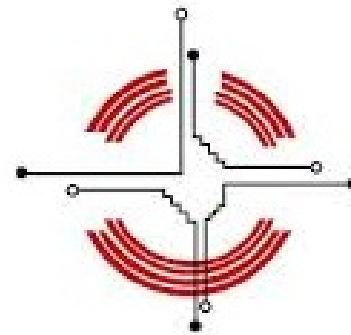


Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 55

Navajo Technical University – Crownpoint

Navajo Technical University in Crownpoint (NTU) provides an Energy Systems Associate degree that is focused specifically on electricity, magnetism, photovoltaic electrical systems, and wind generation education and training.

This Associate of Applied Science Degree in Energy Systems is offered as a two-year program that requires a minimum of 61 credits with 33 credits in the Photovoltaic, Solar, Wind, Environmental Science and Electrical Fields of Study. This program also includes training in Geographic Information Systems (GIS) and includes a 4-credit hour National Electrical Code Exam Preparation course. The NEC Exam is required for Journeyman electricians. As noted earlier, many companies require their Solar Installation Crew leaders to be Journeyman electricians. Exposure to this course is very beneficial to students' future growth.



**NAVAJO
TECHNICAL
UNIVERSITY**

As referenced earlier in this section, the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network identified one electrical and two photovoltaic training topics that would be most valuable to them for beginning Photovoltaic Technician I crew members. When reviewing the NTU coursework available, their courses would provide this specific training that could “fast track” students into entry level photovoltaics installation or entry level electrical contractor employment if desired.

NTU historically had 31 to 41 students in the Energy Systems AAS program in the Fall 2013 to Spring 2015 semesters. Since that time student participation has decreased to the 20-30 student range. Similar to some of the other schools in this report, several students are leaving the program before finishing. Some of these students are transferring to other programs, but the majority of students are leaving to enter the workforce.

Eastern New Mexico University – Roswell

Eastern New Mexico University in Roswell has developed a new Bachelor of Applied Arts and Sciences degree in Renewable Energy. Although this program has only been in operation just over a year, it provides a pathway for students with Associate degrees to pursue a four-year degree in renewable energy.



This program focuses primarily on Electronics Engineering Technology with detailed instruction in electrical circuits, electronics, and control systems, but it also includes several courses on renewable energy technology. This degree program enables graduates to pursue careers in Wind Turbine technology, Solar Power engineering technology, and energy management systems, in addition to several other career pursuits.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 56

They reported they are now working with Xcel Energy and educational institutions in Eastern New Mexico to develop renewable energy labs to supplement their renewable energy program. It is hoped that the wind turbine renewable energy lab can be operational in spring or fall 2021 and the solar renewable energy lab can also be operational in 2021.

New Mexico Junior College

New Mexico Junior College has an Associate of Applied Sciences degree in Energy Technology. The coursework is primarily related to the Petroleum Industry, but it also includes coursework in thermodynamics, control systems, material science and nuclear science.

NMJC has well-developed certificate programs for basic technician training available including coursework including Basic Electrical; Industrial Electrical; Mechanical Training; Hydraulic and Pneumatic Training; Process Controls; and Programmable Logic Controllers (PLC).



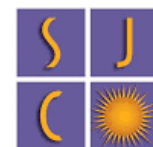
Very good discussions were held with NMJC leaders regarding the potential of adding some Photovoltaic coursework to these certificate programs that could provide a firm basis for students desiring entry level photovoltaic installer positions in Solar Energy companies. Following discussions with local electrical contractors, they noted that this type of training would also be beneficial for new hires to electrical contracting firms. These firms noted a severe shortage of available workers to hire.

As referenced earlier in this section, the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network identified one electrical and two photovoltaic training topics that would be most valuable to them for beginning Photovoltaic Technician I crew members. If these two Photovoltaic Training topics could be added to the NMJC program, their courses would provide this specific training that could “fast track” students into entry level photovoltaics installation or entry level electrical contractor employment if desired.

New Mexico Junior College also has the ACT Academy that allows high school students to take the technician training noted above during their junior and senior years of high school. It was noted that if the Photovoltaic courses could be added and used along with the basic electrical course and electrical controls course, these students could be ready for electrical or solar employment directly out of high school.

San Juan Community College

The San Juan Community College (SJCC) School of Energy (SOE) was recently named a Center of Excellence for Renewable Energy and Sustainability by New Mexico Governor Michelle Lujan Grisham. The SOE is exploring four areas of emerging technologies -- electrical vehicle technology, repurposing and recycling lithium ion batteries, water security and sustainability, and hydrogen power.



SAN JUAN COLLEGE



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 57

In November 2020, the school announced it will soon augment training for instrumentation controls and electrical technology in wind and solar energy. With newly purchased wind and solar trainers, students will learn installation and maintenance skills on real-world equipment that will help them transition seamlessly into a career.

A copy of the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network was sent to SJCC along with additional information detailing the workforce needs for the renewable solar industry. Additional discussions were held with SJCC regarding the potential of adding Photovoltaic training to their programs. SJCC noted they were in the process of incorporating Photovoltaic training into their courses as recommended.

Western New Mexico University

Western New Mexico University (WNMU) in Silver City offers an Associate of Applied Science in Electrical Technology with 56 hours of Electrical Technology core requirements. WNMU formerly offered a Certificate in Environmental Electrical Technology, but that program has been discontinued. It was noted that two 200 level Solar and Wind Energy courses formerly in that Certificate Program have been included in the Associate of Applied Science in Electrical Technology degree program.



A copy of the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network was sent to WNMU along with additional information detailing the workforce needs for the renewable solar industry. Additional discussions were held with WNMU regarding the potential of adding Photovoltaic training to their programs. WNMU was interested in adding Photovoltaic training as recommended, but as noted earlier, any proposed expansion is dependent on hiring an additional instructor.

WNMU presently has approximately 35 students in the combined Electrical Technology Associates degree and certificate programs. Approximately 10 graduates each year have received the Associates degree or certificate. The program courses fill up quickly, so they regularly have waiting lists for new students. If additional Photovoltaic courses could be added in the WNMU Associates or a Certificate program, it could provide a significant benefit in the southwest corner of the state.

University of New Mexico

The University of New Mexico primarily focuses on providing four-year degrees in the Electrical and Mechanical Engineering Fields. However, within these degree programs they offer courses on Photovoltaics, Smart Grid Technologies, Power Systems and Distribution systems. In past years some of their engineering students have performed wind energy research in cooperation with the Wind Turbine installation at Mesalands Community College.



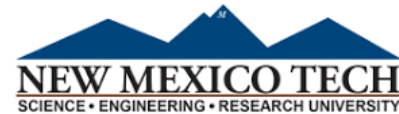


Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 58

The University of New Mexico sees itself as providing the next step in higher education for renewable energy students with two-year associates degrees.

New Mexico Tech

New Mexico Tech also has the primarily focus of providing four year degrees in the Electrical and Mechanical Engineering Fields. However, within these degree programs they offer some courses on Wind Energy, Smart Grid Technologies, and Electrical Systems.



Some solar energy research has been performed at the Playas facility in Southwest New Mexico. They indicated they may be expanding educational opportunities in electrical smart grid technology.

New Mexico Tech also sees itself as providing the next step in higher education for renewable energy students with two year associates degrees with project and research opportunities in the renewable energy fields.

Renewable Energy Workforce Education Recommendations

As noted in this section, only two New Mexico educational institutions provide Wind Energy Technician Training on Industrial Turbines. This is a limited number, but both of these programs have access to industrial wind turbines for training purposes and both are good programs. It does not appear that there is a shortage of wind turbine technicians available from these programs to perform wind turbine work during wind farm construction or ongoing wind turbine maintenance and repair after the construction is completed.

In contrast, all of the NM Educational Institutions reviewed in this report provided some level of electrical training. Three of these institutions presently provide basic electrical and photovoltaic instruction as desired by the solar energy industry for entry level workers. But the remaining institutions primarily focused on industrial electrical training and did not include needed instruction on photovoltaic topics as needed by the solar energy industry.

Each of the institutions were contacted and information was provided regarding the training needs for the solar energy industry as identified in the *2017 Solar Training and Hiring Insights Report* from the Solar Training Network.

During these educational contacts, several of the educational institutions reported they are either adding or proposing to add additional coursework in photovoltaic technology, and a few were moving toward adding renewable energy microgrid and smart grid technology training.

This information is very encouraging. It should be noted that the installation of solar farms requires many photovoltaic technicians to set up the individual solar cells in array. If each of these educational institutions add photovoltaic courses to their programs, there will be much more solar renewable energy training to develop the workforce to fill the future solar farm installation (and O&M) needs in the future.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 59

As noted above, when a wind farm is constructed, Wind Turbine Technicians are only needed for a small part of the construction project, namely the Wind Turbine commissioning process. In the case of the Sagamore Wind farm, the Wind Turbine commissioning process was performed by Vestas, the Wind Turbine manufacturer from Colorado.

After construction is completed, the Sagamore Wind Farm will need several Wind Turbine Technicians for the ongoing operation and maintenance work. The educational programs in the state identified in this report should be able to provide the necessary number of Wind Turbine technicians.

But it is very important to note that the bulk of the wind farm construction process is performed by large construction firms who excavate the foundations, install steel reinforcement foundation cages, pour the concrete foundations, set up the towers, build access roads, install electrical connection lines between the turbines, install electrical substations, install electrical transmission lines, and construct O&M buildings.

As noted in earlier sections of this report, the New Mexico contractors were not able to provide the workforce necessary to work on these portions of the “fast track” Sagamore Wind Farm Project. These other construction processes need access to additional workforce or other strategies to be able to provide work on large wind farms in New Mexico. **Workforce Training for these construction processes are not accomplished by NM Educational Institutions, but by Workforce Apprenticeship programs and other construction training programs.** The New Mexico Workforce Apprenticeship programs and other construction training programs will be discussed in the next section of this report.

Renewable Energy Workforce Apprenticeship Programs

Electrical Apprenticeship Programs

Several organizations offer electrical apprenticeship programs in New Mexico. The electrical apprenticeship program is directly beneficial to the renewable energy industry in New Mexico. After the education/experience hours are met and the appropriate test is passed, the individual would become a licensed electrical journeyman capable of performing commercial electrical or transmission line work.

There is a shortage of journeymen electricians in New Mexico overall, and this license is required to install renewable energy project connection wiring, transmission line wiring and in many cases, being a crew leader on a solar project installation team.

The New Mexico Department of Workforce Solutions (DWS) lists five organizations who are registered with the DWS to provide electrical apprenticeship training programs. They are the Associated Builders and Contractors Education and Training; the New Mexico Joint Apprenticeship Training Committee; The Northern New Mexico Independent Electrical Contractors, Inc.; The Southern New Mexico Independent Electrical Contractors, Inc.; and Powerline Technologies of Rio Rancho, NM.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 60

These programs ordinarily allow the workers to take evening classes while working for an electrical contractor full time. Most electrical apprenticeship programs required 8,000 hours of on the job training (OJT). Upon completion of the apprenticeship program, they receive a certificate of completion from the State of New Mexico and the U.S. Department of Labor office of apprenticeship.

Substation Electrician Apprenticeship Programs

Both Solar and Wind Farm Renewable Energy Projects require electrical substations to handle the high volumes of electricity produced by the project. Skilled substation electricians are needed to construct and provide O&M for these facilities. After the education/experience hours are met and the appropriate test is passed, the individual would become a licensed electrician capable of performing electrical substation work.

The New Mexico Department of Workforce Solutions (DWS) lists one organization that is registered with the DWS to provide the substation electrician apprenticeship training program. It is provided by PNM of Albuquerque. This program would also allow the workers to take evening classes while working for a contractor full time. Upon completion of the apprenticeship program, they receive a certificate of completion from the State of New Mexico and the U.S. Department of Labor office of apprenticeship.

Electrical Lineman Training Programs

In addition to Electrical and Substation Electrician Apprenticeship Programs, a few New Mexico higher education institutions offer Electrical Lineman Training programs. Dona Ana Community College in Las Cruces offers a one-year pre-apprenticeship certificate program in Electrical Linemen training. Central New Mexico in Albuquerque offers a fifteen (15) week pre-apprenticeship certificate program in Electrical Linemen training and New Mexico Junior College in Hobbs offers a four-week Electrical Lineman Training Program.

These Electrical Lineman Training programs are not full apprenticeship programs, but they can either provide the minimal training to obtain an entry level electrical lineman job, or they can serve as a beginning point to continue toward an Electrical Linemen apprentice program.

Electrical Lineman Apprenticeship Programs

Several organizations also offer electrical lineman apprenticeship programs in New Mexico. The electrical Lineman apprenticeship program is directly beneficial to the renewable energy industry in New Mexico. There is also a shortage of electrical linemen in New Mexico. After the education and experience hours are met and the appropriate test is passed, the individual would be able to work on a distribution or transmission line crew.

The New Mexico Department of Workforce Solutions (DWS) lists five organizations that are registered with the DWS to provide electrical lineman apprenticeship training programs. They are the Central NM Electric Coop. of Moriarty, NM; PNM Albuquerque; The City of Farmington; Springer Electrical Coop. of Springer, NM; and Continental Divide Electric of Grants, NM.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 61

These programs also allow the workers to take evening classes while working for an electrical agency full time. Upon completion of the apprenticeship program, they receive a certificate of completion from the State of New Mexico and the U.S. Department of Labor office of apprenticeship.

Heavy Equipment Operator Apprenticeship Program

As noted earlier, excavation for Wind Turbine Foundations is a critical component of Wind Turbine Farm Construction. Heavy equipment operators are needed to provide this work. After the education and experience hours are met, the individual would be able to operate heavy equipment for a construction contractor.

DWS lists one organization that is registered with the DWS to provide the heavy equipment apprenticeship training program. It is provided under the Operating Engineers Local 953 Journeyman and Apprentice Training Program in Albuquerque (IUOE).

This program would also allow the workers to take evening classes while working for a contractor full time. Upon completion of the apprenticeship program, they receive a certificate of completion from the State of New Mexico and the U.S. Department of Labor office of apprenticeship.

Ironworker Apprenticeship Program

The second item necessary for construction of Wind Turbine Foundations is the placement and tying of steel rebar prior to pouring concrete for the concrete turbine foundation. Upon discussions with the New Mexico Ironworkers representative, he stated the ironwork apprenticeship program would be very applicable to the placement of steel rebar for large concrete foundations.

DWS lists one organization that is registered with the DWS to provide the ironworker apprenticeship training program. It is provided under the New Mexico Ironworkers JAC Training Program in Albuquerque.

This program would also allow the workers to take evening classes while working for a contractor full time. Upon completion of the apprenticeship program, they receive a certificate of completion from the State of New Mexico and the U.S. Department of Labor office of apprenticeship.

Cement Mason Apprenticeship Program

The third item necessary for construction of Wind Turbine Foundations is the placement of concrete for the concrete turbine foundation. This program includes reading plans for the work, preparing the subgrade to specifications, placing structural steel reinforcement, pouring the foundation including finishing and curing.

DWS lists two organizations that are registered with the DWS to provide the cement mason apprenticeship training program. They are the NM Conference of Plasterers and Cement Masons in Albuquerque and the Associated General contractors NM Multi-Trade Apprenticeship Program in Albuquerque.

This program would also allow the workers to take evening classes while working for a contractor full time. Upon completion of the apprenticeship program, they receive a certificate of completion from the State of New Mexico and the U.S. Department of Labor office of apprenticeship.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 62

Laborer Apprenticeship Program

An additional Apprenticeship program that would be helpful for the construction of a Wind Farm would be a program for general construction laborers. Many construction laborers are required for the construction of large wind farm projects.

DWS lists three organizations that are registered with the DWS to provide the construction laborer apprenticeship training program. They are the ABC Construction Craft Laborer Program of Albuquerque, the Associated General Contractors NM Multi-Trade Apprenticeship Program in Albuquerque, and the NM Laborers' Joint Apprenticeship and Training Committee.

This program would also allow the workers to take evening classes while working for a contractor full time. Upon completion of the apprenticeship program, they receive a certificate of completion from the State of New Mexico and the U.S. Department of Labor office of apprenticeship.

National Center for Construction Education and Research (NCCER)

In addition to the NMDWS approved apprenticeship programs identified above, NCCER offers construction technology training in multiple categories to provide construction training to begin to prepare high school and college students for work in the construction industry.

Students in these high school programs can receive construction training as electives while completing their other required coursework. For students who are not interested in going to college, this can provide a clear pathway to complete high school and enter the work world.

These certified NCCER training facilities are located in high school programs and higher education programs spread throughout New Mexico. Upon completion of these programs, graduates receive NCCER certification in that trade.

The NCCER website at NCCER.org lists several construction categories provided by New Mexico education facilities that are directly applicable to the construction of solar and wind energy projects. Following is a list of these applicable construction categories along with the number of NM schools providing this training in parenthesis: Concrete Finishing (27), Alternative Energy (5), Electrical, Industrial Maintenance Electrical and Instrumentation (12), Ironworking (25), Mobile Crane Operator (25), Power Construction Maintenance Technician (11), Power Line Worker (22), Transmission Power Line Worker (10), Solar Voltaic Systems (17), and Construction Craft Laborer (31).

Renewable Energy Workforce Apprenticeship Training Recommendations

The DWS State Apprenticeship Office has a well-developed apprenticeship program with many apprenticeship categories and funding reimbursement programs that could be beneficial for both the wind and solar renewable energy construction projects.

However, after speaking to some contractors and schools that use and provide the apprenticeship programs, it appears there are some weaknesses in the system.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 63

The electrical apprenticeship programs mentioned in the above section require four years of work and evening classes to complete. It was reported that roughly half of the individuals who begin an apprenticeship program, complete the program. Because of the extended training time, many of the students quit the apprenticeship education program and just keep working for their employer to learn the trade by on the job training (OJT). They then take a test review course and take the test. If they pass, they become licensed electricians.

The Workforce Innovation and Opportunity Act (WIOA) also has provided funding for worker training programs including apprenticeships. The DWS State Apprenticeship Office works with Local Workforce Development Boards to assist participants with the cost of training. This can include cost of tuition, training fees, and related expenses such as supplies and equipment. Apprenticeship Office staff can also work with employers to determine if they are eligible to have a portion of participant wages reimbursed.

This funding program can be very beneficial to workers and employers, but there are only specific situations where employers can be reimbursed. The limitation on specific situations for reimbursement sometimes stops employers from using the program.

In the case of the Sagamore Wind Farm project, NM-DWS provided information on the WIOA federally funded training reimbursement program. This program offers subsidies for on-the-job training for new hires, skill upgrade (promotions), and for customized training of existing employees.

The Sagamore General Contractor was planning to hire several New Mexico employees to work on the wind farm project. It would have been desirable to hire the new employees under one of these programs to potentially receive partial wage reimbursement. For new employee hiring, the program had restrictions that the new hire must be low income, under employed or a dislocated worker. After investigating the programs, Wanzek determined that none of the programs would be applicable for their use, so they did not use the program.

As noted previously, the need for electricians in New Mexico is very high. Electrical Subcontractors around the state are needed for home and commercial construction of all types. Several years ago, the Urenco Energy Enrichment project in Eunice, New Mexico attracted electricians from all over the state to provide electrical construction services on the \$4 billion project. These large projects occur regularly throughout the State of New Mexico.

As noted in the Renewable Energy Workforce Need section of this report, Pattern Energy stated they expect to build a total of 4,000 MW of wind generation in New Mexico in the coming years, representing an \$8 billion investment.

When large renewable energy projects are proposed for construction in New Mexico, additional licensed electricians need to be available to perform the work. It would be desirable if additional incentives on the state level could be provided to employers to make it worth their effort to hire new entry level electricians and train them to become licensed.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 64

It is recommended that these concerns be researched further, and a Renewable Energy Construction Workforce employer incentive program be developed on a state level to make additional use of the renewable energy educational and apprenticeship programs to increase the workforce for these critical Solar and Wind Renewable Energy projects. This program should not only be available for electrical contractors but be extended to other contractors mentioned in this report who provide renewable energy project construction services.



Blade install – June 8, 2020



Renewable Energy Workforce Recommendations

1. Work with renewable energy companies as they undergo PRC reviews to plan the size and construction schedule for their proposed wind and solar projects so New Mexico firms can provide work on a production level that meets their capability. (Can provide incentives, if necessary.)
2. Contact large New Mexico renewable energy construction contractors and inform them in advance of upcoming renewable energy projects. If the size or schedule of the project is too large for them, encourage them to use their time before the project bids to identify construction partners they can enter into a joint venture agreement with to construct the project together.
3. Provide additional employer incentives for contractors to make additional use of the renewable energy educational and apprenticeship programs to increase the workforce for Solar and Wind Renewable Energy projects.
4. As this report was being finalized, the **New Mexico Chamber of Commerce released their 2020 report entitled, "Driving New Mexico's Future"**. This report included several Specific Strategies that could be tailored to increasing the New Mexico Renewable Energy Workforce. The specific strategies and comments are included below in order of priority:
 - a. Strategy #7, Page 19 - Replicate Arkansas and South Carolina's "Be Pro Be Proud", a program designed to change high school students' and parents' perceptions about technical careers. This is a mobile workshop that travels to all high schools around the state. This program and mobile workshop could be used to inform high school students about the opportunities in the renewable energy industry.
 - b. Strategy #1, Page 16 – Create and fund a talent recruitment program to attract young professionals. For our purposes, we are not interested in attracting professionals from other areas but attracting our own young people in New Mexico with a coordinated social media program as listed in this strategy to inform them of the opportunities in the renewable energy industry. Emphasis on the benefits of remaining in New Mexico and taking advantage of the opportunities as noted in this strategy is also important to include.
 - c. Strategy #5, Page 18 – Create Scholarships for first-generation college students. In addition to the focus of this strategy, scholarships could also be created for first generation students who would like to attend educational institutions that offer renewable energy training.
 - d. Strategy #8, Page 19 – Create a Grant Tuition Program for Community College Students pursuing a degree in a STEM field that agree to remain in New Mexico for a specified number of years. This strategy could be very effective for students who would like to pursue an associates degree in a renewable energy field and agree to work in that field for approximately three years.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 66

e. Strategy #4, Page 17 – Provide a specific state income tax exemption for military retirement pensions. In the 2017 Solar Foundation Training Report (see appendix), it was reported that there is a severe shortage of applicants for solar energy installation positions. There is a U.S. Department of Energy Program called the Solar Ready Vets to help exiting veterans connect with Solar energy jobs. The Solar Energy Industries Association (SEIA) found that many veterans learn crafts and technical skills that can benefit the solar industry during their time in active duty. They also have workforce assets beyond technical skills including the ability to operate on their own and effectively coordinate as part of a team. Veterans should be identified as a very good source for the future renewable energy workforce.

f. Strategy #6, Page 18 – Target Workforce Training and job placement for ex-offenders. This would be another potential source for future renewable energy workers. The Indiana HIRE program provides training and additional support services to allow ex-offenders to connect with a job placement opportunity and a mentor. This program has been very successful with a 3-month retention rate of 97%. This program could be used to supplement the renewable energy field.



APPENDIX

List of Recommended Contractors and Suppliers for Future Renewable Energy Projects

Attorney General Office Letters and Responses

2017 Solar Training and Hiring Insights Report

2020 New Mexico Renewable Energy Transmission and Storage Study

2020 NM Chamber of Commerce – “Driving New Mexico’s Future”



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 68

List of Recommended Contractors and Suppliers for Future Renewable Energy Projects

Workforce Category	Company Name and Contact Person	Address	Phone and Email Address
Roadway Construction	K. Barnett Britnee-Ann Bowers	P.O. Box 960 Clovis, NM 88102	(575) 762-4407 britnee@kbarnett.com
Roadway Construction	RMCI, Inc. Steve Duffy	6211 Chappell Rd. NE. Albuquerque, NM 87113	(505) 345-0008 sduffy@rmciinc.com
Roadway Construction	Mountain State Constructors, Inc.	3601 Pan Am. Fwy NE#111 Albuquerque, NM 87107	(505) 292-0108 neil@msconstructors.com
Roadway Aggregate	White Rock Crushing Tina Dzuik	112 NM-267 Portales, NM 88130	(505) 918-0411 whiterockcrushing@gmail.com
Concrete Supply	RMCI, Inc. Steve Duffy	6211 Chappell Rd. NE. Albuquerque, NM 87113	(505) 345-0008 sduffy@rmciinc.com
Concrete Supply	Clovis Concrete Josh Ashley	100 N. Norris Clovis, NM 88101	(575) 762-1938 joshzashley@gmail.com
Concrete Aggregate	Janes Gravel Co. Kyle Gayler	750 NM 267 Melrose, NM 88124	(575) 253-4466 kyle.gayler@rejanescos.com
Wind Turbine Foundation Const.	Bradbury Stamm Const. Lawrence Peterson	7110 2nd Street NW Albuquerque, NM 87107	(505) 238-8909 bids@bradburystamm.com
Wind Turbine Foundation Const.	RMCI, Inc. Steve Duffy	6211 Chappell Rd. NE. Albuquerque, NM 87113	(505) 345-0008 sduffy@rmciinc.com
Wind Turbine Foundation Const.	AUI, Inc. Julie Rodrigo	7420 Reading Avenue SE Albuquerque, NM 87107	(505) 338-4522 julier@auinc.net
Electric Material Supply	Border States Elec. Sup. Francisco Gonzales	5601 Jefferson St. NE Albuquerque, NM 87109	(505) 344-1313 fgonzalez@borderstates.com
345 kV Transmission line installation	<u>MMR Group</u> Eric Miller	5624 Lovington Hwy Hobbs, NM 88240	(225) 252-3138 emiller@mrrgrp.com
345 kV Transmission line installation	<u>Elite Communication</u> Gabe Trujillo	313 Hathoway Los Lunas, NM 87031	(505) 917-0964 gabe@elitenm.co
345 kV Transmission line installation	<u>K&S Electric</u> Donny Simon	1901 N. Grimes St. Hobbs, NM 88240	(575) 631-2424 donny.simon@valornet.com
345 kV Transmission line installation	Shalom Electric Royce Craig	2420 N. Dal Paso St. Hobbs, NM 88240	(806)239-0318 shalomeq107@gmail.com
345 kV Transmission line installation	THECO Electric Tom Hagan	PO Box 2290 Corrales, NM 87048	(505) 897-7140 thecoelectric@msn.com
345 kV Transmission line installation	Bixby Electric Stacy Gunthorpe	521 Wheeler Ave. SE Albuquerque, NM 87102	(505) 842-5384 x 140 stacey.gunthorpe@bixbyelectric.com
34.5 kV Electrical Wiring installation	Shalom Electric Royce Craig	2420 N. Dal Paso St. Hobbs, NM 88240	(806)239-0318 shalomeq107@gmail.com
34.5 kV Electrical Wiring Consultant	M Electric Michelle Silva	8300 Corona Loop NE Albuquerque, NM 87113	(505) 803-3511 michelle@MElectricinc.com
Fiber Optic Wiring installation	CCI Reese Howard	55 Hwy 82 Alamogordo, NM 88310	(575) 439-6424 rhoward.cci@gmail.com
Fiber Optic Wiring installation	<u>K&S Electric</u> Donny Simon	1901 N. Grimes St. Hobbs, NM 88240	(575) 631-2424 donny.simon@valornet.com
Fiber Optic Wiring installation	Shalom Electric Royce Craig	2420 N. Dal Paso St. Hobbs, NM 88240	(806)239-0318 shalomeq107@gmail.com



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 69

List of Recommended Contractors and Suppliers for Future Renewable Energy Projects

Workforce Category	Company Name and Contact Person	Address	Phone and Email Address
Electrical Substation Construction	<u>Southwestern Electrical Contracting</u>	603 Canal St. Alamogordo, NM 88310	(575)437-6381 c.jones@southwestelectrical.com
Electrical Substation Construction	THECO Electric Tom Hagan	PO Box 2290 Corrales, NM 87048	(505) 897-7140 thecoelectric@msn.com
Electrical Substation Construction	Bixby Electric Stacy Gunthorpe	521 Wheeler Ave. SE Albuquerque, NM 87102	(505) 842-5384 x 140 stacey.gunthorpe@bixbyelectric.com
O&M Building Construction	<u>E. Purcella Const.</u> Earl Purcella	257 Hawkweed Rd. Roswell, NM 88201	(575) 914-2654 epurcellaconstruction@gmail.com
O&M Building Electrical Work	Privett Electric, LLC Eddy Privett	501 E. 3rd Street Portales, NM 88130	(575) 760-2115 privett1996@gmail.com
O&M Building Plumbing Work	Kam Tech Plumbing Trace Hellums	1507 E. Berrendo Rd. Roswell, NM 88201	(575) 208-8067 kamtechroswell@gmail.com
Fencing and Gates	Red River Const. Co LLC Kendal Abernethy	PO Box 314 Red River, NM 87558	(806) 239-4713 Kendal@AFence.US
Fencing and Gates	Tri West Fence Bryant Thomas	110 Denny Rd Bernalillo, NM 87004	(505) 400-0373 bryant@triwestfence.com
Trucking	Overtork, LLC Lyle Frazee	830 E Danube St Portales, NM 88130	(575) 760-7621 lrfraze@gmail.com
Trucking	Double D Cust. Express David Lester	PO Box 5981 Clovis, NM 88101	(575) 714-3224 doubled@plateautel.net
Trucking	Pro Trucking LLC Nora Valeriano	1710 W. Tumbleweed Dr. Hobbs, NM 88240	575-441-2355 protruckingllc@yahoo.com
Trucking	<u>Levacy Trucking</u> Frank Levacy	1794 S. Lane Portales, NM 88130	(575) 714-2989
Construction Material Testing	Southwest Eng. Inc. Paul Pompeo	475 Archuleta Rd. Las Cruces, NM 88005	(575) 526-3381 paul.pompeo@soudermiller.com
Construction Material Testing	Pettigrew and Assoc. Charity Benton	100 E. Navajo Hobbs, NM 88240	(505) 280-8635 cbenton@pettigrew.us
Site Safety Management	Southwest Safety Svcs. Jefferey Garrett	128 Llano Del Sur SE Albuquerque, NM 87105	(505)873-0044 sales@swsafetyservices.com
Rental Construction Equipment	United Rentals Troy Johnston	1901 Commerce Dr. Hobbs, NM 88240	(806) 252-3100 tjohnsto@ur.com
Rental Construction Equipment	Worldwide Machinery Bart Furrow	3001 N. Lovington Hwy. Hobbs, NM 88240	(303) 341-5555 bfurrow@wwmach.com
Rental Construction Equipment	<u>Eastern Equipment</u> Jeanne Kircher	42421 US 70 Portales, NM 88130	575-356-5560 jkircher@yucca.net
Rental Construction Equipment	Plumb Bob Land/Cattle Jerry Swenson	POB 5573 Clovis, NM 88102	(575) 760-0289 jerryswenson@gmail.com
Rental Construction Equipment/Tools	Harbor Freight	1925 N. Prince St. Clovis, NM 88101	575-763-9544 RetailFacilities@harborfreight.com
Construction Water	Duncan Cattle Co. Jim Duncan	2656 srrg Causey, NM 88113	(575) 607-6399 jdcattle@yucca.net
Waste Disposal	Ed's Recycling Center Michael Lingnau	605 S. Prince St Clovis, NM 88101	(575) 760-6619 michael@edsrecycling.com



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 70

List of Recommended Contractors and Suppliers for Future Renewable Energy Projects

Workforce Category	Company Name and Contact Person	Address	Phone and Email Address
Glass Supply	All Glass Inc.	421 W. Fir Portales, NM 88130	(575) 356-0399 allglassincportales@live.com
Steel Supply	Clovis Steel Roger Cherry	2405 S. Prince St. Clovis, NM 88101	(575) 769-0808 roger@clovissteel.com
Metal Supply	My Metal Wholesale Gabe Goodwin	1379 US 60 Clovis, NM 88101	575-763-2662 ggoodwin@gomymetal.com
Shim Pack Supply	Reliance Steel G. Ortiz	1801 S. Eighth St. Albuquerque, NM 87102	(505) 247-1441 gortiz@rsac.com
Const. Supplies	Titan Const. Products Brian Roche	30 C Frontage Road East Placitas, NM 87043	(575) 771-3399 broche@titaneccp.com
Lumber Supplies	Kenneth Herbert Lumber Kenneth Herbert	317 South Main Ave Portales, NM 88130	(575) 356-5253 janet@kennethherbertlumber.com
Fuel Supply	Red Rock Oil	521 W. Brady Ave. Clovis, NM 88101	(575) 762-2284 redrockoilco@outlook.com
Misc. Supplies	Ace Hardware	1300 S. Avenue D Portales, NM 88130	(575) 356-5827 acehardware.megan@gmail.com
Misc. Supplies	AAA Firepro	221 Schepps Blvd. Clovis, NM 88101	(575) 762-2594
Sanitary Waste Disposal	Mighty Vac Suzahn Horton	POB 326 Texico, NM 88135	(575) 769-3132 mightyvac@gmail.com
Hydrovac Services	Superior Hydrovac Svcs	5500 W. Alabama Hobbs, NM 88242	(575) 390-1577 superiorhydrovacolutions@yahoo.com
Clothing Supplies	<u>Design Wearhouse</u> Lezlie Privett	1408 S. Ave D Portales, NM 88130	(575) 226-7878 viewourdesigns@gmail.com

Renewable Energy Project Recommended Firms Notes:

1. All of the above listed firms have their New Mexico Resident Firm Certificates with the exception of those firms underlined, who are pursuing their New Mexico Resident Firm Certificates.
2. As noted in the body of the report, Firms who are listed on the New Mexico Department of Transportation (NMDOT) Prequalified List have the experience and capability to work on Renewable Energy Projects in their areas of expertise. These firms are also recommended for contact for bidding purposes to determine their capacity to perform the required work production rates or to determine if they would like to joint venture with another firm to provide the required work production rates. The link to the NMDOT Prequalified List is as follows: [Prequal_List.pdf \(state.nm.us\)](https://www.state.nm.us/transportation/prequal/prequal_list.pdf)



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 71

STATE OF NEW MEXICO
OFFICE OF THE ATTORNEY GENERAL



HECTOR H. BALDERAS
ATTORNEY GENERAL

TANIA MAESTAS
Chief Deputy

January 3, 2020

VIA EMAIL

Russell Doss
Souder, Miller & Associates
3409 N. Grimes St.
Hobbs, NM 88240
russell.doss@soudermiller.com

Dear Mr. Doss:

Thank you for your work as the independent project advisor for the Sagamore Wind Farm with Southwest Public Service ("SPS"). Attorney General Balderas remains excited about the development of clean energy in New Mexico and the development of jobs and local expertise in the field, and your work is vitally important to these accomplishments. To that end, the Office of the Attorney General entered into the letter agreement with SPS, CCAE and WRA. We are excited about the opportunity to ensure jobs and projects for local New Mexico businesses and to grow New Mexico's clean energy work force. Though you have been providing monthly updates and since the December groundbreaking of the project, we are requesting specific information, of which we would appreciate timely production.

First, since the letter agreement provided 30% of the balance of plant costs, or approximately \$57 million, for cost effective and qualified New Mexico resident businesses, we are requesting written verification on whether the project is on target to meet that goal. If the project is not anticipated to meet that goal, what are the barriers to achieving success in this area? Have you observed New Mexico resident businesses being successful in their bids for the work? Please provide a list of the New Mexico resident businesses that have been approved and a list of the services that they provide. Secondly, while we have not received notice of any disagreement between you and the general contractor, please provide information reflecting any instance where you and the general contractor have disagreed or where you have made a recommendation that was not taken by the general contractor. If any such disagreement occurred, how were those disputes resolved?



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 72

Russell Doss
p. 2

We appreciate your attention to these matters and look forward to hearing from you by January 10, 2020.

Sincerely,

A handwritten signature in blue ink that reads "Cholla Khoury by dw".

Cholla Khoury
Director, Consumer & Environmental Protection

Cc:
Will DuBois, will.w.dubois@xcelenergy.com SPS
Steve Michael smichel@westernresources.org WRA
Chuck Noble noble.ccae@gmail.com CCAE



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 73



Souder, Miller & Associates ♦ 3409 North Grimes Street ♦ Hobbs, NM 88240
575.738.0283

January 9, 2020

VIA EMAIL

Cholla Khoury
Director, Consumer and Env. Protection
State of New Mexico
Office of the Attorney General
P.O. Box 1508
Santa Fe, NM 87504

Dear Ms. Khoury,

Thank you for your letter and thoughts regarding the Sagamore Wind Farm project and our work as the independent project advisor. This letter contains the responses to your questions raised.

1. Is the project on target to meet the \$57 million goal?

The goal of 30% of the balance of plant ("BOP") costs currently equates to approximately \$45 million and 50 million, as current forecasted BOP costs are lower than original estimates. After considering the amount of work proposed to be self-performed by the contractor under the project's current circumstances, the amount of previously identified available work that could be performed or supplied by NM firms was approximately \$30 million. We have been on a good track to meet that \$30 million figure. The most recent Project Team meeting was held on Thursday January 9, 2020 and the general contractor informed us he felt confident in meeting the \$30 million figure for work and supplies provided by NM firms.

Listed in the response to the next question is additional information describing the barriers to meeting the 30% goal.

2. What barriers are being experienced that is preventing meeting this goal?

Originally, we identified several work areas where we believed NM contractors would have the experience and capacity to provide significant work on the Sagamore Wind Farm Project. The work/supply category list we preliminarily identified for NM firms is as follows:

- roadway construction and roadway aggregate supply,
- foundation excavation, foundation rebar placement, and foundation pouring,
- concrete supply and concrete aggregate supply,



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 74

- electrical materials purchased,
- 34.5 kV electrical wiring and fiber optic wiring installation,
- 345 kV overhead transmission line installation,
- electrical substation construction,
- O&M building construction,
- gates/fencing,
- trucking,
- construction material testing,
- site safety management,
- site security,
- NM labor,
- rental construction equipment, and
- other small tasks including fuel provision.

Initial discussions with the General Contractor showed they were generally open to NM firms performing these work categories provided that the NM firms met the stringent safety regulations, were certified as NM resident firms, and could provide the extremely high production capacity required for this “fast track” project.

We worked aggressively to identify several roadway contractors and turbine foundation contractors and were able to get them certified as NM Resident Firms. As we were finalizing the prequalification process for several of these firms, we were informed by the General Contractor that they would be “self-performing” several of these work items. The General Contractor will be “self-performing” road construction, foundation excavation, and foundation concrete placement.

We had originally estimated that the approximate price to construct the roadways (including supply of roadway aggregate) to be approximately \$9 million. Since the general contractor will be constructing the roadways with their own crews, only the roadway aggregate (with trucking) will be able to be purchased from NM Resident firms, which is approximately \$3 million.

We have also estimated that the total foundation excavation, rebar placement and concrete pouring work is approximately \$35 million. With the general contractor providing this work concrete aggregate procurement is the last component of the foundation scope that could be sourced from a NM resident firm.

It should be noted that when we investigated the NM firms to perform this foundation work, a major problem was encountered. This project is a “fast track” project that resulted from a time squeeze between the delayed time frame for the Southwest Power Pool generation interconnection approval and the requirement to have the project fully complete and operational prior to the December 31, 2020 tax credit expiration.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 75

To complete this work schedule for approximately 240 turbine foundations, the contractor plans to have 15 turbine foundations, excavated, compacted, rebar placed and poured each week. This is a rate of three 400 cubic yard foundations each day. When we contacted the NM firms who could perform this type of work, they did not have the capacity to perform that high rate of production on this foundation construction. Since there is not an option to perform the work on a slower pace, the general contractor will need to perform that foundation work.

The general contractor pursued bids on the supply of concrete for the foundations from NM and out of state firms and the out of state firm had a substantially better price. Utilization of an out of state firm was approved by Xcel since the use of the NM firm would increase the price of the work.

However, we asked the general contractor if they would get a price from a NM Resident firm for the supply of concrete aggregate. They are still working on this possibility as the concrete sub-contractor is responsible for sourcing of the aggregate. The price for the concrete aggregate from near the project site should be comparable to the price for concrete aggregate hauled from out of state. We hope utilization of local aggregate can be realized as it has the potential to add approximately \$1 million in value to our NM spend goal.

When this wind farm project oversight work began, we were told that there were no NM firms that could provide the 345 kV overhead transmission line required for this project. We found three firms that appeared to be able to perform this work valued at roughly \$9 million.

However, when we discussed the “fast track” construction schedule and their existing work load, one firm could not meet the safety requirements, one firm pulled out because of their heavy existing work load and the final firm was disqualified by the general contractor because they did not have the experience and capacity to perform the work on the “fast track” schedule. When we reviewed the general contractors concerns with the last firm, we concurred.

Regarding the O&M building construction and the electrical substation construction, we also identified potential firms to bid that work, but the initial firms dropped out because of their existing workload and inability to construct the improvements in the time required. Since that time, we had two more firms interested in constructing these facilities and they were referred to the general contractor for review and prices. The value of these two facilities are roughly estimated to be \$5 million.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 76

3. Have you observed NM Resident Businesses being successful in their bids for work?

The previous question notes the problem with the NM concrete supplier being unable to compete in price with the out of state concrete supplier.

One of our successes has been in the provision of roadway aggregate. The general contractor went out to bids for roadway aggregate from out of state aggregate brokers. We investigated NM brokers and found they did not have the capacity to perform the required work. However, we were in contact with the successful out of state aggregate broker and they agreed to acquire the roadway aggregate from NM suppliers and use NM trucking firms to transport the aggregate. They have now contracted with a NM Resident firm to provide this work at an estimated cost of \$3 million.

Two NM Resident firms were awarded bids for the electrical wiring of the general contractor's yard and the purchase of supplies for the yard construction. We have since been given a list of other NM firms who have been contracted for relatively small work items. The majority of these do not have the NM Resident Certification, but some of these are now pursuing their NM Resident Certification, with our assistance. All these firms will be listed in the response to the next question.

Another of the apparent successes on this project is the purchase of electrical materials from a NM Resident Firm. We contacted a NM electrical supply firm that the general contractor had been previously worked with. They are a NM Resident Firm and between \$5-10 million of electrical supplies may be able to be purchased from this firm.

4. Provide a list of the NM Resident businesses that have been approved and a list of the services they provide.

<u>Firm</u>	<u>Service to provide</u>	<u>NM Resident Firm?</u>
Red Rock Oil, Clovis	Fuel supply	No (pursuing)
B&B Waste, Clovis	Site Waste Disposal	No (pursuing)
Mighty Vac, Texico	Site Sanitary Service	No (contacting)
Roosevelt COOP	Utility Service	No – utility
Wade Farms, Dora	Water	No (contacting)
Duncan Cattle, Causey	Water	Yes
Red River Fencing	Site Fencing	Yes
Border States Supply	Electrical Suppliers	Yes
Privett Electric, Port.	Electrical yard wiring	Yes
Double D Trucking	Road Aggregate/Trucking	Yes
Herbert Lumber, Port.	Lumber Supply	Yes
United Rental	Equipment Rental	Yes
Ace Hardware, Port.	Hardware store	No (pursuing)



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 77

Clovis Steel	Bldg. Supplies/hardware	No (pursuing)
My metal Whsl., Clovis	Metal Bldg. supplies	Yes (under DBA)
Lowe's, Clovis	Bldg. Supplies/hardware	No (contacting)
AAA Firepro, Clovis	Fire Ext. Sales/service	Yes
Amy's Whsl., Ros.	Tent Rental (ground break)	No
SMA	Bus. Source Advisor	Yes

5. Provide information regarding any disagreement between you and the general contractor or a recommendation that was not taken by the general contractor.

We had spoken to the general contractor about construction material testing for the project since a rough estimate of \$1 million could be required for this work. We prequalified two firms and asked the general contractor to get a quote from them. The contractor initially told us they asked for a quote from one firm and received no response. At the next meeting, we asked again if they had requested quotes from either firm and they said no. We have asked them to again get quotes from these firms and are awaiting their response at our next meeting.

6. If a disagreement occurred, how were those disputes resolved?

The first disagreement occurred when the general contractor originally told us they would receive quotes from NM firms for the roadway construction work. We proceeded to prequalify firms. Then two meetings later, they told us they would be "self-performing" the work. This was greatly disappointing since it would have been a very good work category for several NM Firms.

However, since the general contractor would not be using an out of state subcontractor to perform the work, we were limited as to being able to compare prices directly. We went along with the general contractor performing the roadway construction labor and asked if we could have the roadway aggregate supplied by NM firms. We were able to work with the out of state aggregate broker to have the NM aggregate supply and trucking costs performed by NM Resident Firms.

As noted earlier in this letter, we have received preliminary information from the general contractor regarding the award of the 34.5 kV electrical wiring plowing installation, the construction material testing, the concrete aggregate supply, the O&M building, and the electrical substation construction. We are working to obtain the bid information for each of these work items and reviewing them independently to make sure all of the firms are properly licensed in New Mexico and that the qualified NM firms are given equal opportunity to bid on and be considered for award the work contract.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 78

Thank you for the opportunity to provide you this additional detailed information on the Xcel Sagamore Wind Farm Project. I hope this has provided you the information you need. If you have any questions, please do not hesitate to contact me.

As we previously discussed, we will be holding an Advisory Group conference call on January 16, 2020 at 9:30 am (MT). These items can be discussed further during that meeting, if desired.

Sincerely,

Russell Doss, P.E.
Senior Engineer II

cc: Raiford Daniel, Xcel
Brian Hudson, Xcel

Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 79

STATE OF NEW MEXICO
OFFICE OF THE ATTORNEY GENERAL



HECTOR H. BALDERAS
ATTORNEY GENERAL

January 29, 2020

Via E-mail

Russell Doss
Souder, Miller & Associates
3409 N. Grimes St.
Hobbs, NM 88240
russell.doss@soudermiller.com

Dear Mr. Doss,

Thank you for your timely response to our inquiry of January 3, 2020. In your response you identified what appears to be a significant amount of work proposed to be self-performed by the contractor. In fact, your letter states that the value of the work set aside for New Mexico resident businesses has dropped from an anticipated \$45-\$50 million to \$30 million (Response letter, p. 1). You identified several areas in which the General Contractor decided they would be "self-performing" the work. Those areas included road construction, foundation excavation and concrete placement (Response letter, p. 2). Additionally, you noted that the decisions of the General Contractor to "Self-perform" the work limited your ability as to being able to compare prices directly (Response letter, p. 5).

The Attorney General is concerned with the reduction of value in the current forecast compared to the anticipated amount agreed to with the parties. Of particular concern is the work that has been labeled "self-perform" rather than performed through New Mexico subcontractors. As stated in the letter agreement with the parties, we are aware that the award of subcontracts to New Mexico resident businesses is dependent on, among other things, cost effectiveness, thus a critical component of the decision on whether to use New Mexico resident businesses is whether the use of such a business can result in cost savings, or at least no increased cost. Have you been able to independently verify cost comparison between the items the General Contractor has deemed "self-perform" and the bids of New Mexico resident businesses? Please confirm for us that the "self-performed" items to be completed by the General Contractor are in fact to be performed by employees of the company and not independent contractors, as defined by the U.S. Internal Revenue Code. Please provide a list of employees or position numbers and a description of the work which the General Contractor plans on performing, as well as all subcontracts the General Contractor has entered into for the Sagamore Wind Farm. What information have you obtained to be able to ensure that the lowest price resource is being utilized to fulfil such "self-performed" items?



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 80

Russell Doss
January 29, 2020
Page 2

Additionally, it appears from the list of New Mexico businesses you provided that most of the qualifying businesses are supply contractors and not labor or skilled contractors. Please explain why there are few, if any, businesses identified for the provision of labor and skilled services?

We appreciate your continued attention to these matters and look forward to hearing from you by February 7, 2020.

Sincerely,

Cholla Khoury
Director, Consumer & Environmental Protection

cc:
Will DuBoise, will.w.dubois@xcelenergy.com SPS
Steve Michael smichel@westernresources.org WRA
Chuck Noble noble.ccae@gmail.com CCAE



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 81



Souder, Miller & Associates ♦ 3409 North Grimes Street ♦ Hobbs, NM 88240
575.738.0283

February 14, 2020

VIA EMAIL

Cholla Khoury
Director, Consumer and Env. Protection
State of New Mexico
Office of the Attorney General
P.O. Box 1508
Santa Fe, NM 87504

Dear Ms. Khoury,

Thank you for your letter and thoughts regarding the Sagamore Wind Farm project and our work as the independent project advisor. This letter contains the responses to your questions raised.

1. Have you been able to independently verify cost comparison between the items the General Contractor has deemed "self-perform" and the bids of New Mexico resident businesses?

No cost comparisons were possible because the New Mexico resident businesses that prequalified ultimately lacked the capacity to meet the needs of the project as a prime subcontractor.

For example, regarding the Wind Turbine Foundation excavation, rebar placement and concrete pouring work, we had prequalified a few NM subcontractors that perform this type of work. However, when we notified the NM subcontractors of Wanzek's "fast track" schedule for the foundation construction where they were excavating three foundations each day, placing rebar for three foundations each day, and pouring three foundations each day on an assembly line basis to construct fifteen foundations each week, the NM subcontractors informed us they did not have the personnel to complete the work on that "fast track" basis. For this reason, no NM firms had the capacity to bid on the "fast track" foundation excavation, rebar placement or concrete pouring work.

Wanzek has provided summary costs associated with self-performing certain scope items. However, a large contractor with very skilled and experienced roadway, excavation, rebar and concrete crews can commonly do this type of work at significantly less cost than private NM subcontractors with less experience who have never worked on a wind farm project previously. Also, Wanzek's shared overhead costs associated with being a very large company give them a cost advantage over small private firms.



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 82

Contributing factors for the decisions for Wanzek to self-perform these scope items include their competitive industry costs, the high-risk potential created by a demanding project schedule, and current availability of company resources.

2. Please confirm for us that the "self-performed" items to be completed by the General Contractor are in fact to be performed by employees of the company and not independent contractors, as defined by the U.S. Internal Revenue Code.

The self-performed items performed by Wanzek are being performed by employees of Wanzek and not by independent contractors, as defined by the U.S. Internal Revenue Code.

3. Please provide a list of employees or position numbers and a description of the work which the General Contractor plans on performing for the Sagamore Wind Farm.

Listed below is a summary of Wanzek's craft positions being utilized to self-perform certain scope items.

- Access Road Construction
 - Construction Manager 2 EA
 - Equipment Operator 13 EA
 - Foreman 3 EA
 - Skilled Labor 6 EA
- WTG Foundation Excavation & Backfill
 - Construction Manager 2 EA
 - Equipment Operator 6 EA
 - Foreman 3 EA
 - Skilled Labor 6 EA
- WTG Foundation Concrete Forming & Pouring
 - Construction Manager 2 EA
 - Equipment Operator 2 EA
 - Crane Operator 2 EA
 - Foreman 2 EA
 - Skilled Labor 11 EA

4. Please provide a list of the subcontracts the General Contractor has entered into for the Sagamore Wind Farm.

- Collection System Trenching – Gulbranson Trenching
- Substation & T-Lines – Paradigm
- Concrete Supply – Van Eaton Redi Mix
- Rebar Install – TRC



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 83

- O&M Building – MBA
- Aggregate Supply – Matmown
- Electrical Testing – CE Power Engineering Services
- Materials Testing – Element Materials Technology
- Fiber Terms – True Grit Communication
- Fencing – Red River Fencing
- Yard Electrical Hook up – Privett Electric

Please note that this list includes all subcontractors who are presently under contract, not just the NM Resident subcontractors. As noted later under question #6, Wanzek is still working with NM contractors regarding the provision of construction services under some of the above listed subcontractors.

5. What information have you obtained to be able to ensure that the lowest price resource is being utilized to fulfil such "self-performed" items?

Since no NM subcontractors had the capacity to construct the Wind Turbine foundations on the "fast track" basis, we could only analyze the roadway work to determine if the lowest price resource was being utilized to fulfill that "self-performed" work.

Xcel notified SMA that the unit price per foot of Wind Turbine Access Road construction was \$21 per linear foot of roadway. To determine if this was a better price than could be obtained from NM roadway contractors, we used two comparison methods.

First, we accessed the most recent available NMDOT average annual unit bid prices from the NMDOT website. Second, we accessed an annual roadway bid agreement from a Southeast NM community near the project area. One of the bidders was local, but the second bidder was from out of town approximately 70 miles from the project site. The second bidders bid prices were used as a second comparison for this analysis because they would be more representative of this project where all contractors will need to travel some distance to work on the project.

To construct the access roads, four work items will be needed including clearing and grubbing, excavation, subgrade compaction and base course installation. One additional item, geogrid fabric installation is needed for this access road construction, but it was not listed on the NMDOT average costs or the SENM community annual bid. The cost for this geogrid fabric installation will be added at the end of the cost comparison.

The annual average NMDOT prices include many very large projects and are listed on the following page next to the SENM Out of Town Contractor Annual Roadway Bid Prices.



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 84

NMDOT Annual Average Bid Prices -

Clearing and Grubbing -	\$1.00/Sq. Yd.
Excavation -	\$6.00/Cu. Yd.
Subgrade Prep. (per lift)	\$1.17/Sq. Yd.
Base Course Installation -	\$17.91/Ton

SENM Annual Roadway Bid Prices -

\$1.50/Sq. Yd.
\$12.00/Cu. Yd.
\$1.00/Sq. Yd.
\$23.00/Ton

Since the base course is being provided at a separate cost for this access road work and is not included in the General Contractors per-foot installation price, we must remove the value of the base course aggregate from the unit prices above. The value of the caliche base course aggregate supplied on this project is \$7.48/Ton. When this cost is removed from the above base course installation prices, the actual installation cost without aggregate is shown as follows:

NMDOT Annual Average Bid Prices -

Base Course Installation Only -	\$10.43/Ton
---------------------------------	-------------

SENM Annual Roadway Bid Prices -

\$15.52/Ton

To complete the analysis to determine a “price per foot” of access road, we must determine the quantities needed for each work item for the 16 foot wide access road. These calculations are reflected below:

- Clearing and Grubbing – $16 \text{ SF/LF} \times 15\text{F}/9\text{SY} = 1.78 \text{ SY/LF}$
- Excavation – Excavate 2.5 feet below surface for subgrade preparation to be performed in four 6-inch lifts – $16 \text{ SF/LF} \times 2.5 \text{ SF/LF} \times 1 \text{ CY}/27/\text{CF} = 1.48 \text{ Cu. Ft/LF}$
- Subgrade Preparation – As noted above, four 6” lifts of compaction are needed – four lifts x $1.78 \text{ Sq. Ft/lift} = 7.18 \text{ Sq. Yd/LF}$
- Base Course Installation (6” thick) – $16 \text{ SF/LF} \times 0.5 \text{ ft/LF} \times 1 \text{ CY}/27 \text{ Cu. Ft.} = 0.3 \text{ Cu. Yd/LF}$

With the Bid Prices noted earlier and the quantities listed above, the prices are as follows:

NMDOT Annual Average Bid Prices -

Clearing and Grubbing -	\$1.78/LF
Excavation -	\$8.88/LF
Subgrade Prep. (four lifts)	\$8.33/LF
Base Course Installation -	<u>\$3.13/LF</u>
Subtotal cost est. -	\$22.12/LF

SENM Annual Roadway Bid Prices -

\$2.67/LF
\$17.76/LF
\$7.12/LF
<u>\$4.66/LF</u>
\$32.21/LF

As noted earlier, the geogrid fabric installation was not listed in either of the above bid price documents. SMA received a price on another bid in SENM that did include geogrid fabric. The cost of the fabric and installation was \$4.24/Sq. Yd. On a large project like this, the



Xcel Energy Sagamore Wind Farm Business Sourcing Advisor Final Report Page | 85

installation cost of the geogrid fabric would be approximately \$1.00/Sq. Yd. Since each Linear foot of the roadway is \$1.78 Square yards, this would add \$1.78 to each cost.

With all items considered, the total cost comparison results are as follows:

Wanzek "self performed" access road price with geogrid - \$21.00/LF
NMDOT Average Annual bid price plus geogrid installation (\$1.78/LF) - \$23.90/LF
SENM Annual Roadway Bid Price plus geogrid installation (\$1.78/LF) - \$33.99/LF

Wanzek benefits from being a very large company with administrative overhead spread over all its divisions. This cost advantage appears when their access road price is compared to the costs from the other options. The Wanzek price is approximately 12% lower than the low bid cost average of NMDOT projects all around New Mexico. When comparing to a local contractor from SENM that needed to include travel costs for employees to access the site, the Wanzek cost advantage increases to 34%.

It should be noted that the low bid SENM Annual roadway bid price for the local contractor was still in excess of the Wanzek price even though the local contractor had no out of town travel costs to access the work sites. The low bid SENM Annual Roadway bid price (with geogrid installation cost) was \$22.02, which was still approximately 5% over the Wanzek "self-performed" bid price.

As a result of this analysis, SMA is confident that the lowest price resource is being utilized to fulfil the "self-performed" items.

6. Additionally, it appears from the list of New Mexico businesses you provided that most of the qualifying businesses are supply contractors and not labor or skilled contractors. Please explain why there are few, if any, businesses identified for the provision of labor and skilled services?

The project has just begun and Wanzek is still working with their subcontractors and NM contractors regarding the provision of construction services. Wanzek has confirmed they will be able to meet or exceed the goal for supplies and services to be provided by NM Resident firms.

Listed below is a previously provided list of the businesses that have been approved, a list of the services they will provide, and their present NM Resident status.

<u>Firm</u>	<u>Service to provide</u>	<u>NM Resident Firm?</u>
Red Rock Oil, Clovis	Fuel supply	No (pursuing)
B&B Waste, Clovis	Site Waste Disposal	No (pursuing)
Mighty Vac, Texico	Site Sanitary Service	No (contacting)



Xcel Energy Sagamore Wind Farm
Business Sourcing Advisor
Final Report
Page | 86

Roosevelt COOP	Utility Service	No – utility
City of Portales	Water	No – utility
Duncan Cattle, Causey	Water	Yes
Red River Fencing	Site Fencing	Yes
Border States Supply	Electrical Suppliers	Yes
Privett Electric, Port.	Electrical yard wiring	Yes
Double D Trucking	Road Aggregate/Trucking	Yes
Herbert Lumber, Port.	Lumber Supply	Yes
United Rental	Equipment Rental	Yes
Ace Hardware, Port.	Hardware store	No (pursuing)
Clovis Steel	Bldg. Supplies/hardware	No (pursuing)
My metal Whsl., Clovis	Metal Bldg. supplies	Yes (under DBA)
Lowes, Clovis	Bldg. Supplies/hardware	No (contacting)
AAA Firepro, Clovis	Fire Ext. Sales/service	Yes
Amy's Whsl., Ros.	Tent Rental (ground break)	No
SMA	Bus. Source Advisor	Yes

The project team has been experiencing challenges with the compressed planning and construction schedule caused by the Southwestern Power Pool (SPP) DISIS delays. The original project schedule had identification, vetting, and development of New Mexico suppliers beginning approximately 12 months before construction mobilization. Due to DISIS delays, it was unknown if the project was going to move forward until August 2019. Construction mobilized in November 2019 compressing the sourcing portion of the schedule.

Thank you for the opportunity to provide you this additional information on the Xcel Sagamore Wind Farm Project. I hope this has provided you the information you need. If you have any questions, please do not hesitate to contact me.

As we previously discussed, we will be holding an Advisory Group conference call on February 20, 2020 at 9:30 am (MT). These items can be discussed further during that meeting, if desired.

Sincerely,

Russell Doss, P.E.
Senior Engineer II

cc: Raiford Daniel, Xcel
Brian Hudson, Xcel

2017



SOLAR TRAINING AND HIRING INSIGHTS

A Solar Training Network Research Report





This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DE-EE0007319, Nationally Administered by The Solar Foundation.

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

PRIMARY AUTHORS

Tim Olson, J.D., The Solar Foundation
Colin Nackerman, The Solar Foundation

ACKNOWLEDGEMENTS

The Solar Training Network is a program funded by the U.S. Department of Energy's SunShot Initiative and administered by The Solar Foundation. The Solar Training Network is designed to help meet the workforce needs of the solar industry through solar training and strategic employment partnerships. The Solar Foundation is a national 501(c)(3) nonprofit organization whose mission is to accelerate adoption of the world's most abundant energy source.

The Solar Training Network team would like to acknowledge and thank the research partners and contributors to this report. Thank you to Lyra Rakusin and Tommy Cleveland, North Carolina Clean Energy Technology Center, NC State University, for collecting and analyzing employer hiring and promotion data; Colleen McCann Kettles, Florida Solar Energy Center, University of Central Florida for conducting interviews and synthesizing data on tools and resources; Mark White, Ph.D. for guidance on the development of the geographic demand index; the entire research team at the Solar Energy Industries Association (SEIA) for providing invaluable labor data and analysis support; and Alex Winn, The Solar Foundation for editing and policy insight.

The Solar Foundation would also like to thank all the solar employers and training providers who participated in the various surveys, interviews, and data collection efforts that were conducted. Your responses were critical in providing us with timely data and insights that we hope will provide lasting benefits for the solar industry.

For technical questions about the report, please contact: Tim Olson, The Solar Foundation, Director of Legal Affairs, tolson@solarfound.org

For press and media inquiries, please contact: Avery Palmer, The Solar Foundation, Senior Communications Manager, apalmer@solarfound.org, 202-866-0908

Please cite this publication when referencing this material as "Solar Hiring and Training Insights 2017, The Solar Foundation, available at: SolarTrainingUSA.org"

© April 2017, The Solar Foundation





SOLAR TRAINING AND HIRING INSIGHTS 2017

A Solar Training Network Research Report

In surveys of employers conducted in 2015 and 2016, U.S. solar employers reported experiencing high levels of difficulty filling open positions. This report summarizes research by the Solar Training Network – a program funded by the U.S. Department of Energy SunShot Initiative – that analyzes why the solar industry is experiencing such high levels of difficulty finding and retaining qualified applicants; explores the business case for investing resources in solar workforce development; and examines what can and should be done to efficiently and effectively facilitate solar hiring. The research aggregates data from several efforts, including an extensive survey of more than 400 solar installers, as well as smaller case studies and in-depth interviews with dozens of solar employers, trainers, and workforce development boards.¹

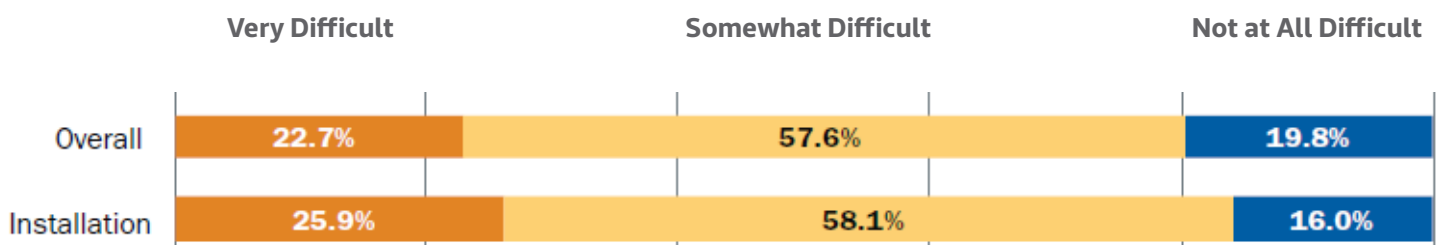
The cost of solar installations have dropped precipitously over the last several years and, as a result, the rate of solar photovoltaic (PV) deployment has grown exponentially, with annual installed capacity growing from 1,925 megawatts (MW) in 2011 to 14,626 MW installed in 2016.² The U.S. solar workforce responded in tandem, with job growth increasing 247% over

the same time period, surging from 105,145 to 260,077 solar workers in just five years.³ In 2016 alone, the solar workforce added more than 51,000 new solar jobs, 80% of which were newly created positions.⁴

The majority of the new solar industry jobs added in the last five years were positions within installation firms – with 93,199 installation related jobs added between 2010 and 2016.⁵ Despite growing efforts by public and private solar training organizations, installation firms from around the country still report significant difficulty finding qualified candidates. **In 2016, 84% of solar installers reported difficulty filling open installation positions.**⁶

Solar employers expect to add 26,258 positions in 2017, a 10% growth in the workforce. While this expected employment growth may be lower than the 24.5% experienced in 2016, a 10% increase still represents significant growth in an industry with an already insufficient applicant pool. In addition, employment growth in the overall U.S. economy is projected to continue, meaning competition for qualified workers from other industries will likely increase as well.

HIRING DIFFICULTY FOR OVERALL SOLAR INDUSTRY VS. INSTALLATION SECTOR, 2016



Despite the increasing maturity of the solar market, solar employers' difficulty finding qualified workers has only increased in recent years. Between 2014 and 2016, solar installation firms reporting that it was "very difficult" to find qualified workers rose from 19.4% to 25.9%.⁷ In some states, the struggle to find and retain qualified solar employees seems almost ubiquitous among employers. The top five states with the highest reported difficulty hiring⁸ were Indiana (100%), New Mexico (95.5%), Oregon (93.3%), Utah (91.2%), and Hawaii (90.9%).

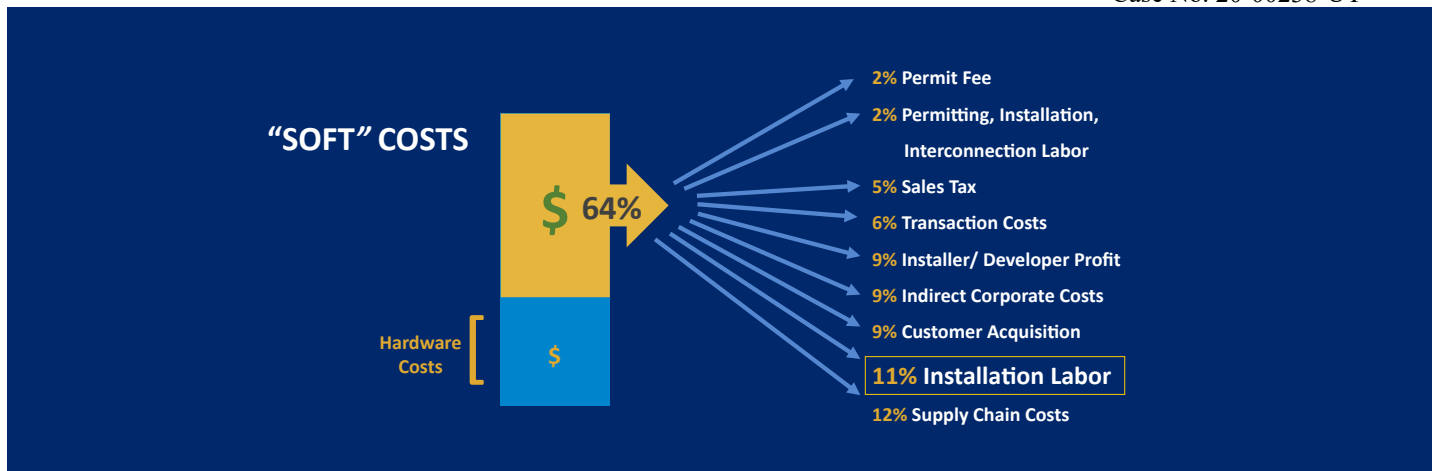
While an insufficient number of applicants is an issue in many regions, with half (50%) of all firms nationally reporting a deficient supply of applicants, the quality of new hires is frequently cited as a more pressing issue. **Over three quarters (77.6%) of all employers cite difficulty finding candidates with any training specific to the position, and a similar number (77.9%) report difficulty finding candidates with any relevant work experience.** These results were further corroborated by the 2016 National Solar Jobs Census which found that lack of applicant experience/training, certifications, and an insufficient applicant pool were the top three most significant contributors to difficulty in hiring by employers.⁹

TOP STATES - HIRING DIFFICULTY



The gap between solar workforce supply and demand, and associated difficulty filling open positions, increases the ultimate cost of deploying solar. **In a 2015 survey, two thirds of employers indicated that difficulty filling open positions was both costing their firm money and restricting their ability to grow.** Recruitment costs, and the opportunity cost of delayed hiring and missed business opportunities, are substantial. When asked to quantify the impact unfilled positions had, 38.7% of employers reported costs greater than \$10,000 per position, with 13.7% reporting costs greater than \$50,000. Clearly improving employee pipelines and decreasing difficulty finding and hiring qualified solar workers can have a tremendous economic impact on the solar industry.





Soft costs – the non-hardware costs of a solar installation, which include the cost of recruiting, hiring, training, and retaining employees – account for a significant portion (64%) of the final price per watt of installed solar in the U.S.¹⁰ **Installation labor costs alone account for 11% of the total cost of a new solar PV system.** These soft costs are keeping U.S. solar PV installation prices above those in many other countries, despite comparable hardware costs,¹¹ leading to lower numbers of installed systems than would otherwise be possible.

The research conducted by The Solar Training Network aims to provide new information and increase understanding of the solar training and hiring practices that may reduce installation labor soft costs. To accomplish this, the research focuses on three essential questions. **Why** should solar employers invest in training and workforce development? **What** are solar employers looking for and what are the best practices for training potential and existing solar workers to help meet that demand? Lastly, **where** should solar workforce development tools and resources be deployed to most efficiently and effectively bridge the gap between solar workforce supply and demand?

THE BUSINESS CASE FOR INVESTMENT IN TRAINING

Understandably, a major focus of solar training and safety education aims to decrease mistakes and injury rates. Mistakes by solar installers can

be costly for a company and the solar industry as a whole, and can even lead to serious injury or death. According to a 2014 study, a typical residential rooftop installation that has been improperly installed can lead to call-backs for additional removal, repair, and reinstallation, costing between \$2,500 and \$7,500.¹² **If improved training procedures could lead to a 1% decrease in the rate of such call-backs, it could save the solar industry more than ten million dollars in less than a year.**¹³

Additionally, research has shown that incumbent training and advancement opportunities are primary drivers of increased employee satisfaction.¹⁴ Increased job satisfaction can reduce employee turnover and improve productivity, which can also enhance company revenues.¹⁵ A continued focus on training to increase labor efficiency and lower employee turnover has the potential to yield tremendous savings for employers.

Seeking to examine the business case for the investment of resources by employers in training after hire, this research effort consisted of an in-depth analysis of the hiring, training, and promotion practices of ten solar installation firms. Both the costs and benefits associated with each company’s hiring practices were assessed. **The initial results show a positive trend between investment in training and increased labor efficiency.** This result is not surprising, as it is a trend that has been affirmatively demonstrated in similar industries.¹⁶

TRAINING REQUIRED AND FINANCED BY COMPANY, BY POSITION.

Company	# of Hours for Required Onboarding Technical Training	Proficiency Requirement to move to PV2/ Jr. Installer	Proficiency and Training Requirement to move to PV3/Sr. Installer	Average Number of Months to get to PV3/ Sr. Installer	Proficiency Requirement to become Crew Lead
A	40 hour in-house	Passed Probation, up to 6 months	Work Independently, Work Safely	6-12 months	Years in Company
B	40 hour in-house	No data	No data	No data	Electrical License in required locations
C	2-3 weeks supervision with Operations Director prior to crew assignment	N/A	N/A	N/A	Electrical License
D	Installers are taking semester Journeyman classes.	Review	Review	6 months	Electrical License. Previously NABCEP Certification and Electrical License
E	OSHA 10	OSHA 10, Pass Probation	Work Independently	6 months	OSHA 30
F	OSHA 10	N/A	4 months	12 months	NABCEP Accredited Classes, SunPower Master Certification
G	8 hours of supervision on jobsite	N/A	Work Independently	6 months	Electrical License
H	5 hours online safety training	At least 6 months at PV1	92% QC rating, work independently using SOP	At least 6 months at PV2, Install 0.150 kW per Hour	92% QC rating, attitude and office involvement
I	4 Hours Safety with Crew Lead	OSHA 10, Forklift, Work Independently	SEI PV101 Course	6-9 months	Some kind of management course
J	3 Hours Safety Training with Solar Manager	N/A	Met professional goals	12 months	Can Interface with Customer, Manage crew

A breakdown of the training practices financed by those companies both immediately after hire, and throughout an average employee's career, are summarized in the table on page 4. All companies have been kept anonymous.

Each of the ten companies interviewed had varying forms of on-boarding and training for entry-level installers, exemplifying the diverse approaches to post-hire training in the solar industry.¹⁸ **However, almost all of the companies expressed similar opportunities for rapid advancement and promotion to a PV3/Senior Installer position after only 6-12 months of work and training.** Vertical movement within these companies was not just in title, but consisted of pay raises that reflect their value-add through significantly higher wages on average. **An average employee at one of these companies could see a 45% wage increase after less than one year of experience and training at the company.**

The relatively rapid promotions and pay increases witnessed in the ten companies surveyed are made less surprising when considering employer-reported difficulty finding employees with relevant work experience and adequate soft skills.¹⁹ Within a year, an entry-level employee will have developed significant hands-

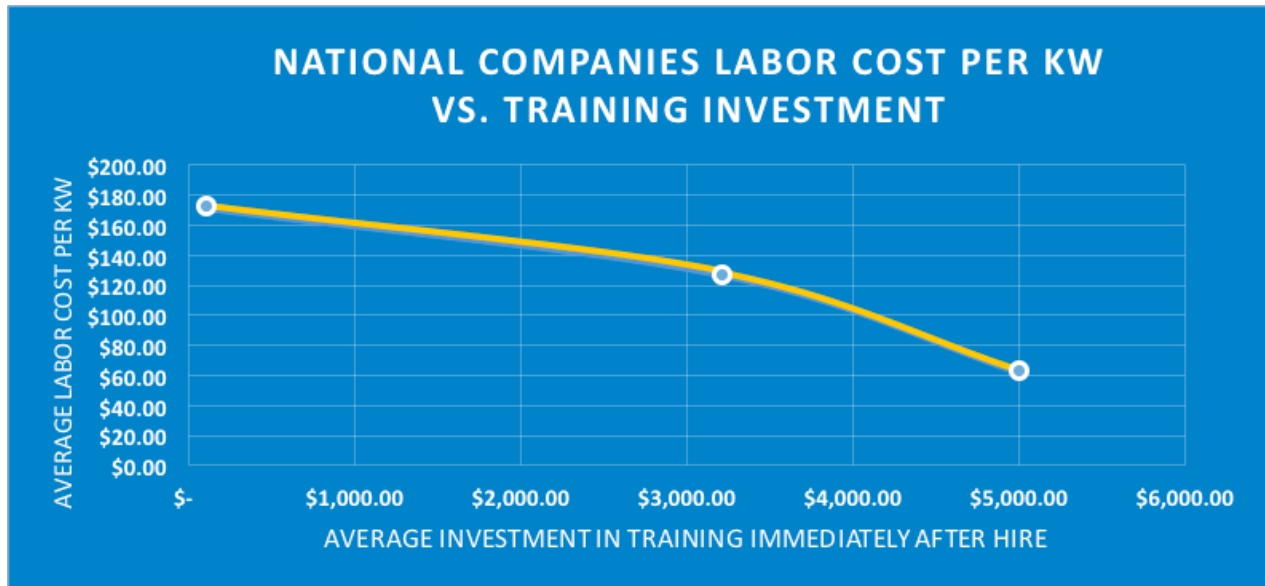
on experience, and those without sufficient soft skills can be quickly weeded-out.

Though the sample size of companies interviewed was relatively small, three of the ten employers were large multi-state companies that, when combined, accounted for the majority of current solar hiring and capacity deployment in the United States.²⁰ These three companies all operate in more than seven states and are spread over diverse markets and policy environments. Averaging labor rates across multiple diverse markets lowers the possibility that these companies' costs are skewed by local policies and requirements. Additionally, these three companies can achieve the most comparable economies of scale. These factors make them the most apt in the sample to compare returns on their investments in training.

When these three companies are compared there is a downward trend in average labor costs with increased investment in employee training. The most efficient solar installer in the sample, reporting \$65 of installation labor per kW installed, also committed the largest investment in training new employees at \$5,000 per installer. Comparatively, the median company investment amongst the ten employers was approximately \$100 per employee, and indicated nearly double

HOURLY WAGE DATA FOR INSTALLERS, BY POSITION.

Hourly Wage Summaries					
	Entry-Level No Experience (PV1)	Some Experience (PV1)	Some Solar Experience (PV2)	Sr. Installer (PV3)	Crew Lead
Range	\$10 - \$23	\$10.50 - \$23	\$16 - \$27	\$15 - \$32	\$20 - \$48
Mean	\$13.93	\$14.14	\$18.64	\$20.50	\$33.68
Median	\$13.00	\$13.50	\$17.00	\$20.00	\$35.00



the labor costs at \$130 per kW installed. While not statistically conclusive, this comparison supports the concept, seen in similar industries, that a company can experience a return on investment in training after hire. While these companies represent the majority of current hiring in the U.S., additional analysis is needed to provide statistically significant results.

By working with solar installers, training providers can help the solar industry decrease labor-related soft costs and increase PV deployment broadly by developing improved incumbent worker training opportunities. Through this research and improved industry communications, training providers can also gain a better understanding of what solar employers are looking for in entry-level candidates and help decrease the difficulty finding and retaining qualified employees through improved prior-to-hire training programs.

WHAT EMPLOYERS ARE LOOKING FOR

In the last several years there has been a maturation and proliferation of solar PV Balance of Systems (BOS) equipment, including racking

and power control systems. Many companies have taken this opportunity to develop their own installation techniques and procedures based on the products they prefer and believe offer them a competitive advantage. Consequently, companies have produced a suite of programs and techniques for teaching associated product- and company-specific installation practices after hire, as seen above. **Employers correspondingly report that they look less to installation-specific training among job applicants, and place more value on those experiences that develop technical abilities, safety techniques, and soft skills that are common to all companies.** A lack of traditional in-depth training, degrees, certifications, and electrical licenses are not holding back entry level applicants, but seem to hold more value for incumbent employees looking to take on greater levels of responsibility and leadership within their organization.

Overall, the research indicates that an *ideal* entry-level solar installer candidate would have some prior solar or construction trade experience (less than one year is acceptable for most employers), with some basic electrical knowledge, familiarity with PV system

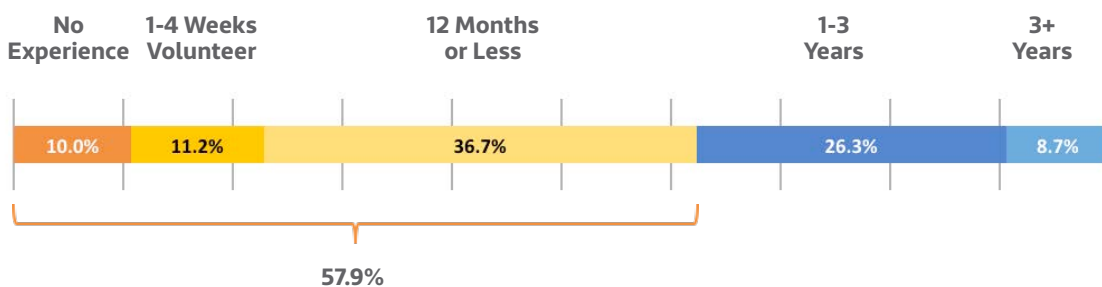


installation, and understanding of safety protocols. Employers indicate that there needs to be *more* training (not per student, but generally), and that they would benefit from access to industry standardized on-the-job training programs for both new hires and incumbent employees. Training providers should connect with their local employers to develop hands-on opportunities for entry-level trainees, as well as more in-depth upskilling programs for existing employees. This will ensure training effectively prepares students with the appropriate *level* of skills and experiences employers are looking for, and help incumbent solar workers advance their careers.

A. Previous Experience

Solar employers express relatively low expectations for the desired level of previous work experience in entry-level applicants. As discussed above, a lack of relevant work experience was the most commonly cited (77.9%) reason for difficulty hiring. This is despite the fact that **a majority of installation companies (57.9%) expect less than a year of experience in a comparable position for entry level candidates**, with 21.2% of those expecting either no formal experience or 1-4 weeks as an apprentice, intern, or volunteer in a comparable position.

LEVEL OF EXPERIENCE EXPECTED FOR ENTRY-LEVEL CANDIDATES



Entry-level solar positions therefore appear to be well suited to job seekers moving laterally from similar industries. Electrical experience, soft skills (work ethic, dependability, critical thinking), and roofing experience ranked highest in terms of areas of expertise that are most difficult to find in solar job applicants. These skills can be developed and demonstrated to employers through non-solar experience in a variety of previous positions. **A majority of employers (61%) consider experience in a non-solar construction trade important to their hiring considerations.** Additionally, employers value more than just full-time experience; over half (57%) of employers also find a solar apprenticeship²¹ or internship important when considering new applicants.

B. Training

Generally, employers believe that the solar industry would benefit from additional and improved solar training and education for installer applicants and incumbent employees. **Over three quarters (79.6%) of employers stated that there was a general need for additional solar training.** However, in another response, only 40.9% of employers stated that completion of a semester-long course in solar installation training is either “important” or “somewhat important” for entry-level installers.

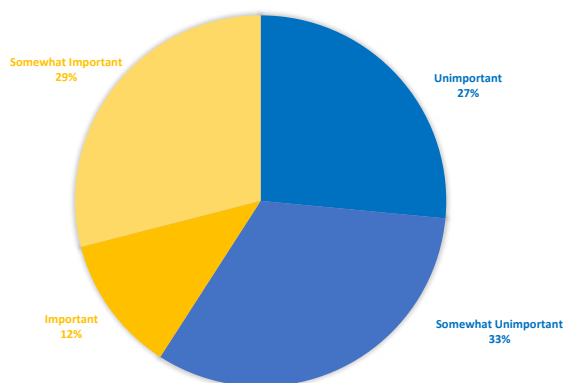
There is a clear desire for some form of solar training and increased skill development for entry level positions, but it is not clear if increased traditional semester-long courses would adequately address those needs for entry-level employees.

The disconnect over the appropriate level of training does not necessarily indicate that the standard 40+ hour course has no place in today’s solar industry, nor does it mean that prior-to-hire training in general is not valued. Rather, the level of detail covered in semester-long courses likely holds more value for incumbent workers looking to advance their careers within a company.

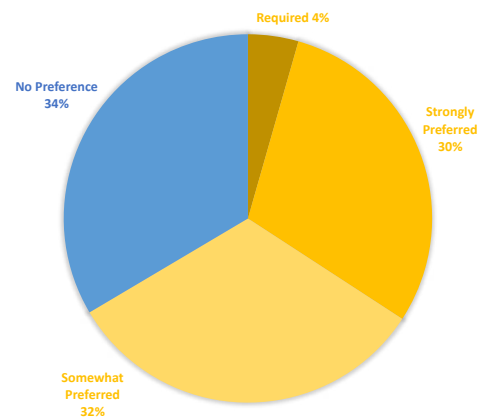
C. Certifications

Skilled technical industries rely upon standardized certifications as benchmarks for employee competency. However, compared to some similar industries such as electrical or plumbing, there is generally less emphasis on certifications in the solar industry.²² **Currently, the solar industry is almost evenly split on the importance of entry-level installers obtaining a solar certification, with 48.1% considering it either important or somewhat important, and 51.9% considering certifications unimportant.**

IMPORTANCE OF COURSE COMPLETION



NABCEP EXAM PREFERENCES



The North American Board of Certified Energy Professionals (NABCEP) Associate Exam is the most widely-recognized solar industry certification. Sitting for the exam requires the completion of a 40-hour course, built upon the NABCEP Associate Learning Objectives which were developed with input from a broad cross-section of solar installers and equipment manufacturers.²³ When hiring entry-level solar installation workers, over half (62%) (62%) of employers stated they prefer NABCEP exam passage; however, only 0.8% of employers require a NABCEP certification, and 49.1% do not consider it important in evaluating entry-level candidates. Comparatively, more employers considered completion of a solar apprenticeship (57.4%) or construction experience (61.4%) important in their hiring decision than a certification.

A real-time labor market information analysis tool – TalentNeuron – was used to analyze more than 800 open solar PV installer positions throughout the U.S. in January 2017. The results corroborated the installer survey responses given above. Of these entry-level positions advertised online, less than 10% referenced a preference for, or requirement of, NABCEP credentials, and one in four (24%) indicated a preference for, or requirement of, OSHA certification.

EMPLOYER TRENDS IN POST-HIRE TRAINING

Once a solar employer decides to bring on a new hire, they have a broad range of resources and options available to continue to train and upskill that employee, filling gaps that may still exist in their skillset. Post-hire training can take many forms, including formal on-the-job training programs, third-party training and certifications, mentorship, internship and apprenticeship programs, and more. Many larger companies have the ability to

create standardized, in depth, onboarding and training for all employees regardless of their background. In contrast, smaller companies tend to rely more heavily on training provided by crew leads or third-party providers. Many federal, state, and private programs exist to help facilitate and fund workforce development and training. Nevertheless, dozens of interviews with employers, training providers, and workforce development boards across the country indicate that such programs are largely underutilized by the solar industry.

A. On-the-Job Training

Only 34% of employer respondents to the broad 400+ employer survey indicated that they provide a formal on-the-job training (OJT) program. Of those that offer OJT, the average training length was 40-hours. Safety training was the primary focus of most OJT programs. Over two thirds (65%) of OJT programs include OSHA safety training, with the majority (63%) offering the 10-hour OSHA training course, a quarter (24%) offering both 10 and 30 hour courses, and 14% offering only the 30-hour course. The next most frequently covered topics, with about 5 hours each, include system components, solar energy fundamentals (mainly related to installation), and electricity basics (also tied to components). Other training includes product-specific training offered by manufacturers, utilized by 63.9% of employers for part of their OJT, each averaging about 8 hours.

Only 42.7% of installers use outside training providers not employed directly by their company as a part of their OJT, and only 40.9% of OJT programs included a classroom component. Almost two-thirds (63.6%) of those that do offer classroom training with a third-party trainer send their employees to the training provider's facilities for training. However, most installers (59.2%) do not currently have relationships with local training providers, such as community colleges.

Solar companies generally rely most heavily on internally developed materials versus those produced by industry organizations to deliver OJT. A majority of respondents (55%) rely on some form of tool, checklist, or application, with most (54%) using *company specific* checklists, training, and processes. **With that said, two thirds (66%) of respondents stated that a standardized industry-wide OJT training program would be highly valuable to their company.** The three topics which companies felt would be most valuable to cover in a standardized training program were:

- System Installation and Connection (78%) including basic knowledge of system components and basics of installation/ connection of a system
- System Components (75%) including the ability to identify and correctly handle solar system components
- Electricity Basics (75%) including basic electrical principals and common electrical system components

B. Workforce Development Tools and Resources

Tools and resources that help attract, train, and retain qualified workers can be essential to the development of a nascent industry. These workforce development tools and resources can range broadly in form, and are both privately and publicly developed and maintained by a large number of organizations. However, the target audiences and recipients of these tools and resources, often small local employers or solar training providers, typically do not have the time or means to seek out, learn about, and take advantage of the tools and resources available to them.

Workforce development boards (WDBs), solar training providers, and solar employers were interviewed regarding their knowledge and use of available solar training tools and resources, the perceived usefulness of available resources, and ideal tools and resources that are not yet available. The solar industry members and training providers indicate a need to stay up-to-date on, and learn about, current workplace

AVAILABLE TOOLS AND RESOURCES FOR THE SOLAR INDUSTRY, BY CATEGORY ²⁴

Training Resources	Workforce Board Services	Recruitment Resources	Workplace Tools
Solar Training Network	WIOA Funded On-the-Job Training	Solar Career Map	Solar Pathfinder Kit
Solar Ready Vets	WIOA Funded Work Experience	Skills Gap Analysis	PV Watts
SITN Best Practices	Veteran Services	Renewable Energy Competency Model	Quick Reference Guides
NABCEP Credentials	ITA Training	Job Fairs	Standard Work Specifications
IREC Credentials	Targeted Occupation List	Industry Events	Technical Standards
NCCER Curriculum and Credentials	Labor Market Data	Job Boards	Standardized Permitting Systems
Certificate Programs (A.S. Degrees)	Apprenticeship		
Vendor Provided	YouthBuild		
Internships	Americas Promise		
Modular Training	TAACCCT		
Stackable Credentials Multiple Credentials	Sector Strategy		
Continuing Education			
GEARED			

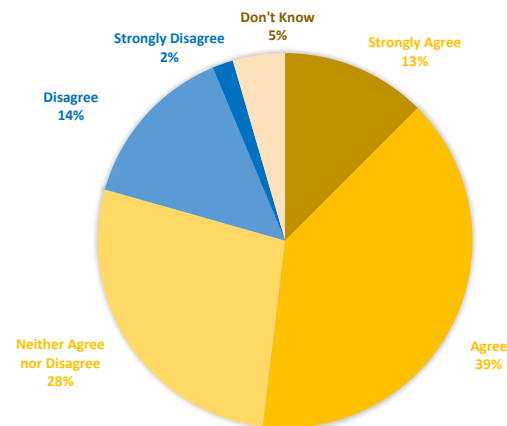
tools, but are unaware of any centralized clearinghouse to find such information. A list of tools and resources identified through literature review and by interviewees, separated by type, can be found on page 10.

Workforce Development Boards have their own internal recruitment resources that are available to both job seekers and businesses; however, typically these are standard resources that do not reflect any customization for the solar industry. While funding programs through the Workforce Innovation and Opportunity Act, and other federally-funded programs, can typically be used for solar training, several administrative steps often need to be taken prior to federal and state approval. Thus far, WDBs report minimal use of these funding sources for solar programs. Solar champions at local WDBs, industry support, and additional local solar labor market information could help drive greater utilization of these resources.

Solar employers utilize a variety of tools to locate and recruit potential employees. In interviews solar employers indicated a preference for combining solar career fairs with other solar industry events. Many employers felt that adding an introductory training component to such events would be highly beneficial; however, most solar trainers do not currently attend or participate in solar job fairs or industry events. IREC created and hosts several tools that can be useful in recruitment, training, and career development in the solar industry.²⁵ These include the Solar Career Map, Solar Competency Models, and a solar Skills Gap Analysis tool. However, solar trainers and employers interviewed were generally not familiar with these tools.

In terms of active recruiting for job candidates by employers, word of mouth was most often used (77%), followed by internet job postings on career websites (63%), then direct recruitment from known training programs

INSUFFICIENT JOB BOARDS/ PLACEMENT SERVICES



(19%). **Over half (51.9%) of respondents “strongly agreed” or “agreed” that current job boards and placement services are insufficient or difficult to use.** Employers report that they almost exclusively utilize generic job boards and would consider a solar-specific job board valuable if available.²⁶

Many skilled trades, such as electrical, have more standardized work processes and have developed quick reference guides for their industry. Standardized on-the-job training, reference guides, and other tools have not yet been widely developed or accepted by the solar industry.²⁷ **All interviewees indicated that standardizing workplace practices and tools to the extent possible would support the growth of the solar industry.**

C. Mentorships, Apprenticeships, and Internships

Over three quarters (77%) of industry respondents did not have formal mentorship or apprenticeship programs. Despite these current low numbers, interviews with solar employers revealed that this is a highly desired and valued experiential component for interested solar candidates. Additionally, only about one out of four respondents were aware if their organization had a diversity

hiring program, and less than 20% were aware whether their company had a formal veteran hiring program.

The Workforce Innovation and Opportunity Act, along with other federal and state programs, provides funding for on-the-job training or internship opportunities for certain disadvantaged groups, however, very few solar installers were aware of, or actively utilizing, these programs. The gap between demand and adoption of such programs indicates that there is a lack of awareness in the industry about such programs, and that the cost or sophistication required to take advantage of them may be limiting use by the industry. The creation of tools and educational materials that teach employers about how to access these opportunities could help bring more resources for development of beneficial training programs for underserved group into the solar industry.

GEOGRAPHIC NEED FOR DEPLOYMENT OF WORKFORCE DEVELOPMENT RESOURCES

An insufficient supply of qualified and well-trained solar workers in a local economy can slow the growth of that solar market. However, many efforts to expand solar training have been criticized for promoting such training in areas where there was not sufficient hiring demand to meet the new supply of labor. Solar training providers and workforce development boards, often the groups trying to create new training programs, have expressed frustration with inadequate local solar market information. **Decision makers, responsible for the justification and allocation of workforce development resources, need a better understanding of the geographic distribution of solar workforce supply and demand.**

To help determine which states have the highest need for additional training investment

and deployment of workforce development resources, a Geographic Demand Index (“the Index”) was developed. The Index uses seven unique factors to analyze three general characteristics of the solar workforce market in each state. The seven factors were standardized using either the state’s total jobs, or total solar jobs. Each factor was given a weight based on that factor’s potential impact on the future gap between solar workforce demand and supply. The three general characteristics are Recent Market Trends, Projected Market Trends, and Training Supply Indicators for each state.

GEOGRAPHIC DEMAND INDEX FACTOR WEIGHTING, BY CATEGORY

Recent Market Trends (2015-16 Job Growth By Sector)	
Solar Non-Installation Jobs	15%
Solar Installation Jobs	20%
Projected Market Trends (2016-2019 Labor Projections)	
Residential Installation Jobs	20%
C&I Installation Jobs	10%
Utility Installation Jobs	5%
Training Supply Indicators	
Reported Difficulty Hiring	20%
Training Providers	10%

All of the factors are arranged to point towards a future gap between demand for qualified solar installers and the local supply of well trained workers. Those states with a high Index value are not those with the greatest need for total workforce development support in terms of actual dollars or other resources, but rather have a higher likelihood of seeing a solar workforce



TOP STATES WITH DEMAND FOR SOLAR WORKFORCE DEVELOPMENT

Rank	State	Total 2016 Solar Jobs
1	Vermont	1,767
2	New Mexico	2,929
3	California	100,050
4	Oregon	4,509
5	Delaware	363
6	Utah	4,408
7	New Hampshire	1,184
8	Colorado	6,004
9	Nebraska	1,585
10	Indiana	2,700

shortage in coming years. The results, including ranking for each factor, can be found in a table below.

Vermont, the state with the highest total Index score by a significant margin, is a prime example of why the highest score does not necessarily indicate the greatest *amount* of additional resources needed. With a solar workforce about two percent the size of California’s, far fewer workforce resources would likely need to be deployed to meet the growing training workforce of Vermont. Still, Vermont’s solar jobs grew 58 times faster than the overall state economy in 2016²⁸, and they are projected to see the largest solar jobs growth relative to their total state workforce in 2017.

Vermont’s growth and demand for additional

workers is likely driven by an aggressive Renewable Portfolio Standard that was recently passed²⁹, in addition to solar-friendly net metering and interconnection policies.³⁰ The state ranks high on a jobs per-capita basis, but still is a relatively small overall market, with 1,767 total solar jobs in 2016.³¹ New Hampshire, ranking 7th, is a similar state, with a strong per capita solar job market in a small but quickly growing workforce, with solar-friendly policies and high electricity rates driving residential solar growth.

California, Nevada, and Massachusetts have historically lead the charge for solar employment, all ranking in the top five for total solar jobs and solar jobs per capita, however, they have drastically different Index values for a variety of reasons. California led the nation



New Mexico, Oregon, and Utah share many similarities. Each state has a relatively high density of solar jobs in their state (all rank 11th or higher for solar jobs per capita), experienced more than 50% growth in installation jobs in 2016, ranked in the top 20 for installed capacity in 2016, and have solar-friendly net metering and interconnection policies.³⁴ These states are all expected to have steady job growth in coming years and will likely see increased difficulty hiring if nothing else changes. Another similarity that should be considered by decision makers and others using this Index, is that these states all have solar job markets largely concentrated in a single metropolitan area.³⁵ Statewide policies and programs may be more effective in these states than in states with distinct regional markets, such as California.

While Nebraska's rank of 9th may seem surprising since it is expected to see relatively few solar installations in the coming years, the state experienced more than 100% growth in non-installation jobs, and 78% growth in installation jobs last year. While Nebraska's growth rate appears high because it is starting from a relatively small base, Nebraska employers also report a high level of difficulty hiring (9th) and Nebraska has the fewest recorded training centers per solar job in the country.

Training providers, industry groups, workforce development boards, and decision makers at all levels can use the Index, and additional information included in the table below, to make more informed decisions about the deployment of limited resources. The Index will be updated by the Solar Training Network as new data become available.

GEOGRAPHIC DEMAND INDEX, 2016

	2015-2016 Change in Solar Jobs by Sector					2016 - 2019 Projections			Supply Indicators		Total Demand Score	
	2016 Jobs	Solar Non-Installation Jobs		Solar Installation Jobs		Resi. Install Jobs	C&I Install Jobs	Util. Install Jobs	Difficulty Hiring	Training Providers	Rank	State
State	2016 Solar Jobs	Change 2015-16	Rank	Change 2015-16	Rank	Rank	Rank	Rank	Rank	Rank	Rank	State
Alabama*	530	89	41	154	28	43	39	42	35	49	48	AL
Alaska*	64	18	38	13	35	28	44	35	30	1	33	AK
Arizona	7,310	-462	51	850	9	5	18	14	31	19	15	AZ
Arkansas*	271	-1	49	8	39	41	36	5	40	1	41	AR
California	100,050	11820	3	12632	2	4	11	46	32	12	3	CA
Colorado	6,004	972	10	34	37	15	5	17	19	20	8	CO
Connecticut	2,174	267	22	-44	43	9	3	19	28	45	12	CT
Delaware*	363	-1	50	-88	48	2	2	35	33	43	5	DE
D.C.	1,180	136	21	43	32	-	-	-	-	-	-	DC
Florida	8,260	984	26	716	26	13	24	41	39	25	29	FL
Georgia	3,924	60	44	680	18	35	40	47	46	14	45	GA
Hawaii	3,194	366	5	14	36	50	50	7	1	15	23	HI
Idaho*	611	59	32	170	11	32	35	48	24	1	26	ID
Illinois	3,718	278	40	-42	41	30	31	29	18	35	34	IL
Indiana	2,700	739	17	394	21	26	16	39	4	22	10	IN
Iowa	563	127	35	88	33	21	21	25	5	50	47	IA
Kansas*	467	171	25	14	38	20	42	34	9	47	42	KS
Kentucky*	1,202	202	29	-2	40	42	44	38	9	36	32	KY
Louisiana	2,922	698	11	250	22	48	28	31	35	1	21	LA
Maine	572	19	43	223	7	24	33	12	1	48	17	ME
Maryland	5,429	297	28	862	8	14	7	8	38	34	13	MD
Massachusetts	14,582	1225	12	-1738	50	11	49	23	26	18	31	MA
Michigan	4,118	1040	18	300	30	25	25	18	48	33	43	MI
Minnesota	2,872	101	42	776	10	34	22	45	7	39	20	MN
Mississippi*	883	110	30	214	15	44	44	2	37	1	24	MS
Missouri	2,380	233	33	293	24	29	19	20	47	16	39	MO
Montana*	168	6	45	53	23	18	12	43	23	51	49	MT
Nebraska*	1,585	578	4	230	12	46	44	33	9	1	9	NE
Nevada	8,371	2294	1	-2687	51	49	13	50	50	13	50	NV
New Hampshire*	1,184	172	16	281	5	7	6	28	27	40	7	NH
New Jersey	6,056	40	48	-1055	49	8	14	40	17	24	27	NJ
New Mexico	2,929	447	7	582	3	3	4	1	6	28	2	NM
New York	8,135	617	36	-732	45	10	8	27	20	31	16	NY
North Carolina	7,112	219	39	942	13	16	20	44	28	46	36	NC
North Dakota*	175	34	34	23	34	38	41	10	9	1	19	ND
Ohio	5,831	634	27	386	29	36	26	13	9	27	18	OH
Oklahoma*	814	195	24	224	20	37	38	21	40	30	38	OK
Oregon	4,509	746	9	764	6	6	10	4	3	17	4	OR
Pennsylvania	3,061	58	47	505	27	17	34	32	21	41	37	PA
Rhode Island	1,176	268	6	-33	44	39	30	15	49	1	35	RI
South Carolina*	2,772	875	8	132	31	22	23	11	9	32	11	SC
South Dakota*	478	86	19	73	17	47	44	26	9	1	14	SD
Tennessee	3,548	260	31	-510	47	33	15	22	22	1	30	TN
Texas	9,396	3853	15	-1488	46	31	27	37	44	26	40	TX
Utah	4,408	476	13	1253	1	12	9	49	8	21	6	UT
Vermont	1,767	219	2	180	4	1	1	3	42	29	1	VT
Virginia	3,236	721	20	552	19	19	17	16	16	44	25	VA
Washington	3,681	1081	14	338	25	27	29	24	43	23	28	WA
West Virginia*	381	39	37	-8	42	45	43	9	33	42	46	WV
Wisconsin	2,813	387	23	485	16	23	32	30	45	38	44	WI
Wyoming*	152	3	46	60	14	40	37	6	24	1	22	WY

CONCLUSION

As consumers continue to see ever-lower prices for solar, the solar industry is poised to see continued job growth well above the national average in the coming years, despite a projected slowing in pace. There is no indication that the high levels of difficulty finding and hiring qualified solar workers seen today will lessen without some form of industry change. The difficulty experienced by solar installers does not appear to be a result of overly burdensome barriers to entry, and is reportedly costing employers tens of thousands of dollars. Training providers should work closely with employers to improve solar training both before and after hire. Prior-to-hire training should focus on providing a preliminary understanding of system components and electrical basics, safety techniques, softs skills, and should maximize opportunities for hands-on worksite experience. Training providers should also work with employers to develop company specific on-the-job training or internship opportunities.

Along with low barriers to entry, there are staggering opportunities reported for rapid advancement for an entry-level solar installer. Entry-level installers can see promotions to a senior installer position within the first 6-12 months of employment, which can be accompanied by a 45% increase in pay. The solar industry should work together to continue to educate, and foster interest in, potential solar employees about the possibilities that a career in the solar industry presents. Additionally, employers, and especially trainers, should take better advantage of the underutilized resources offered by workforce boards and development organizations.

It is clear from this report, and other research identified through this effort, that companies can witness greater labor installation efficiencies and fewer call-backs through improvements in

training. While this study saw an initial trend that companies with larger investments in employee training had lower overall installation labor costs, additional research should be performed to determine a stronger correlation. A deeper study comparing return on investments for specific training methodologies could help the industry determine how employers and trainers can best train both entry-level and incumbent employees. Employers and training providers should communicate more openly about best practices and lessons learned to improve training. The creation of a central clearinghouse of existing tools and resources that can help employers develop and provide training opportunities would be pivotal in raising awareness and use of these underutilized programs.

As training practices are improved, workforce development resources should not be deployed blindly or uniformly, but rather should be utilized in those geographic regions that are most likely to have an underserved market for qualified solar workers. The gap between solar workforce supply and demand is affected by a multitude of factors and varies greatly over time and between regions. The Geographic Demand Index, developed through this research effort, should be continuously updated and expanded upon to provide the industry and decision makers the most accurate information for the effective deployment of limited resources.

Through unified stakeholder collaborations and continued research, the solar industry can improve training to better suit its unique and changing marketplace. Effective training and workforce development can not only bring down costs for employers, but can also foster a healthier workforce pipeline that enables local solar markets to fully realize their potential.

Endnotes

1. The full report is available to members of the Solar Training Network at www.solartrainingUSA.org
2. Solar Energy Industries Association, GTM Research, U.S. Solar Market Insight, 2016 Q3 Report.
3. The Solar Foundation, National Solar Jobs Census 2016.
4. Id.
5. Id.
6. This is supported by a CEG TalentNeuron analysis which gives current solar installer and electrician open positions a score of 60 out of 100 in “difficulty-to-fill.”
7. Id. at 49.
8. This combines the percentage of firms reporting both “significant difficulty” with those reporting that finding qualified applicants is at least “somewhat difficulty.”
9. The Solar Foundation, National Solar Jobs Census 2016.
10. Department of Energy, SunShot Initiative. <http://energy.gov/eere/sunshot/soft-costs>
11. Studies by the Rocky Mountain Institute concluded that soft costs for residential PV systems in the US are roughly twice the amount of Australia’s and four times the amount of Germany’s. These soft costs are respectively \$1.22, \$0.65, and \$0.33 per Watt installed. Available at <http://www.rmi.org/simple#simplebosform>
12. Barry Cinnamon, et al. “WHITE PAPER: Solar Panels Last 25 Years – But Will They Stay Safely Attached to Your Roof? The Importance of Reliable Solar Mounting Systems,” 2014. Available at http://cinnamonsolar.com/wp-content/uploads/2013/05/The-Importance-of-Reliable-Solar-Mounting-Systems-White-Paper_March-2014-copy.pdf
13. Assuming 300,000 installations in a year (which is less than the total installations in 2015), and using an average \$5,000 in avoided costs per incident, this would lead to \$15,000,000 in savings.
14. Sageer, et al. 2012. Identification of Variables Affecting Employee Satisfaction and Their Impact on the Organization.; Hausknecht, et. al. 2008. Targeted Employee Retention: Performance-Based and Job-Related Differences in Reported Reasons for Staying; and Ramlall, S. 2004. A Review of Employee Motivation Theories and their Implications for Employee Retention within Organizations.
15. <https://www.zanebenefits.com/blog/bid/312123/employee-retention-the-real-cost-of-losing-an-employee>
16. Konings, J. & Vanormelingen, S. 2010. The Impact of Training on Productivity and Wages: Firm Level Evidence. <http://ftp.iza.org/dp4731.pdf>
17. The number of hours in this column reflects training that only pertains to solar installation, such as safety or basics of electricity and excludes topics on company policies and procedures.
18. See “Employer Trends in Post-Hire Training” below for more.
19. See “What Employers are Looking For” below for more.
20. According to a March 2017 analysis using TalentNeuron software.
21. The term “apprenticeship” is not defined as a traditional Department of Labor apprenticeship program (see Part 3 Tools and Resource below).
22. See e.g., National Electrical Contractors Association list of state code and licensing requirements, available at: <http://www.necanet.org/professional-development/careers-in-electrical-contracting/licensure/state-code-licensing-requirements>.
23. <http://www.nabcep.org/wp-content/uploads/2016/08/NABCEP-PVA-Learning-Objectives-8.15.15.pdf>
24. See full research report for a breakdown of each tool or resource, as well as reported awareness and usefulness of each tool or resource by various groups. Available at www.solartrainingusa.org.
25. See, <http://www.irecusa.org/workforce-education/training-resources/>.

26. The Solar Energy Industries Association does host a solar job board, however, solar installers do not currently report using this resource. Available at, www.seia.org/solar-jobs.
27. This is likely due to the broad proliferation of solar PV BOS equipment, including racking and power control systems, and other associated hardware used in the installation of a solar PV array.
28. The Solar Foundation, National Solar Jobs Census 2016.
29. Requiring retail electricity providers in the state to obtain 75% of their electricity from renewable energy sources by 2032.
30. Vermont received an A for net metering policies and a B for interconnection policies by Freeing The Grid. Available at, <http://freeingthegrid.org/#state-grades/vermont>
31. While Vermont ranks 31st for total Solar Jobs in 2017, they rank 3rd in solar jobs per capita. See, <http://www.thesolarfoundation.org/solar-jobs-census/factsheet-2016-vt/>
32. See, <http://solarstates.org/#state/california/counties/solar-jobs/2016> for more information on California.
33. See, <http://solarstates.org/#state/massachusetts/counties/solar-jobs/2016> for more information on Massachusetts.
34. Each state receive a B or higher for net metering and interconnection policies by Freeing the Grid. See, www.freeingthegrid.org.
35. See, <http://solarstates.org> for a county by county breakdown of job locations.



www.SolarTrainingUSA.org

New Mexico Renewable Energy Transmission and Storage Study

JUNE 2020



A Significant Study for New Mexico's Energy Future

At a critical juncture in the 2020s, the New Mexico Renewable Energy Transmission Authority (NM RETA) partnered with ICF, an international consulting firm, to evaluate the future potential for New Mexico's vast renewable energy resources and the needed electricity transmission system. ICF was the perfect choice, drawing upon extensive industry knowledge, distinguished professionals, and innovative forecasting tools to develop solutions to complex energy issues. Launched in late 2019, ICF's diverse team of experts spent hundreds of hours to evaluate New Mexico's power line networks, cost-effective collection of developed renewable resources, and achievement of Energy Transition Act (ETA) targets. In collaborating with the NM RETA advisory committee and staff, new transmission and upgrades were identified to complement growth of utility-scale wind and solar power plants in New Mexico. This work focused on four key areas of investigation into our state's energy future, for 2020-2032:

- Potential of renewable resources
- Renewable resources development for clean electricity
- Transmission to support renewable resources development
- Economic benefits of transmission and renewable resources development.

NM RETA's role is to implement the electricity transmission infrastructure needed to enable aggressive development of our extensive renewable resources. A state government instrumentality in place for over ten years, NM RETA is working to deliver clean electricity from wind and solar to both in-state and export markets. As a part of statewide grid modernization, it is imperative to expand transmission; otherwise, renewable and clean electricity targets are unattainable. RETA is committed to working with developers, utilities, state/local officials, tribes, and the public to achieve a brighter future with renewable energy.





New Mexico Renewable Energy Transmission and Storage Study June 2020



Study Results

Over the next decade, in order to meet clean energy goals established by many states, including New Mexico, renewables will need to be developed at an unprecedented pace.

The analysis of public documents and interviews with private energy and transmission companies identified that the potential for renewables developed in New Mexico will not only support state clean energy goals, but will also serve as low cost resources to support the clean energy goals of other states. By adding transmission infrastructure to support exports to other states, New Mexico could expand from 2,500 megawatts (MW) of renewable capacity as of the end of 2019 to 11,500 MW by 2030. The 11,500 MW would satisfy New Mexico's clean energy goals, as well as grow clean energy exports.

Quick tutorial

One megawatt (MW) of electricity is 1,000 kilowatts (kW) or 1,000,000 watts (W); MW or kW is known as "capacity," which is the moment-to-moment power in a transmission line. "Energy" is measured in kilowatt-hours, such as found on a home utility bill; the average New Mexico home uses 600 kWh per month. 100 MW can power 120,000 New Mexico homes for a year.



New Mexico Renewable Energy Transmission and Storage Study June 2020

Total Renewable Capacity

11,500 MW

Operating in 2032

- 11,500 MW comprised of 2,500 MW existing, 3,100 MW currently under development and 5,900 MW identified in this study.
- State renewable share reaches 54% (meets 2030 ETA milestone).
- Given current market conditions, by 2032, 5,900 MW of new renewables can be exported if firm transmission barriers removed.

Jobs per Year

Up to **3,700/800**

Construction Phase /
Beyond 2032

- Development, construction, and operation of new renewables and transmission result in an average of 3,300 to 3,700 jobs during the construction periods through 2032.
- 600 to 800 permanent jobs associated with this development will continue beyond 2032.

Investment in New Mexico

Up to **\$11 Billion**

2021-2032 / Beyond 2032

- Total investment in the development, construction, and operation of new renewables and transmission ranges from \$9.3 billion to \$11.2 billion through 2032.
- Additionally, annual operations and maintenance investments total \$155 million to \$190 million each year.

The economic benefits attributed to New Mexico from the transmission and renewable additions are substantial. For example, in the next dozen years, it is expected that up to 3,700 jobs per year will exist, including both permanent and temporary construction jobs. Continuing beyond the construction period, up to 800 permanent jobs will continue to be needed to support the infrastructure developed in this period.

The investments will also have cascading effects in multiple areas. A few of these benefits include: improved power system reliability, efficient electricity generation, efficient grid operations, and increased economic opportunities.

Additional Transmission Benefits

Reliability Cost Savings

- Storms or other events can result in outages on the transmission grid. Power outages can be costly to local business.
- A strong and robust grid helps ensure that the power stays on, reducing the impact and high cost of outages.

Efficient Use of Generation Resources

- Transmission facilitates optimal use of existing grid resources, lowering the total generation required to serve the electric demand.
- More efficient use of resources may reduce the need to build new generating facilities.

Efficient Grid Operations

- Increasing transmission capacity can reduce bottlenecks and congestion on the system, allowing more efficient dispatch of resources, including low-cost sources.
- The cost of the new transmission is mitigated by access to more cost-effective generation.

Economic Opportunities

- All businesses benefit from supplies of more reliable and lower-cost electric service.
- Infrastructure investments lead to additional employment opportunities for New Mexico's economy.
- These jobs support increased economic output, income for state residents and added tax revenues for state/local governments.

Potential of Renewable Resources

New Mexico has potential to support wind and solar resource development, with the potential for locating infrastructure on available lands identified as extremely high. There is the potential for 137,000 MW of wind available on State Trust and private lands. Solar potential is even greater, with 824,000 MW available on State Trust and private lands.

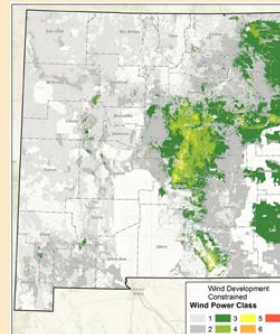
To project the potential that could be reasonably developed over the next 10 to 12 years, it was estimated that an average of 2,000 MW of solar and 2,000 MW of wind capacity could be developed in New Mexico on an annual basis. In the near-term (within the next few years) and throughout the study horizon, projects that were already in the development cycle could become operational within this 2,000 MW per year range, and new projects that are beginning development now could become operational in the later years of the study horizon.

Renewable Resources Development for Clean Electricity

New Mexico, within the broader western and southwestern power markets, has the ability to meet the goals of the Energy Transition Act (ETA) and serve areas with significant growth expected in their demand for renewables, including California, Washington and Colorado.

Wind Development Potential

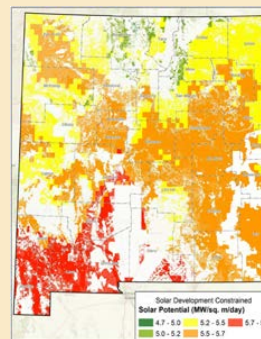
- Total developable land area for commercially viable wind equals 20,500 square miles
- 18,500 square miles on State Trust and private lands



137,000 MW of highest quality wind potential on State Trust and private lands.

Solar Development Potential

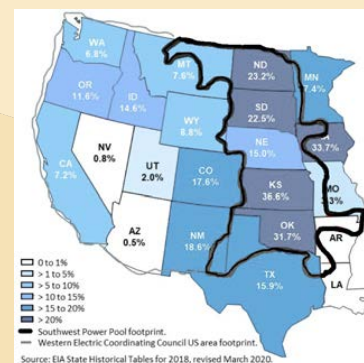
- Total developable solar land area equals 68,000 square miles
- 49,000 square miles on State Trust and private lands
- Over 9,300 square miles in highest output areas



824,000 MW of highest quality solar potential on State Trust and private lands.

Significant Opportunity to Provide Wind Resources to the West

- New Mexico has direct access to transmission grids supporting the western and midwestern U.S.
- Neighboring states in the Midwest like Texas and Oklahoma already have significant wind penetration.
- To the West, wind penetration has lagged the Midwest.
- The western markets provide a significant opportunity for New Mexico wind facilities.



Transmission to Support Renewable Resources Development

By adding transmission capacity, New Mexico's network of power lines would largely be driven by growing demand in the western states, including California. Based on these results and the siting potential evaluated, two alternative siting scenarios were developed to reflect the uncertainty in how resources could be developed going forward.

Regional Economic Impacts for New Mexico

Total investment in the development, construction, and operation of new renewables and transmission ranges from \$9.3 billion to \$11.2 billion through 2032. Additionally, annual operations and maintenance investments total \$155 million to \$190 million each year. According to the Renewable Energy Transmission and Storage Study, renewable energy generation is estimated to create up to 3,700 development and construction jobs by 2032, with 800 permanent jobs into the future.

The Renewable Energy Transmission and Storage Study indicates New Mexico is uniquely positioned to supply renewable energy power to western and midwestern states that have a limited wind/solar energy footprint. In addition to New Mexico, both the State of California and State of Washington will require 100% clean energy supply by 2045. Other western states like Nevada, Oregon, Colorado, Montana, and Arizona have near-term and long-term Renewable Portfolio Standards targets.

Alternative Transmission Development Plans to Support Growth in Renewables

- Three transmission expansion plans capable of reliably supporting 5,900 MW were identified.
- All plans add a new export path to enable renewable energy exports.
- Transmission solutions were found to be more effective than storage.
- Between 911 and 1,276 miles of new lines are required.

	Plan 1	Plan 2	Plan 3
Renewable Capacity	5,900 MW incremental wind and solar through 2030		
Renewable Siting	Centralized siting in key renewable development zones		Distributed siting across most renewable development zones
Key Expansion Elements	2 new export paths to Arizona	New export path to Arizona via SunZia	2 new export paths to Arizona
Estimated total length (miles)	911	929	1,276

Average Annual Economic Benefits

- Transmission expansion and renewable generation results in roughly 3,300 to 3,700 annual jobs during the 8-year construction phase.
- Permanent impacts, resulting from operational needs that follow the construction phase result in an additional 639 to 765 annual jobs.
- Similarly, there are annual increases in gross state product (GSP), personal income, and state and local tax revenues both during the construction phase and longer term thereafter.

	Construction Phase		Permanent Impacts	
	Low	High	Low	High
Jobs (Jobs per year)	3,257	3,678	639	765
GSP (\$million)	\$270	\$332	\$52	\$63
Income (\$million)	\$172	\$194	\$30	\$36
Tax (\$million)	\$23	\$27	\$4	\$5

**Construction takes place from 2021-2025 and 2028-2030*

**Permanent impacts (O&M) take place from 2024-2050*

**Tax impacts include state and local (i.e., excludes Federal)*



New Mexico Renewable Energy Transmission and Storage Study June 2020

Background

In recognition of the limitations New Mexico's aging transmission grid poses to the development of renewable energy generation in New Mexico, RETA was established by the New Mexico Legislature in 2007 to plan, finance, develop, and acquire high voltage transmission lines and energy storage projects to promote economic development in New Mexico. Transmission and renewable energy development create construction and permanent jobs, and also create capital investment in New Mexico.



RETA's Mission

New Mexico has some of the best wind, geothermal, and solar resources in the United States. With a thoughtful and deliberate approach to the development of its renewable resources, New Mexico can develop a major renewable energy industry.

The Western Spirit Project, an approximately 155-mile transmission line, will start construction in the Fall of 2020 and will be in commercial operation in the Fall of 2021. The Western Spirit line will enable 800 MW of new renewable energy to be constructed, representing over one billion dollars of new investment in New Mexico.

SunZia is a 520-mile transmission project in New Mexico and Arizona with 315 miles located within New Mexico. SunZia is rated at 3,000 MW for two 500kV AC lines. Western Spirit and SunZia combined will generate tens of millions of dollars in State and local taxes and create thousands of jobs.

RETA's visible success is attracting the interest of major transmission developers. RETA is the essential link in allowing our State to make renewables work and for upgrading our transmission grid. Transmission benefits include improved reliability, efficient electric generation, efficient grid operations, and vast economic opportunities.



RETA's Response

Transmission Issues

Building transmission capacity is key to enabling a renewable energy future. Strengthening relationships with stakeholders and successful siting is essential if transmission projects, critical for renewable energy, are to be built.

RETA is an essential link in supporting the Energy Transition Act (ETA), which requires 100% zero carbon electricity for utilities by 2045 and rural electric cooperatives by 2050.

RETA's Action Plan

The actions listed below are selected as short-term, actionable measures to be taken by RETA to address administrative, policy, and technical issues raised by ICF's report.

1. Expand RETA's public outreach regarding the transmission and energy storage study.
 - Provide elected leaders at the federal, state, and local levels, and reporters who cover the renewable energy industry with up to date analysis of New Mexico's energy future.
2. Continue working with existing partners and expand relationships.
 - Continue coordination with Western Spirit to get the project built on schedule.
 - Continue coordination and collaboration with SunZia, Lucky Corridor, and Gladstone transmission projects.
3. Develop new agreements and partnerships with world class renewable energy and transmission developers.
 - Expedite finalizing current agreements under review and negotiation, and seek out new partnerships.
4. Work with the major participants in renewable energy development to prioritize transmission corridors to simplify transmission siting.
 - Include major in-state utilities and transmission providers; renewable energy generating companies; local, state, and federal permitting agencies; the military installations; tribes; consumers; and environmental groups
 - Educate the general public and key renewable energy stakeholders about the study and its key findings to promote renewable energy growth in New Mexico.
5. Continue to evaluate the delivery of renewable energy to in-state customers.
 - Examine resilience improvements, distribution systems, and locational grid security.
 - Evaluate issues related to implementing the Energy Transition Act.
 - Rank renewable delivery lines.
6. Monitor the technological advances and potential implementation of large-scale storage facilities in New Mexico and follow the development of microgrids.
7. Participate in WestConnect/Southwest Area Transmission planning process to advocate for best-candidate transmission projects.
 - Support the most efficient use of the existing transmission systems and facilitate the development of longterm plans that most effectively meet the transmission objectives (load serving, resource delivery, etc.) for New Mexico.

Growing While Preserving Our State's Beauty

THE HEART OF RENEWABLE ENERGY IS PRESERVATION OF OUR RESOURCES





New Mexico Renewable Energy Transmission and Storage Study

June 2020

For more information, or to see the complete study, visit www.nmreta.com.

RETA Board of Directors

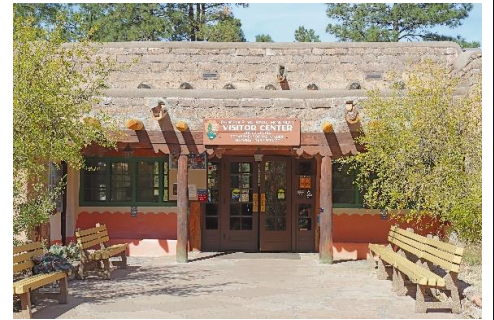
Robert E. Busch, Chairman
Tim Eichenberg, Member
Douglas James Howe, Member
Noah B. Long, Member
Louise Martinez, Member
Dr. James P. Miller, Member
Megan Anderson O'Reilly, Member



Driving New Mexico's Future

Empowering a Competitive
Economy in a
Post-Pandemic World

2020



The post-pandemic economy will bring new opportunities for New Mexico to improve its overall competitiveness and grow the state's economy.

New Mexico is at a turning point.

The COVID-19 pandemic has exposed many strategic economic vulnerabilities for our state and our nation. The state's growing dependence on the oil and gas sector to fund critical government operations has made us increasingly vulnerable to international markets and price fluctuations. The federal government has identified several areas where offshoring has created significant national security risks in industry sectors from bio-pharmaceutical and medical device manufacturing, to IT infrastructure, logistics and defense industry component manufacturing.

Over the next few years there will be a national effort to mitigate supply-chain risk and build strategic resilience in America's economy by reshoring and nearshoring critical infrastructure and manufacturing.

The New Mexico Chamber of Commerce created this report and its accompanying strategies to make New Mexico more competitive in order to take advantage of these global transitions while creating economic diversification and resilience for our local communities and businesses.

This effort would not have been possible without the partnership and collaboration of many government, higher education and business leaders. They have informed and driven this effort. As well, without the intellectual and financial support of our sponsors, this strategic action plan would not have been possible.



Thank you to our generous sponsors:

Lead Sponsor:



Premier Sponsors



Supporting Sponsors:



Contributing Sponsors



Sincerely,

Allison Smith
Board Chair
New Mexico Chamber of Commerce
Founder, Roadrunner Capital Reports

Sayuri Yamada
Chair, Economic Strategy Working Group
Director, Government and Public Affairs
Public Service Company of New Mexico

Rob Black
President & CEO
New Mexico Chamber of Commerce

The Challenges and the Opportunities

As we turn the page on 2020 and look to the future, we see unbridled opportunity. The promise and possibilities of 2021 can bring economic healing through foresight, public-private collaboration, and decisive action. Vaccines will combat the pandemic, and a renewed commitment to improve the state's competitiveness can jumpstart the economy.

New Mexico enjoys many assets: dramatic natural beauty, cutting-edge research, rich cultural diversity and next-generation companies creating our future. However, when looking at past economic performance and upcoming challenges, we know that we must do better to successfully compete with other states for investments, jobs, and talent.

About a decade ago, Michael Porter (considered the nation's top expert on competitiveness) addressed the National Governor's Association. Porter explained that "...competitiveness is the only way to achieve sustainable job growth, improve wages and stabilize public finances." Over the past 10 years, from 2009 to 2019, New Mexico was in the lowest third of states for job growth, wage growth, and growth of Gross Domestic Product (GDP). In recent years, New Mexico has taken steps to improve our tax rankings,



focused more on worker training, and provided needed tools for the Economic Development Department, but many of our neighboring states still performed much better.

The global economy is rapidly changing; our members can anticipate accelerated disruption. This is a double-edged sword that will bring many new opportunities as it challenges and transforms existing jobs and companies.

Complacency is not a mindset that can bring success!

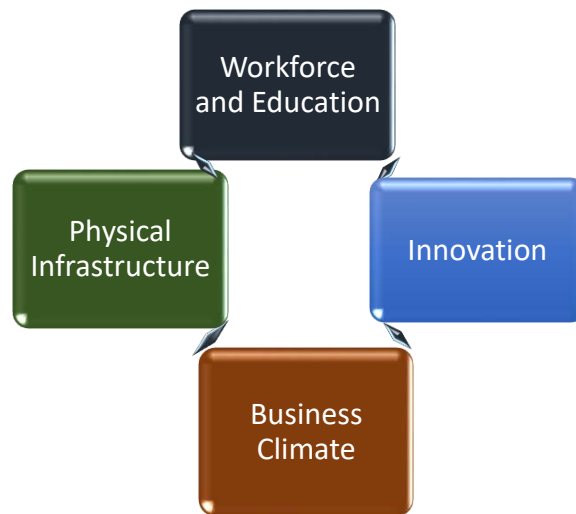
Working together, we must continuously improve our business climate by making the regulatory, legal and tax environments equal to or better than our competitors. We need to invest more in our infrastructure to take advantage of our strategic location. We should seek ways to leverage our state's research and nurture the entrepreneurs that will transform ideas into jobs. Most importantly, we must champion the education, training, and attraction of talent. Today, no business can be successful without the skills, experience and people required to grow and innovate.

Challenges, certainly, but opportunities abound. Emerging prospects in energy, space, life science and health, value-added agriculture, outdoor recreation and border trade will be cornerstones for our future. Together, with clear sustained focus, we can improve our state's economic competitiveness and bring increased prosperity to our citizens and businesses.



Competitiveness

What is economic competitiveness and why should that be a priority for New Mexico? There are several definitions and a rising number of organizations that regularly rank states. The World Economic Forum has been publishing information about competitiveness for over 40 years. It asserts that competitiveness is “the set of institutions, policies and factors that determine the level of productivity” of a place. In recent years, organizations like CNBC, Forbes, CEO Magazine and Site Selection have used multifactor analysis to analyze and publish annual state rankings. An average of the major rankings roughly correlates with states’ actual economic performance. While each publication’s ranking criteria is different, they tend to agree on broad measurement areas.



Competitiveness factors are usually grouped around four general areas: (1) business climate: business friendliness, regulation, taxation, and legal climate; (2) workforce and education; (3) infrastructure: road, rail, air, water, broadband, and energy; and (4) innovation capacity: entrepreneurship, research, and availability of capital.

Different industries and companies have differing needs. Each year, site selection consultants are surveyed, and an overall list of the most important factors are revealed. The top 15 factors for the most recent year’s list are included in the box to the right.

Performance is another way to measure a state’s economic competitiveness. Along with strengthening the issues that are prioritized by business, most

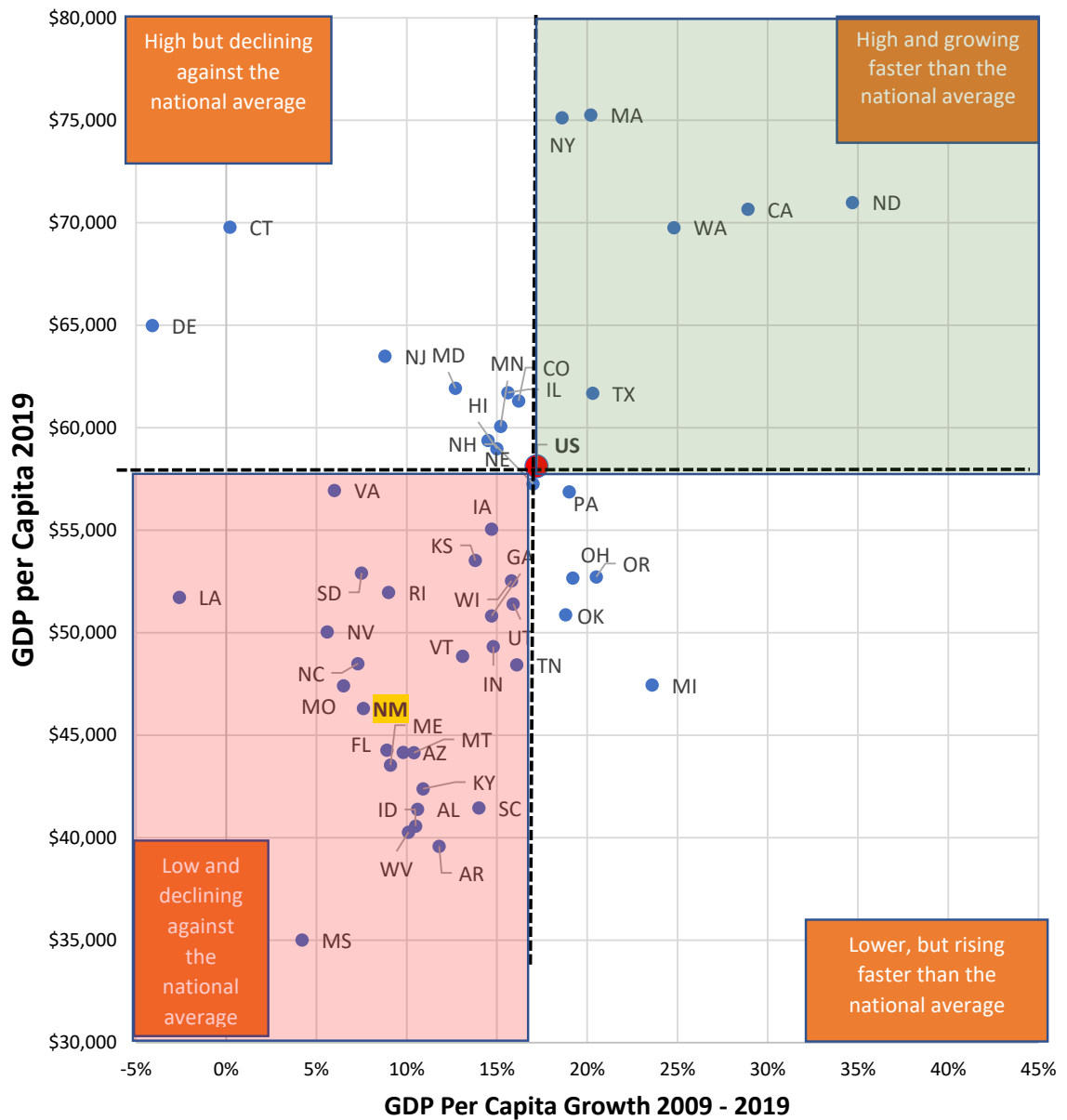
Most Important Issues for Site Selectors

1. Highway Accessibility
2. Availability of Skilled Labor
3. Labor Costs
4. Quality of Life
5. Occupancy or Construction Costs
6. Corporate Tax Rate
7. Energy Availability and Costs
8. Tax Exemptions
9. Environmental Regulations
10. Proximity to Major Markets
11. Right-to-Work State
12. Available Buildings
13. Fast-Track Permitting
14. State and Local Incentives
15. Shipping Costs

Source: Area Development’s 34th Annual Survey

competitiveness strategies are designed to raise the prosperity or standard of living for residents. The most common way to measure standard of living is by GDP per capita and its growth over time. The chart below shows each state's 2019 GDP per capita mapped against the growth over the past decade. New Mexico is among the states with lower GDP per capita than the national average and also slower growth than the national average.

GDP per Capita 2019 & Growth 2009-2019



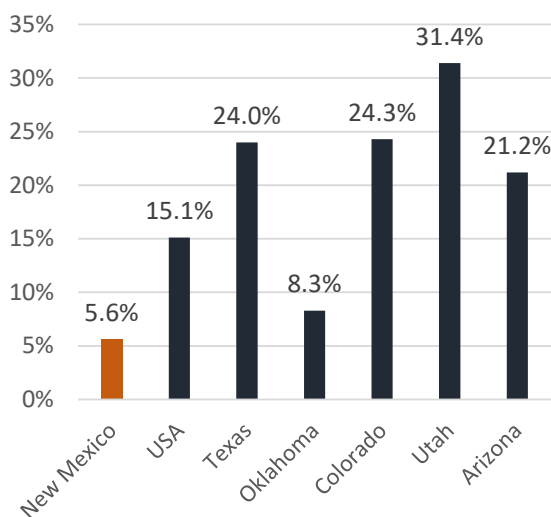
New Mexico's Current Competitive Challenges

The COVID-19 pandemic has devastated the nation's economy over the past year. No state has been spared the loss of jobs and businesses. In 2021, we all begin the race to recovery, but in New Mexico we have much more ground to make up. The previous decade was marked by slow economic growth when compared to neighboring states and the nation. The two charts below show job and GDP growth comparisons. Although some years were good and the state was at or above the national average, for the decade, New Mexico ranked 44th among states in job growth and 39th in GDP growth.

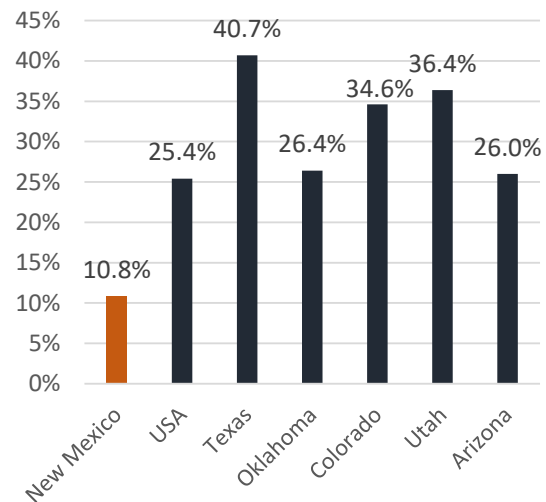
Challenge #1

Improve New Mexico's business climate, workforce skills, and infrastructure to better compete for new jobs and investments.

Percentage Job Growth 2009-2019

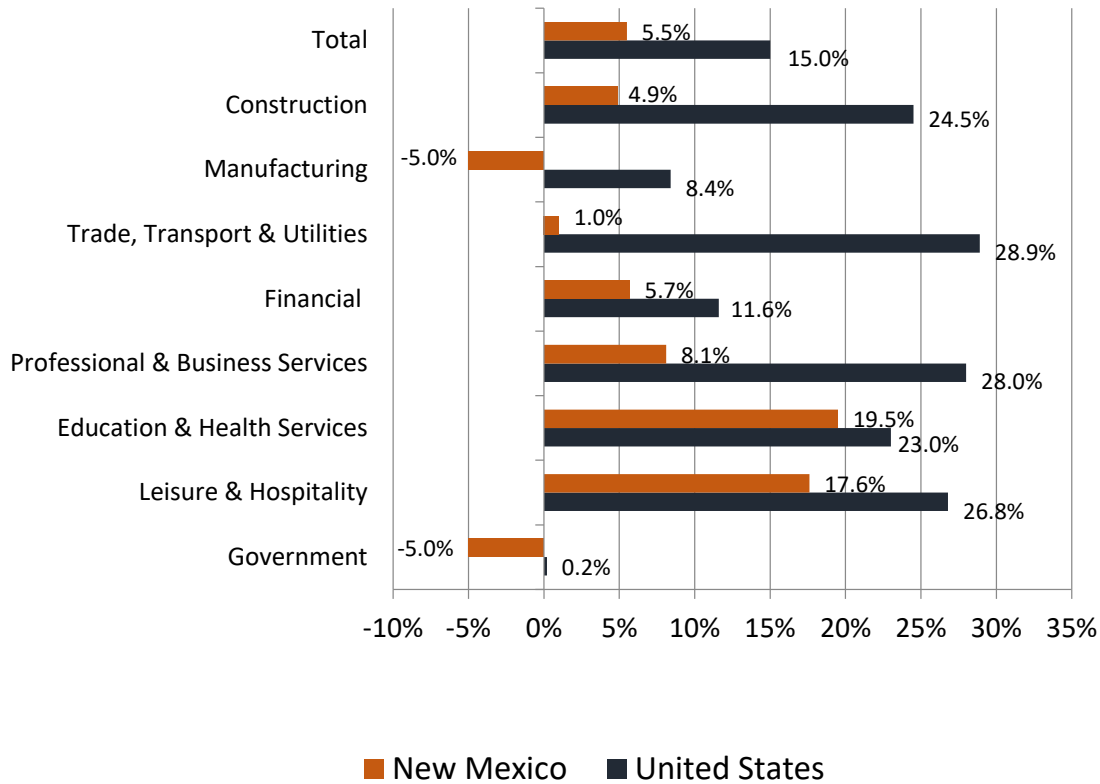


Percentage GDP Growth 2009-2019



Job growth in the state fell below the national average in every major industry. Particularly troubling was the state's net loss in manufacturing jobs, and very low growth in trade, transportation, utilities, and professional and business services, contributing to the state's very slow wage growth. NM ranked 44th among states for wage growth for 2009-2019. The state also experienced a manufacturing shift from higher value durable goods to lower value non-durable goods, with significant net job losses in several advanced industry manufacturing sectors.

U.S. and NM Non-Farm Employment Change 2009-2019



We believe that a strong technology sector is critical to our future growth. The state has more than 80,000 technology industry jobs and the total has increased over the past five years. However, the growth rate is still at about half the national average with the strongest growth in the subcategories of environmental tech and life science.

Technology Job Change 2014-2019	
New Mexico	+4.4%
USA	+8.8%
Texas	-2.7%
Oklahoma	-10.8%
Colorado	+12.2%
Utah	+19.6%
Arizona	+16.5%



In addition to the need to improve overall economic performance, the second key challenge is encouraging greater working age population growth. After overall population growth of 13 percent between 2000 and 2010, the state’s growth slowed to less than two percent over the past decade. Since 2012, growth has essentially stalled. Current projections for the next decade suggest negative working age growth in New Mexico, and a rapidly aging population. The state’s population over the age of 50 is projected to double.

Challenge #2

Grow New Mexico’s working age population to provide the workforce needed to attract and retain businesses.

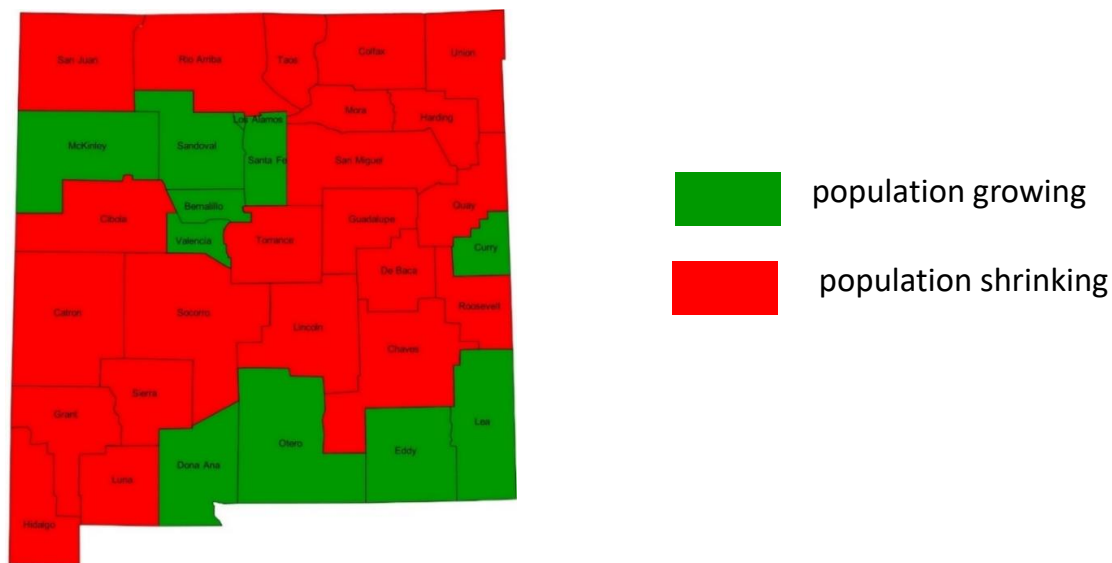
While attracting retirees is a productive economic development strategy, workforce remains the key business growth requirement and the lack of growth in prime workforce ages will act as a throttle for attracting new businesses, especially when many of the neighboring states expect strong growth.

Projected Population Working Age Change 2020-2030

	Total	Percentage
New Mexico	- 33,423	-3.2%
Texas	+517,908	+3.4%
Oklahoma	- 46,500	-2.3%
Colorado	+ 81,593	+2.6%
Utah	+101,999	+6.5%
Arizona	+133,760	+3.6%

The state has experienced small and uneven population growth. About two-thirds of the state’s counties actually lost population between 2009-2019. This trend is expected to continue, making it increasingly difficult to expand prosperity statewide. One positive sign is that in 2019, New Mexico was named a top 10 state for people moving in.

New Mexico Population Change 2009-2019



What We Heard from Stakeholders

Understanding our challenges is important, but our focus must be on a better future. To determine what is needed to make New Mexico more competitive and economically successful, we reached out to business leaders and community stakeholders across the state. Nearly 700 people completed an electronic survey – this information was augmented by in-depth discussions in virtual focus groups.



In the survey, over 77 percent of respondents indicated that their business had been hurt by the COVID-19 pandemic.

When asked what they were most and least satisfied with, Quality of Life was rated with the highest satisfaction. Energy, water and sewer infrastructure also received “satisfied” scores.

Survey Respondents Were Most Satisfied With

- The quality of life in their community
- The availability of affordable and reliable energy
- The availability and quality of water and sewer infrastructure

Survey Respondents Were Least Satisfied With

- The availability of workers with appropriate skills
- Business taxes
- Quality and cost of health care and insurance
- State government regulations impacting your business

The areas ranked lowest included available workforce, business taxation and regulation, and the quality and costs of health care.

We asked what was needed and what the state government could do to grow the New Mexico economy and create more jobs. Several themes emerged:

- **More workers with in-demand skills are needed.** More than half of the respondents said that potential employees lacked the work-ready soft skills necessary to be successful employees. In the discussions there was also a general consensus that the overall pool of labor was not growing fast enough to meet current business needs, that the education system needed improvement, and that recruiting new professionals to the state was sometimes difficult. A common suggestion was for the state to be more aggressive in its branding and marketing.
- **The business climate, especially the state regulatory climate, needs significant improvement.** “Review regulations to make them more business friendly,” was the top named action for improvement. For stakeholders who do work in multiple states, New Mexico’s regulations were viewed as complex and confusing, with slow response times.

Stakeholders felt that state and local governments that work at the speed of business, and that want to help businesses be successful, should be a top priority of the Governor, the Legislature, and local elected officials.

In addition to the regulatory environment, the state's taxes were often mentioned as a concern. While most businesses would like income taxes to be lower, many comments focused on taxes that create a specific competitive disadvantage to New Mexico businesses such as the Gross Receipts Tax, Weight and Distance taxes, and taxation of military pensions.

- **Infrastructure Funding.** Public-private partnerships for expanding infrastructure in areas of need and where improvement would heighten opportunity was a main focus. Expanded broadband, improved multimodal transportation, energy, and ready buildings and sites were all viewed as essential to growth.
- **Be future-focused and opportunistic.** Many stakeholders believed that New Mexico has untapped assets and would have new opportunities in the next decade. Suggestions included taking better advantage of the state's innovation assets: reducing brain drain, promoting commercialization, supporting entrepreneurship, and targeting emerging technology clusters such as space and alternative energy.
- Throughout the discussions, stakeholders felt that **New Mexico should be a model of institutionalized Public-Private collaboration.** Numerous recent examples of collaboration were extolled, and many felt that New Mexico's size created additional potential. The most common suggestion was to improve the opportunities for business input and to better engage and inform elected officials.



Our Future Opportunities

It is unlikely that many states entered 2020 with contingency plans for an unprecedented global pandemic and a deep, medically induced global recession. We expected that the new decade would bring continued urbanization, slowing globalization, and accelerating technological transformation. The pandemic disrupted our economy and our lives, but at some point – hopefully soon – New Mexico will be facing the next new normal. No one’s crystal ball is clear, but anticipating new opportunities now will provide a head start to improve our competitive position.

The residual effects from the pandemic and the subsequent 2021 reset are likely to include many of these emerging trends:

- (1) **Remote everything, once referred to as “the death of distance,” will be more common.** More people will work remotely, shop remotely, get their health, entertainment, and banking services remotely. We have all endured months of forced reprogramming of the way we work and live. Companies have adjusted. Many of these shifts will become permanent.



New Mexico Opportunities

Champion emerging technology companies that align with the state’s current research strengths.

Build a talent attraction strategy highlighting the state’s natural beauty, affordability, outdoor recreation, and diversity to appeal to young professionals seeking new living options.

Target existing company supply chains and take advantage of the state’s proximity to Mexico.

Strengthen short term retraining and work experience to transition citizens to in-demand occupations.

Extend opportunity to underserved communities

Use data analytics to identify actions to improve the state’s competitiveness.

(2) **Relocations could be more common.** While overall movement of people in America has slowed over the past 20 years, the trend of some Americans moving from high-priced urban centers to more affordable smaller metros has been accelerating over the past decade. Mid-sized city centers prospered following the Great Recession with reimagined suburbia also becoming more attractive to millennials that want walkability, connectivity, and more space. News reports this summer have chronicled more movement, pandemic-induced, from density to less dense living options, and from high-priced to affordable. Hotspots like Phoenix, Denver, Las Vegas, and Austin will still attract many new residents, but smaller metros might become increasingly attractive. Nobody knows where the new hot spots will be, but they will need high-speed broadband, access to amenities and housing choices. New Mexico has many locations that offer good opportunities. Enhanced talent recruitment and placemaking strategies could yield good return on investment. The state's natural beauty, population diversity, affordability and safe climate could be attractive to anyone seeking a change.

(3) **Reshoring accelerates.** Covid-19 has shone a bright light on the security and safety advantages of having specific industries and their supply chains within the United States' borders. Over the next few years, we expect growth in biopharmaceutical, medical devices, defense components and food processing. Efficiency will still be important, but so will supply chain redundancy and flexibility. Proximity to Mexico, affordability, and access to good transportation infrastructure could be key advantages for the state. Recruitment marketing to the supply chains of existing companies, and targeting the industries most likely to reshore, are promising opportunities.

(4) **Technological disruption accelerates.** The Covid-19 shutdown and stay at home orders exposed many business vulnerabilities. Manufacturing and construction businesses were already moving toward more robotics due to skilled labor shortages. Employment in those industries were also the first to rebound. Expect service industries – currently highly dependent on face-to-face interaction – to substitute robots wherever possible, to reduce their exposure to similar future disruptions. Early research suggests that the impact will disproportionately hurt small businesses and lower wage workers. Agile retraining options for New Mexico workers that are or will be displaced will be necessary and could create a longer-term competitive advantage.

Also expect the emergence of new industries and companies stimulated by advancements in augmented and virtual reality, artificial intelligence, nanotechnology, photonics, IoT, 5G, synthetic biology, genomics, and quantum technologies.

(5) **The Federal Government will be faced with a choice: invest or reduce the deficit.** The multiple rounds of stimulus bills in 2020 have tamped down the worst of the COVID-19 economic impact but have also added trillions to the federal deficit. Additional stimulus is

likely in 2021 and it will trigger a call for some spending cuts, tax increases, or both. Federal funding is an important part of the state's economy, with New Mexico among the states with the highest percentage of Federal funds in the state budget. The state's Los Alamos and Sandia Federal Labs are critical to emerging technologies but could be vulnerable to budget considerations.

- (6) **Expect more state competition, data analytics and the need for continuous scenario planning.** Pre-pandemic, many states, including New Mexico, were experiencing economic transformations. Changes in demographics, technology, and consumer behavior continuously disrupt the status quo and confound both business and state economic planning. Businesses' new investment decisions are now mostly driven by sophisticated data analytics that easily allow comparisons between "place" options. Real time analysis and nimble responses to data illuminating threats and opportunities can give the state a competitive advantage.

In a time of mass disruption, the pandemic has acted as an accelerant. Trends we expected are impacting us sooner, with a few unexpected tangents thrown in to upend even the best plans. States recognize that they are in competition for new investments and have begun to develop new ideas for the next new normal.

Over the next year, as the New Mexico Economic Development Department develops new strategies for the state, the New Mexico Chamber of Commerce and its members can provide valuable insights about the changes taking place and what it will take to support existing business and attract new businesses to the state.



Improving New Mexico's Economic Competitiveness

Building a more competitive state is a constant challenge and an ongoing quest. Many groups must contribute energy, ideas, and resources. The New Mexico Chamber of Commerce believes that over the next decade public and private sector leaders should work together to make the following competitive improvements.

To address the challenge of insufficient skilled workers

- 1) Increase the overall labor pool for employers
- 2) Improve the number of workers with work readiness skills and in-demand middle skills
- 3) Extend opportunity to underserved communities and populations

To address the top concern of stakeholders and improve the overall regulatory business climate

- 4) Make the New Mexico regulatory environment among the most business friendly in America

To take advantage of the state's location, respond to corporate needs and spread opportunity more broadly

- 5) Strengthen the State's infrastructure

To acknowledge rapid change and take advantage of emerging opportunities

- 6) Prioritize and emphasize entrepreneurship

To align business needs, higher education assets and government efforts to efficiently grow the New Mexico economy and raise the prosperity of the state's citizens

- 7) Amplify the voice of business
- 8) Create forums for ongoing collaboration and partnerships between the public and private sector

Specific Strategies

Increase the Labor Pool for New Mexico Employers

1) Create and fund a talent recruitment outreach program to attract young professionals

- Begin with a social media audit. A social media audit includes a review of what state residents and others are posting about the state across multiple digital platforms (Twitter, Facebook, YouTube, Instagram, and others). After evaluating current New Mexico digital themes, develop a strategy to optimize the state's social media profiles, deliver strategic messages, engage influencers, and support economic strategies.
- Focus media outreach to metropolitan areas in close proximity including Denver, Oklahoma City, Dallas, and Phoenix.
- Emphasize New Mexico's diversity, climate, outdoor recreation, affordability and job opportunities in new technology sectors (alternative energy, space).

2) Ask the legislature to explore the creation of one or more targeted incentive programs to attract professionals with the skills needed in the state's targeted industries

- To address the lack of specialized skills, consider a program patterned after Oklahoma's **Aerospace Industry Engineer Workforce Tax Credit** program that began in 2009, providing state tax credits for five years to the company that hires aerospace engineers, and to the engineers themselves. In the program's first six years it helped attract over 4,200 aerospace engineers with average wages of \$80,000 annually, generating approximately \$287 million in total wages. The number of engineering degrees conferred by Oklahoma colleges and universities also increased 57 percent over the period. In 2018, Oklahoma created a similar **Automotive Engineer Workforce Tax Credit** for automotive engineers and the companies that hire them. This tax credit was expanded in 2019 to include parts suppliers and makers of all types of vehicles.

An additional program should be created to attract new residents and remote workers interested in living in small towns and rural parts of the state that are facing population decline.

- Vermont will reimburse up to \$7,500 in moving expenses for those who move into the state to live and work there full-time, under the **New Worker Relocation Grant Program**, adopted by the state legislature in 2019. During the first three quarters of 2020, a total of \$227,000 was awarded to 51 recipients. The average age of awardees was 32, and recipients moved to Vermont from 21 different states. In 2019, Vermont operated a **Remote Worker Grant Program** for those who moved into the state but who worked remotely for an out-of-state employer. The program paid individuals up to \$5,000 a year for two years.



3) Adopt the Arizona model of recognizing out-of-state occupational licenses, making it easier for people to move into the state and begin working quickly.

- At the beginning of 2020, only Arizona, New Jersey, Montana, and Pennsylvania allowed individuals with out-of-state licenses to transfer a valid occupational license and practice in their states, with only minor limitations.

4) Provide a specific state income tax exemption for military retirement pensions

- In WalletHub's 2020 rankings, New Mexico was ranked as the 30th best state for military retirees, an improvement over previous rankings but still trailing all neighboring states with Oklahoma (12th), Utah (15th), Kansas (16th), Texas (19th), and Arizona (28th). Different rankings have different criteria, but New Mexico

needs to attract and retain more highly-trained military retirees.

- Across America, 21 states fully exempt military retirement pay from state income tax (in addition to those states with no state income tax).

5) Create scholarships for first-generation college students

A scholarship program targeted at New Mexico children who are the first in their families to attend higher education can help expand opportunities to those currently unable to attend college.

- The Florida Department of Education partners with private donors to provide first-in-family scholarships to students whose parents do not possess a bachelor degree or higher. The First Generation Matching Grant Program provides need-based scholarships to Florida residents going into undergraduate programs at two-year and four-year public colleges and universities in the state. In 2019-2020 the program issued \$15.9 million in grants impacting 10,900 first-generation students.

6) Target workforce training and job placement for to ex-offenders

- In Indiana, The Hoosier Initiative for Re-Entry (HIRE) started in 2012 and is run by the state's Department of Corrections and the Department of Workforce Development. The HIRE model prepares inmates with a felony conviction in three areas:
 1. Hiring process skills, workplace readiness training, and financial literacy.
 2. Outreach to area businesses for job placement.
 3. Coordination with support organizations that can assist with clothing, housing, and transportation.

A mentor works with each HIRE participant for one year after an initial job placement. In a recent year, the HIRE program placed over 2,200 ex-offenders in jobs, with a three-month retention rate of 97 percent. Participants also have lower recidivism rates. In 2018 the Indiana HIRE program won a national award from the National Association of State Workforce Agencies.

Improve the Number of Workers with Work-Readiness and In-Demand Middle Skills

- 7) Replicate Arkansas and South Carolina's *Be Pro Be Proud*, a program designed to change high school students' and parents' perceptions about technical careers in manufacturing, construction, transportation, energy, and utilities. In both states, the centerpiece is a Mobile Workshop that travels to all high schools around the state.

- 8) Create a Grant Tuition Program for community college students pursuing a degree in a STEM field that agree to remain in New Mexico for a specified number of years.

In Arkansas, the **Arkansas Future Grant** program provides up to five semesters of tuition grants for STEM majors pursuing an associate degree. Recipients must work in Arkansas for three years after graduation, or the grant becomes an interest-bearing loan.

- 9) **Promote more statewide participation in ACT's Certified Work Ready Communities Program**

Across America, nearly five million people have obtained ACT's National Career Readiness Certificate. In New Mexico, only three counties are participating in ACT's **Certified Work Ready Communities (CWRC)** program to improve middle-skill career readiness and help individuals earn the certificate. In 2016 a line item in South Carolina's state budget helped more counties to achieve CWRC status, and that year South Carolina became the first state in the U.S. to have every county designated as a Certified Work Ready Community.

Make the New Mexico Regulatory Environment Among the Most Business Friendly in America

10) Create a Governor's Office of Regulatory Reform to implement a new requirement that all state agencies do a comprehensive review of all current rules and regulations to identify opportunities to improve response speed, eliminate redundancy, and eliminate unnecessary restrictions. The office would then oversee an ongoing, regular effort to continue to minimize and simplify regulations.

- Every state agency in **Arizona** is required by law to review all of its rules every five years, to uncover any that should be repealed or changed. This statute has helped Arizona maintain one of the least-complex regulatory codes in the country. Arizona's code has fewer than 64,000 restrictive words (terms like "shall," "must," "may not," "prohibited" and "required"). California, the country's most-regulated state, has nearly 400,000 restrictive words. Arizona has also created an online portal enabling those who live and work under its regulations to make recommendations, and it has exceeded its target to reduce red tape. Over a two-year period the state removed 1,100 regulations which it estimates saves businesses \$79 million.
- In 2018, **Virginia** started a three-year pilot program to reduce red tape. The pilot program began with the state's Department of Professional and Occupational Regulation and the Department of Criminal Justice Services. This bill passed the Republican-controlled legislature with strong bipartisan support and was signed into law by Democratic Gov. Ralph Northam. Under the program, the agencies are required to review all existing regulations and reduce the number of restrictions by 25 percent over the three-year period. In 2019, Governor Northam reported that the agencies were ahead of schedule. That same year, Virginia was named America's Top State for Business by CNBC.

11) Conduct a review of the taxes that stand out as anti-competitive such as the tax on construction labor, manufacturing equipment, Weight Distance Tax and the Gross Receipts Tax

- Only four states have a weight distance tax for truckers, creating a competitive disadvantage for realizing New Mexico’s logistics potential.

12) Conduct an annual business survey to determine satisfaction and progress on the state’s business climate. Broadly share the results with legislators and members of the executive branch and use the survey results to guide the Chamber’s advocacy agenda.

Strengthen the State’s Infrastructure

13) Enacted enabling legislation authorizing public-private partnerships (PPPs) for infrastructure.

Across America, 38 states have enacted enabling legislation authorizing public-private partnerships (PPPs) for infrastructure. Most are for transportation projects, but many include other types of infrastructure. New Mexico has not adopted this type of PPP enabling legislation. **Florida’s I-4 Ultimate PPP** aims to complete major interstate upgrades – that would have taken 27 years under normal public sector funding – in about seven years. The \$2.3 billion I-4 Ultimate project in Orlando includes installing express toll lanes for 21 miles, replacing 140 bridges, and reconfiguring 15 major intersections. The 40-year contract includes Skanska and other private partners. The project started in 2015, and by mid-2020 it appeared that completing all work might take one year longer than originally planned.

PPP legislation for New Mexico should be broad enough to authorize public-private collaboration for transportation, water, sewer, broadband, and other infrastructure needs.

14) Create a Rail Spur Economic Development Matching Grant/Loan Program

- Most rail infrastructure improvements in the United States have been made by the private sector, but even small-scale government incentives can encourage additional investments. Two program examples are from Michigan and North Carolina.

- **Michigan DOT's Freight Economic Development Program** provides low-interest loans to businesses for rail infrastructure such as spur tracks. Michigan will provide up to 50 percent of a rail infrastructure project's cost. Loans have a five-year repayment period but can be forgiven (converted to grants) if the company meets agreed-upon annual shipping levels.
- **North Carolina DOT's Rail Industrial Access Program** offers grants to a new or expanding company of up to 50 percent of a project's cost, and up to \$200,000 per project. Grants are to help construct or refurbish rail spur tracks.

15) Create a competitive Rural Development Grant Fund to help rural communities support economic development product building and marketing

- The rural areas of New Mexico are facing many headwinds that are stifling growth. New businesses and jobs are critical to the viability of many communities. Eligible grant fund uses would be broad to accommodate tailored local opportunities, but could include infrastructure, buildings and sites, marketing for economic development and tourism, small business assistance and ecosystem support, and incubator development.
- In the province of Ontario, Canada, the Ontario **Rural Economic Development (RED)** program provides grants to rural localities in two broad categories:
 1. The Economic Diversification and Competitiveness Stream is for business retention and expansion, entrepreneurship, workforce, and technology adoption projects.
 2. The Strategic Economic Infrastructure Stream is for projects such as redevelopment of vacant buildings and rehabilitation of cultural and tourism attractions.

Prioritize Innovation by Emphasizing Entrepreneurship, Tech Transfer & Commercialization

16) Fund entrepreneurial development and job-creating small business growth, particularly in rural areas of New Mexico

- The **Wisconsin Rural Enterprise Fund (WREF)** makes equity investments in startup companies, especially those with potential to create higher-skill, higher-wage jobs. Since it

started in 2002, WREF has made over \$2,000,000 in investments ranging from \$35,000 to \$200,000 each. Investors include Wisconsin economic development organizations, cities, and electric cooperatives.

- In Nebraska, the **Building Entrepreneurial Communities Act** provides grants for two or more communities collaborating on capacity-building efforts including youth entrepreneurship training. Nebraska also offers an **Advantage Microenterprise Tax Credit** for businesses with five or less employees and located in distressed areas that make a new investment or add jobs.

Amplify the Voice of Business

17) Create a public-private annual event to bring leaders from the public and private sectors together with a focus on competitiveness challenges and future opportunities. Begin with a fall 2021 joint event.

- The 2019 **Future Wisconsin Summit** program by the state Chamber of Commerce Foundation featured discussions on rural Wisconsin, the agriculture economy, criminal justice reform and a keynote on the importance of STEM education. The Summit, which is held annually, brings in individuals from both the public and private sectors to discuss issues employers are facing in the workforce today.
- Each year the Missouri Chamber of Commerce holds a public-private conference to focus on a strategic area of the **Missouri 2030** competitiveness plan. The most recent event focused on transportation and making Missouri a leading logistics hub. Previous summits focused on workforce and technology.



The strategic action agenda was prepared by the New Mexico Chamber of Commerce with research support from Economic Leadership LLC in 2020.





Intra-Office Memorandum

Date: January 7, 2020

To: SPS Energy Supply Leadership

From: Brian Smit, Manager, Strategic Asset Management

Subject: Plant X, Unit 3 Discovery Work Investment

During the fall 2019 outage work for Plant X, Unit 3 (Plant X3), a material amount of discovery work was identified. Plant X3 has an approved retirement date of 2024 in the Texas and FERC jurisdictions and a 2020 retirement date in the New Mexico jurisdiction. Filings have been submitted and are currently in progress to align the Plant X3 retirement date to 2024 in all regions. The unit is scheduled to operate through 2024, and has an EOY 2019 estimated net book value of \$4.04M and an underfunded cost of removal (COR) reserve of \$89,000 to be collected through rates.

The discovery work that is out of the planned outage scope includes the following items:

Item Description	Estimated Expense
<i>Capital</i>	
Wall Tube Replacement	\$2,982,500
Bull Nose Tubes	\$100,000
APH Material	\$126,000
APH Labor	\$133,875
Ignitor Replacement	\$318,750
Corner tube material	\$515,625
Insulation and Refractory	\$371,875
Subtotal Capital	\$4,548,625
<i>O&M</i>	
Turbine Valve Repairs	\$249,688
Chemical Clean	\$112,500
Main Steam Seamed Pipe Inspection	\$158,750
Condenser Inspection	\$106,250
Subtotal O&M	\$627,188

To evaluate the financial impact of the discovery work identified, three scenarios were evaluated:

1. Complete Discovery Work: The additional capital (\$4,548,625) and O&M (\$627,188) work that was identified in the fall 2019 outage is completed, to maintain the unit until its current operational date of 2024. Sensitivities were incorporated to account for 25% sensitivity on the capital estimates.
2. Retire in Place, Energy Replacement: This scenario considers that the unit is retired in place due to the discovery work identified and the energy that was

planned to be generated from Plant X3 is served by market energy (2020-2024 average of \$24.26/MWh).

3. Retire in Place, Firm Capacity and Energy Replacement: This scenario considers that the unit is retired in place due to the discovery work identified. The energy that was planned to be generated from Plant X3 is served by market energy (2020-2024 average of \$24.26/MWh). The capacity (93 MW) is assumed to be replaced at the cost of a CT with firm gas (\$7.95/kW-mo), as Plant X3 currently provides firm capacity to the SPS system.

Based on the scenarios outlined above, the unit's lifecycle cost is outlined in the table below.

Action	PVRR	LCOE (\$/MWh)
Complete Discovery Work <i>(Capital Scope Reduction of 25%)</i>	\$52,331,909	\$32.83
Complete Discovery Work	\$53,477,957	\$33.55
Complete Discovery Work <i>(Capital Scope Increase of 25%)</i>	\$54,624,005	\$34.26
Retire in Place, Energy Replacement	\$43,415,491	\$27.23
Retire in Place, Firm Capacity and Energy Replacement	\$79,401,815	\$49.81

It is important to note that this analysis is based on forecasted energy prices and unit capacity factors. As with any forecast modeling, the model is run with "complete" market information where real dispatch of the system includes variations and divergence from what was forecasted. As shown in the table above, based on the market information available at this time, it is most cost effective to retire Plant X3 and forego the discovery work, based on the forecasted market alternatives and no additional capacity need based on this retirement. It is also worth noting that Plant X3 is forecasted to have \$4.13M of unrecovered investment (asset net book value and unrecovered COR) at the end of 2019.

Based on this analysis the discovery work should not be completed without direction from the regional commission that Plant X3 must spend the capital and remain in service. Based on the current SPS generating fleet, SPS capacity needs, forecasted market alternatives and the discovery work estimates, the most fiscally responsible action regarding Plant X3 is to not complete the discovery work and begin the process of retiring the unit.

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
PVSC-PVRR Total

WACC **6.47%**

PVRR Production Cost		NPV (\$M)	2021	2022	2023	2024
Delta (\$M)	2021-2024	2021	2022	2023	2024	2024
Hourly_ReferenceCaseNorFI_PlantX3 Fixed	\$ 5,579	\$ 1,488,274	\$ 1,515,810	\$ 1,544,397	\$ 1,574,515	
Hourly_ReferenceCaseNorFI_PlantX3 Abandoned	(\$12)	\$ 1,483,737	\$ 1,513,338	\$ 1,541,189	\$ 1,571,679	

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Annual

Scenario	Run ID	Company	Year	Peak (MW)	Capacity (MW)	Net Capacity Imports (MW)	Reserve Margin (%)	Load Factor (%)	Firm Capacity (MW)	Energy (GWh)
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2021	4,045.92	8,035.75	0.00	46.41	72.53	5,923.67	25,705.35
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2022	4,012.51	8,027.26	0.00	47.51	74.32	5,918.67	26,121.77
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2023	4,066.83	7,764.26	0.00	38.91	74.05	5,649.41	26,379.57
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2024	4,103.53	7,653.26	0.00	34.84	74.57	5,533.18	26,880.74
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2021	4,045.92	8,035.75	0.00	44.11	72.53	5,830.67	25,705.35
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2022	4,012.51	8,027.26	0.00	45.19	74.32	5,825.67	26,121.77
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2023	4,066.83	7,671.26	0.00	36.63	74.05	5,556.41	26,379.57
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2024	4,103.53	7,560.26	0.00	32.57	74.57	5,440.17	26,880.74

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Annual

Scenario	Run ID	Company	Year	Net Generation (GWh)	Curtailed (MWh)	Fuel Costs (\$000)	Program Costs (\$000)	Commitment Costs (\$000)
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	28,676.93	0.00	345,404.13	0.00	1,689.98
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	26,583.86	0.00	279,458.91	0.00	1,080.68
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	28,630.44	0.00	339,055.36	0.00	1,445.88
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	28,435.00	0.00	336,734.46	0.00	1,126.10
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	28,655.83	0.00	344,795.53	0.00	1,703.62
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	26,572.91	0.00	279,153.19	0.00	1,133.55
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	28,592.80	0.00	338,010.21	0.00	1,473.77
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	28,370.81	0.00	335,014.95	0.00	1,209.45

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Annual

Scenario	Run ID	Company	Year	Non-Fuel Variable Cost (\$000)	Fixed Cost (\$000)	Other Costs (\$000)	Contract Revenue (\$000)	Contract Cost (\$000)	Sales (GWh)
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2021	238,754.68	180,057.87	0.00	2,037.52	0.00	5,374.22
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2022	237,373.05	177,141.16	0.00	2,078.27	0.00	3,675.71
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2023	251,407.48	173,604.60	0.00	2,119.83	0.00	4,801.02
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2024	255,743.37	171,284.56	0.00	2,162.23	0.00	4,293.87
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2021	238,686.21	179,117.56	0.00	2,037.52	0.00	5,352.11
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2022	237,351.45	177,141.16	0.00	2,078.27	0.00	3,666.45
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2023	251,344.44	173,604.60	0.00	2,119.83	0.00	4,770.04
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2024	255,567.27	171,284.56	0.00	2,162.23	0.00	4,239.14

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Annual

Run ID	Scenario	Company	Year	Purchases (GWh)	Losses (GWh)	Sales Revenue (\$000)	Purchase Cost (\$000)	Ancillary Sales (\$000)	Ancillary Purchases (\$000)
0	SPS	2021	2,402.65		170,976.24	26,086.73			
0	SPS	2022	3,213.63		97,913.51	40,042.26			
0	SPS	2023	2,550.15		141,194.17	32,935.00			
0	SPS	2024	2,739.61		124,461.15	42,626.90			
0	SPS	2021	2,401.63		170,191.13	26,007.66			
0	SPS	2022	3,215.31		97,594.35	40,066.06			
0	SPS	2023	2,556.81		140,183.09	33,061.46			
0	SPS	2024	2,749.07		122,720.97	42,812.37			

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Annual

Run ID	Scenario	Company	Year	Retail Sales (GWh)	Retail Revenue (\$000)	Total Operating Cost (\$000)	Externality Costs (\$000)	Capacity Cost (\$000)
0	SPS CaseNoRFI_PlantX3 Fixed	SPS	2021	25,705.35	0.00	618,979.63	0.00	
0	SPS CaseNoRFI_PlantX3 Fixed	SPS	2022	26,121.77	0.00	635,104.29	0.00	
0	SPS CaseNoRFI_PlantX3 Fixed	SPS	2023	26,379.57	0.00	655,134.30	0.00	
0	SPS CaseNoRFI_PlantX3 Fixed	SPS	2024	26,880.74	0.00	680,892.00	0.00	
0	SPS CaseNoRFI_PlantX3 Abandoned	SPS	2021	25,705.35	0.00	618,081.91	0.00	
0	SPS CaseNoRFI_PlantX3 Abandoned	SPS	2022	26,121.77	0.00	635,172.80	0.00	
0	SPS CaseNoRFI_PlantX3 Abandoned	SPS	2023	26,379.57	0.00	655,191.56	0.00	
0	SPS CaseNoRFI_PlantX3 Abandoned	SPS	2024	26,880.74	0.00	681,005.40	0.00	

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Annual

Scenario	Run ID	Company	Year	Capacity Revenue (\$000)
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2021	2,037.52
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2022	2,078.27
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2023	2,119.83
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2024	2,162.23
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2021	2,037.52
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2022	2,078.27
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2023	2,119.83
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2024	2,162.23

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Capital

Scenario	Run ID	Company	Year	Operating Cost	Carrying Costs	Capital Expense	Installed Cost	Book Value	Book Depreciation	Tax Depreciation
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	0	2,507,359.38					438,608.79	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	618,979.63				930,964.55	95,217.74	95,217.74
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	635,104.29				896,174.83	102,918.32	102,918.32
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	655,134.30				851,469.40	125,207.36	125,207.36
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	680,892.00				767,234.41	129,905.52	129,905.52
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	0	2,506,689.39					428,884.44	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	618,081.91				923,152.06	93,277.15	93,277.15
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	635,172.80				890,280.26	100,944.40	100,944.40
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	655,191.56				848,472.12	122,144.06	122,144.07
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	681,005.40				767,234.41	126,842.22	126,842.23

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Capital

Scenario	Run ID	Company	Year	Deferred Taxes	ADIT	Tax Credits	Property Taxes	Decommissioning	Other Costs	Debt
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	0	-63,140.96			28,533.74		238,481.50	
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2021	-16,822.68	218,732.66		6,990.77		89,062.73	422,481.68
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2022	-16,822.68	201,909.98		7,258.66		79,400.84	406,693.73
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2023	-16,057.83	185,852.16		7,561.75		48,226.92	386,405.94
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2024	-15,468.26	170,383.90		7,660.70		28,580.99	348,179.21
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	0	-63,098.33			28,261.48		238,461.98	
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2021	-16,866.68	218,644.64		6,929.41		89,058.33	418,936.29
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2022	-16,866.68	201,777.96		7,196.78		79,396.40	404,018.71
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2023	-15,991.82	185,786.15		7,482.81		48,221.26	385,045.74
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2024	-15,402.25	170,383.90		7,581.76		28,575.33	348,179.21

Southwestern Public Service Company

December 2020 Plant X Unit 3 Economic Analysis
Company Capital

Scenario	Run ID	Company	Year	Debt Service	Interest	AFUDC	Capitalized Interest	Rate Base	Allowed Return	Revenue Requirement
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	0	57,130.80	65,892.86				208,331.19	3,421,314.60
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2021	2,600.33	18,359.59			930,964.57	59,043.56	869,294.43
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2022	10,178.28	17,673.50			896,174.86	56,023.57	880,705.68
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2023	7,834.23	16,791.86			851,469.45	53,132.64	889,262.97
Hourly_ReferenceCaseNoRFL_PlantX3 Fixed	0	SPS	2024	39,651.29	15,130.66			767,234.48	46,583.43	893,622.63
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	0	53,338.38	65,570.74				206,968.47	3,409,265.77
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2021	2,293.18	18,205.52			923,152.09	58,308.43	865,655.24
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2022	9,237.04	17,557.25			890,280.30	55,454.93	878,165.32
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2023	6,505.68	16,732.75			848,472.17	52,957.88	885,997.58
Hourly_ReferenceCaseNoRFL_PlantX3 Abandoned	0	SPS	2024	38,291.09	15,130.66			767,234.48	46,668.85	890,673.56