BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF SOUTHWESTERN)	
PUBLIC SERVICE COMPANY'S)	
APPLICATION FOR APPROVAL AND)	
AUTHORITY TO: (1) ENTER INTO)	
SEPARATE PURCHASED POWER)	
AGREEMENTS WITH NEXTERA ENERGY)	
RESOURCES' MAMMOTH PLAINS AND) CASE NO. 13U	UT
PALO DURO WIND ENERGY CENTERS)	
AND INFINITY WIND POWER'S)	
ROOSEVELT WIND RANCH FOR WIND)	
ENERGY; AND (2) RECOVER THE)	
ASSOCIATED ENERGY COSTS THROUGH)	
ITS FUEL AND PURCHASED POWER COST)	
ADJUSTMENT CLAUSE,)	
)	
SOUTHWESTERN PUBLIC SERVICE)	
COMPANY,)	
·	
APPLICANT.	
)	

DIRECT TESTIMONY

of

BENNIE F. WEEKS

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

TABLE OF CONTENTS

GLOS	SSARY OF ACRONYMS AND DEFINED TERMS	iii
LIST	OF ATTACHMENTS	v
I.	WITNESS IDENTIFICATION AND QUALIFICATIONS	6
II.	PURPOSE OF THIS PROCEEDING, WITNESS ASSIGNMENT, AND SUMMARY OF TESTIMONY	9
III.	OVERVIEW OF SPS	12
IV.	SPS'S RESOURCE PLANNING PROCESS	13
V.	SPS'S 2013 REQUEST FOR PROPOSALS FOR WIND GENERATION RESOURCES	20
VI.	EVALUATION OF THE 2013 WIND RFP BIDS	22
VII.	COST RECOVERY	28
VIII.	CONCLUSION	30
VERI	FICATION	31

GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term

Meaning

ASM Ancillary Services Market

Commission New Mexico Public Regulation Commission

DAM Day Ahead Market

FERC Federal Energy Regulatory Commission

FPPCAC Fuel and Purchased Power Cost Adjustment

Clause

IM Integrated Market

IRP Integrated Resource Plan

LMP Locational Marginal Price

Mammoth Plains PPA Mammoth Plains Wind Energy Center PPA

MW Megawatt

MWh Megawatt Hours

Model PPA Model Wind Power Purchase Agreement

NPV Net Present Value

Palo Duro PPA Palo Duro Wind Energy Center PPA

PPA Purchased Power Agreement

PUCT Public Utility Commission of Texas

PTC Production Tax Credit

REC Renewable Energy Certificate

Acronym/Defined Term

Meaning

RFP Request for Proposal

Roosevelt PPA Roosevelt Wind Ranch PPA

RTBM Real-Time Balancing Market

SPP Southwest Power Pool, Inc.

SPS Southwestern Public Service Company, a New

Mexico corporation

TCR Transmission Congestion Rights

Xcel Energy Inc.

LIST OF ATTACHMENTS

Attachment	Description
BFW-1	2013 Wind Request for Proposals
BFW-2	2013 Wind RFP Bidder Summary
BFW-3	Avoided Cost Analysis

1 I. WITNESS IDENTIFICATION AND QUALIFICATIONS 2 Q. Please state your name and business address. 3 A. My name is Bennie F. Weeks. My business address is 600 S. Tyler Street, Amarillo, Texas 79101. 4 5 On whose behalf are you testifying in this proceeding? Q. 6 A. I am testifying on behalf of Southwestern Public Service Company ("SPS"), a New 7 Mexico corporation and wholly owned subsidiary of Xcel Energy Inc. ("Xcel 8 Energy"). Xcel Energy is a registered holding company that owns several electric 9 and natural gas utility operating companies and a regulated natural gas pipeline 10 company.1 11 By whom are you employed and in what position? Q. 12 I am employed by Xcel Energy Services Inc., the service company subsidiary of Xcel A. 13 Energy, as the Manager of Resource Planning - SPS. 14 Please briefly outline your responsibilities as Manager of Resource Planning. Q. 15 A. My duties include managing analysts and planners in the development of strategic 16 resource planning, including: need assessment, planning, solicitation and negotiation

¹ Xcel Energy is the parent company of four wholly owned electric utility operating companies: Northern States Power Company, a Minnesota corporation; Northern States Power Company, a Wisconsin corporation; Public Service Company of Colorado, a Colorado corporation ("PSCo"); and SPS. Xcel Energy's gas pipeline subsidiary is WestGas InterState, Inc.

1 of long-term purchased power agreements, and financial analysis of various resource 2 and purchase/sales options. I am also responsible for managing the various state resource planning processes to fulfill regulatory requirements and meet company 3 objectives. 4 5 Q. Please describe your educational background. 6 A. I graduated from West Texas State University (now West Texas A&M University) in 7 May 1976, receiving a Bachelor of Science degree with a double major in

Please describe your professional experience.

units in the business field.

8

9

10

11

12

13

14

15

16

17

18

Q.

A.

I began employment with SPS in September 1979, as a meter reader. I became an Engineering Estimator in the Fuel Administration Department in 1981. As an estimator, I prepared monthly fuel plans and prepared the five-year fuel budget. In 1984, I became Senior Production Costing Specialist in Fuel Acquisition and Administration. In that position, I performed studies for fuel budgets, capital projects, fuel contracts, alternative operating procedures, and other special projects. I was responsible for a production costing model (PROMOD) and coordinated and developed the short-term and long-term fuel and energy planning and budgeting for

Mathematics and Physical Education. Additionally, I have 23 continuing education

1		the SPS generating system. In October 2000, I became a Case Specialist in
2		Regulatory Administration for SPS managing all aspects of regulatory cases. I
3		accepted my current position in October 2008.
4	Q.	Have you attended or taken any special courses or seminars relating to public
5		utilities?
6.	A.	Yes. I have attended many utility related classes and seminars hosted by SPS and
7		utility consulting firms.
8	Q.	Have you testified before any regulatory authorities?
9	A.	Yes. I have testified before the New Mexico Public Regulation Commission
10		("Commission"), the Federal Energy Regulatory Commission ("FERC"), and the
11		Public Utility Commission of Texas ("PUCT").

II. PURPOSE OF THIS PROCEEDING, WITNESS ASSIGNMENT, AND SUMMARY OF TESTIMONY

3 Q. What is the purpose of this proceeding?

A.

In this proceeding, SPS is requesting approval and authorization to enter into the following three proposed long-term purchased power agreements ("PPAs") for the purchase of wind energy: (1) Mammoth Plains Wind Energy Center ("Mammoth Plains PPA"), rated at 199 megawatts ("MW"); (2) Palo Duro Wind Energy Center ("Palo Duro PPA"), rated at 249 MW; and (3) Roosevelt Wind Ranch ("Roosevelt PPA"), rated at 250 MW (collectively "PPAs"). The Mammoth Plains and Palo Duro Wind facilities will be developed by NextEra Energy Resources and the Roosevelt Wind facility will be developed by Infinity Wind Resources. The PPAs do not include the purchase of environmental attributes associated with renewable energy certificates ("RECs"). SPS is also requesting authorization to recover the New Mexico retail jurisdictional share of all energy related costs associated with the PPAs through SPS's fuel and purchased power adjustment clause ("FPPCAC").

SPS is filing this case under Rule 551 (17.9.551 NMAC - *Prior Approval of Purchased Power Agreements*), which establishes requirements and procedures for the approval of purchased power agreements. Rule 551 includes specific criteria that

1		apply to long-term purchased power agreements, which are contracts with terms of
2		five years or more.
3	Q.	What is your assignment in this proceeding?
4	A.	My testimony will: (1) provide an overview of SPS; (2) describe SPS's resource
5		planning process; (3) provide an overview of SPS's Request for Proposals ("RFP")
6		for wind generation ("2013 Wind RFP"); (4) present the economic analysis that
7		supports the selection of the Mammoth Plains PPA, Palo Duro PPA and Roosevelt
8		PPA; and (5) discuss and support SPS's request to recover its energy related costs
9		incurred under the PPAs.
10	Q.	Please summarize the conclusions in your testimony.
11	Α.	The acquisition of additional wind resources through the Mammoth Plains PPA, Palo
12		Duro PPA, and Roosevelt PPA is consistent with SPS's 2012 Integrated Resource
13		Plan and will permit SPS to provide low-cost energy and reduce its system energy
14		costs for New Mexico retail and other jurisdictional customers. As a result, the
15		Commission should authorize SPS to enter into the PPAs and approve SPS's request
16		for recovery of the energy-related costs under the PPAs through SPS's FPPCAC in
17		accordance with Rule 550 (17.9.550 NMAC).

i	Q.	Is SPS presenting any other witness in support of its Application?
2	A.	Yes. Ms. Jessica Collins: discusses the terms and conditions of the proposed
3 .		Mammoth Plains PPA, Palo Duro PPA, and Roosevelt PPA; describes the contract
4		negotiation process; and supports the reasonableness of the terms and conditions of
5		the DDAs

III. OVERVIEW OF SPS

2 Q. Please briefly describe SPS.

A.

SPS is headquartered in Amarillo, Texas, and its New Mexico operations are based in Roswell, New Mexico. SPS is a fully integrated generation, transmission, and distribution electric utility that serves approximately 371,000 retail customers (of the total, approximately 104,000 are New Mexico retail customers) in a 52,000 square-mile area of eastern and southeastern New Mexico and the Panhandle and the South Plains of Texas. The service area extends approximately 400 miles from north to south and 200 miles from east to west. SPS serves most of the towns within the service territory, while many areas outside those towns are served by rural electric cooperatives, most of which are wholesale customers of SPS. The largest components of SPS's New Mexico retail service are agriculture and oil and gas production.

IV. SPS'S RESOURCE PLANNING PROCESS

2 Q. Please generally describe SPS's resource planning process.

A.

In its simplest form, electric resource planning involves using forecasts of customer electric demand and energy to determine the appropriate sources of electric supply that should be developed to meet customer requirements in a cost-effective and reliable fashion. SPS compares its existing firm generating resources, including owned generating capacity and firm purchased power, to SPS's projected annual peak firm load obligation over the planning period. Required reserve margins are included to determine SPS's capacity position.

SPS's assessment of electric resource need includes determining both the magnitude of the need as well as the type of resources required (*i.e.*, peaking, intermediate, or baseload). Additionally, resource need assessment must be conducted in accordance with regulatory requirements specifying resource assessment processes and resource specific acquisition, (*e.g.*, requirements for integrated resource planning and amounts of renewable resources in a supply portfolio). This approach is commonly referred to as a load and resources balance.

SPS determines the type of resources its electric supply system requires by evaluating how different resource technologies integrate with SPS's existing electric

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

Q.

A.

supply to serve the overall system capacity and energy needs in a least-cost manner. Planning to meet a resource need is an iterative process performed with computer simulation tools (Strategist and PROSYM, products of Ventyx) that seek a least-cost solution consistent with resource availability, predicted market conditions and fuel costs, power supply reliability, system reliability, and electric system constraints. Typical solutions for meeting resource needs consist of the following: enhancing current resources, demand management, building new resources, and purchasing new long-term or short-term energy and capacity. If an electric resource addition is required, competitive bid solicitations provide a market price that can be compared against self-build options to determine the most economic option to meet a resource need. The ultimate decision is made based on the economic value of the alternatives, the risks inherent in each alternative, the ability to obtain the generation in a timely manner, and other factors affecting a project's value to SPS. Has SPS filed an Integrated Resource Plan ("IRP") under Rule 17.7.3 NMAC? Yes. SPS filed its integrated resource plan in Case No. 12-00298-UT on July 16, 2012 ("2012 IRP"). The 2012 IRP describes SPS's action plan to evaluate and recommend supply-side resource options utilizing the resource planning process

described above. The Commission issued its Final Order accepting SPS's 2012 IRP as compliant with 17.7.3 NMAC on August 30, 2012.

Q. Please briefly describe SPS's 2012 IRP conclusions.

A.

The 2012 IRP recommended following the conclusions from SPS's 2009 IRP, which indicated that the optimized model runs were as follows: (1) combined-cycle capacity and energy appeared in each of the optimized cases, shifting only slightly forward or backward in time; and (2) some amount of wind proved to be economic in virtually all of the runs (except for the no carbon and low gas cases).

Consistent with the IRPs, SPS has acquired several resource additions. These include two combustion turbine generators, Jones Unit 3 (commercial operation June 2011) and Jones Unit 4 (commercial operation June 2013); acquisition of 161 MW of wind energy under a PPA from Spinning Spur Wind LLC; a dispatchable gas combined-cycle purchase for 200 MW (January 2012-December 2018) from Calpine Energy Services, L.P.; and an additional power purchase from Calpine for 200 MW of dispatchable gas combined-cycle capacity and energy from the Oneta generating facility (June 2014 - May 2019).

1	Q.	Does the 2012 IRP include a plan for additional wind?
2	A.	Yes, in part. As stated above, the 2012 IRP follows the conclusions in the 2009 IRP,
3		part of which determined that additional wind resources should be part of SPS's
4		resource portfolio.
5	Q.	Why did SPS decide to issue an RFP for wind generation resources in 2013?
6	A.	During 2011 and 2012, SPS received unsolicited bids for sales of wind generation
7		resources. The proposed prices were very favorable and were trending downward.
8		SPS believes this trend was in part due to wind resource developers attempting to
9		acquire and secure bilateral agreements to take advantage of Production Tax Credits
10		("PTCs") that were scheduled to expire December 2012. On January 2, 2013,
11		legislation extending the PTCs for one year was signed.
12		With the extension of the PTCs and the indication that wind energy prices
13		were economical and beneficial for SPS's customers, SPS decided to issue its 2013
14		Wind RFP. Additionally, acquiring more renewable energy resources will benefit
15		SPS and its customers should carbon legislation be enacted.

1 Q. Does the acquisition of additional wind resources delay or defer any capacity

2 additions?

A.

No. SPS's required planning reserve margin is 13.6%. The planning reserve margin compares existing firm generating resources, including owned generating capacity and firm purchased power, to projected annual peak firm load obligation. SPS can attribute a small amount of wind resources to its planning reserve margin pursuant to the defined methodology in the Southwest Power Pool's Criteria – 12.1.5.3 – Rating Adjustments. The amount credited toward SPS's planning reserve is a MW value for each facility. The total MW credit for the current wind facilities on the SPS system result in a contribution of approximately 5.5% of their nameplate capacity rating to the planning reserve margin. Adding approximately 700 MW of wind resources will result in an additional 38.5 MW that can be credited to SPS's planning reserve margin. The 38.5 MW constitutes a 0.011% increase in the planning reserve margin. The small increase in the planning reserve margin due to the proposed wind facilities is certainly within the range of accuracy of the projected peaks on which the reserve

2016 Firm peak load obligation = 5100 MW. Firm resources = 5900 MW. Planning Reserve Margin = 15% (5900-5100)/5100). Add 38.5 MW to Firm resources = 5958 MW. New Planning Reserve Margin = 16.82%. 16.82 minus 15.69 equals 0.011%.

1		margin is calculated. Therefore, the addition of these wind facilities will have little
2		or no impact on future capacity additions.
3	Q.	Does the addition of the capacity from the PPAs result in SPS exceeding its
4		minimum planning reserve requirement?
5	A.	For the period 2015 – 2019, SPS currently expects to exceed its minimum planning
6		reserve requirement. Beginning in 2020, SPS is projecting a negative planning
7		reserve margin. As illustrated above, the addition of 38.5 MW of firm capacity has
8		minimal affect on the reserve margin. It should be noted that no capacity credit will
9		occur if firm transmission service is not acquired, as discussed later in my
10		testimony.
11	Q.	Why is SPS's planning reserve margin projection higher than the minimum
12		requirement for the period 2015 – 2019?
13		Earlier in my testimony, I described SPS's acquisition of an additional 200 MW
14		purchase of combined-cycle capacity and associated energy from Calpine Energy
15		Services (Calpine 2 PPA). SPS filed a request for approval of the purchase with the
16		Commission on July 13, 2012, Case No. 12-00235-UT, which was subsequently
17		approved on January 15, 2013. In my direct testimony in that case, I discussed four
18		considerations that influenced SPS's decision to enter into the Calpine 2 PPA,

specifically: (1) load growth experienced on the SPS system; (2) the effect on SPS's
operations of potential environmental regulations; (3) the implementation of the SPP
Day Ahead Market ("DAM") scheduled for implementation in March 2014; and (4)
operating reserve criteria. Taking into account these considerations as well as the
reliability needs identified in my direct testimony in that case, the Calpine 2 PPP will
help ensure reliable capacity and economic energy for SPS's customers.

V. 1 SPS'S 2013 REQUEST FOR PROPOSALS FOR WIND 2 **GENERATION RESOURCES** 3 Q. Please describe SPS's RFP for wind generation resources. 4 SPS's 2013 Wind RFP was issued on March 15, 2013, seeking wind generation A. 5 beginning on or after January 1, 2014, but no later than December 2015. A copy of the 2013 Wind RFP (without attachments) is attached to my testimony as Attachment 6 7 BFW-1. 8 The 2013 Wind RFP asked bidders to provide SPS terms and conditions 9 under which the environmental benefits and renewable energy certificates associated 10 with the energy would be included in the purchase and a proposal under which the 11 bidder would retain ownership of the RECs. 12 The RFP sought bids for a minimum size of 10 MW, and required the 13 facilities to interconnect directly to the Southwest Power Pool's ("SPP") transmission 14 system or alternatively, the bidder would be responsible for directing energy from a 15 system outside of SPP and for associated costs. 16 Bid proposals were due on April 12, 2013, and the evaluation, due diligence 17 and PPA negotiations were conducted during the months of April – June.

- 1 Q. Please describe the response to the 2013 Wind RFP?
- 2 A. SPS received eighteen (18) responses from bidders that resulted in over seventy five
- 3 (75) proposals. Attachment BFW-2 shows a summary of the bids received.

1 VI. **EVALUATION OF THE 2013 WIND RFP BIDS** 2 Q. Please describe SPS's bid evaluation process for the 2013 Wind RFP. 3 SPS performed an initial screening of the bids to assess compliance with the RFP, A. and then analyzed the bids and sought clarification from the bidders when necessary. 4 5 Q. Please describe the approach that SPS used to review bids received in response 6 to the 2013 Wind RFP. 7 First, SPS calculated the levelized cost of each bid to determine its rank. After the A. 8 rank was determined, SPS consulted with Xcel Energy internal operations, transmission, purchased power, and regulatory personnel to discuss any issues that 9 10 might arise due to existing unit operations, transmission constraints, transmission 11 service requests, PPA exceptions provided by the bidders, and REC strategy. After consulting with these Xcel Energy internal groups, SPS narrowed the 12 selection to five bids. These bids were then weighted based on six criteria: 1) price; 13 14 2) congestion management; 3) generation interconnection status; 4) ability to 15 facilitate execution of the PPA; 5) balancing authority location; and 6) financial plan. 16 The bids were then narrowed to the final three. Potential savings under the three bids were calculated using SPS's avoided cost to ensure customer benefits if SPS entered 17

18

into PPAs.

Q. How were avoided costs determined?

A.

SPS used the production costing model, *Strategist*, to determine the avoided energy cost. Effectively, *Strategist* constructs the generation stack of available resources to serve the load at the lowest cost, taking system constraints into consideration. In establishing the generation stack to serve the load most efficiently, lowest cost resources and must run resources are at the bottom, with intermediate-cost resources utilized next, and peaking (high operating cost) resources at the top. After the generation stack has been established, the resource on the margin (*i.e.*, the resource used to serve the last increment of the load) and the total cost to serve the load can readily be determined.

Strategist was used to simulate the system dispatch necessary to meet SPS's forecasted system load for a twenty-year period. Next, Strategist was rerun with an additional resource, a 750 MW intermittent resource at a \$0 cost per megawatt hour ("MWh"). This second run resulted in a lower cost than the initial run due to the additional resource that was included at \$0/MWh. The annual costs resulting from the second optimization run with the 750 MW intermittent resource were subtracted from the annual costs resulting from the program results without the intermittent

resource (first run). The differences in total system costs are the avoided energy costs 1 2 that were used to determine the economic effectiveness of the selected projects. 3 Q. What is the final result of SPS's 2013 Wind RFP bid analysis? 4 Taking all of the criteria described earlier into account, SPS determined that the A. 5 Mammoth Plains PPA, Palo Duro PPA, and Roosevelt PPA provide the best wind 6 energy alternatives to add to SPS's resource portfolio. The total system net present 7 value savings (NPV) for these PPAs is \$590.4 million. This NPV savings was determined using Xcel Energy's most current 20 year levelized gas price forecast of 8 \$6.84/MMBtu. In order for the projects not to provide economical energy to SPS's 9 10 customers, the cost of 20 year levelized gas price would need to be less than 11 \$3.81/MMBtu. That scenario is highly unlikely given the range of SPS's delivered gas prices has been approximately \$3.20 to \$4.75 during 2013. Attachment BFW-3 12 13 contains a summary of the final avoided cost analysis. Do these projected savings include costs for curtailment energy? 14 Q. No. However, even if one assumes that 5% (162,000 MWh) of the wind energy is 15 A. 16 compensable curtailment energy, the projected NPV savings is \$481.8 million, which

is still significant savings for SPS customers.

17

1 Q. Will SPS incur any transmission costs for the delivery of the energy produced 2 from the wind projects? 3 That is uncertain at this time. SPP is implementing a new "Integrated Marketplace" A. ("IM"), which will contain: a Day Ahead Market ("DAM") and Ancillary Services 4 5 Market ("ASM") for co-optimized Energy and Operating Reserves; a Transmission Congestion Rights ("TCR") market; and a Real-Time Balancing Market ("RTBM"). 6 7 SPP will also consolidate the existing sixteen Balancing Authorities into a single SPP Consolidated Balancing Authority. A part of the SPP IM will facilitate reliable 8 9 integration of renewable resources. As mentioned above, the IM will provide a TCR 10 market. The TCRs are financial instruments that allow Market Participants to hedge against the congestion cost associated with energy delivery. The hedge is defined 11 12 with a source, sink and MW value. The revenue from TCRs is based on the difference between Locational Marginal Price ("LMP) paid to the generator, and the 13 LMP price at the load. Like traffic congestion, transmission congestion cannot be 14 15 completely eliminated or avoided. However, one can hedge to manage the uncertainty 16 of congestion. 17 SPS submitted requests for firm transmission service for the Mammoth Plains 18 and Palo Duro projects to the SPP on May 31, 2013. At this time, SPS does not

know what the transmission cost impacts might be in order to secure firm transmission service. SPS will receive preliminary results from the transmission service study no later than three months after the initial submission. The final results may not be known for up to 24 months. For the Palo Duro and Mammoth Plains projects, SPS expects one of the following two end results and resulting actions:

1. Result: Transmission Upgrades are significant

Action(s): SPS does not accept firm transmission service. As a result of not having firm service, SPS would not have the free right to convert those rights into TCR rights. SPS would either bid to purchase TCRs or have no hedge between the day ahead LMP at the generator and the SPS load.

2. Result: Transmission Upgrades are minimal or reasonable

Action(s): SPS would have the free opportunity to convert these rights into TCRs to hedge the day ahead congestion between the generator and the SPS load.

As described earlier in my testimony and by SPS Witness Collins, SPS negotiated 30,000 MWh of non-compensable curtailment during the first six (6) years for the Mammoth Plains PPA and Palo Duro PPA. SPS believes that with the non-compensable curtailments and the use of the TCR market to manage potential congestion, it will be protected from any additional costs related to transmission. The

forecasted energy savings are sufficiently large making it likely that any transmission cost would be well below the savings, still resulting in the PPAs being a net benefit for the customers. Additionally, contract terms allow SPS the ability to terminate the PPAs if studies indicate that transmission impacts are significant.

SPS has not submitted a request for firm transmission service for the Roosevelt wind project. SPS believes that this facility is situated such that very little, if any, transmission congestion will occur.

COST RECOVERY

VII.

1

11

12

13

14

15

16

2 What topic do you discuss in this section of your testimony? Q. I explain how SPS proposes to recover the cost of the energy it purchases under the 3 A. 4 Mammoth Plains PPA, Palo Duro PPA, and Roosevelt PPA. 5 Please describe SPS's proposed cost recovery for the energy it purchases under Q. 6 these PPAs. As described earlier in my testimony, the Mammoth Plains PPA, Palo Duro PPA, and 7 A. Roosevelt PPA do not include RECs. SPS is purchasing an energy only product. 8 9 SPS requests approval to recover the New Mexico retail jurisdictional 10 allocated share of total energy costs and any curtailment payments made under the

- Q. What affect will the proposed PPAs have on SPS's financial condition and
 financial metrics?
 A. Based on initial analysis, the additional wind PPAs are expected to add
- 5 incremental imputed debt does not have a material impact on SPS's credit metrics.

4

approximately \$63 million of imputed debt from Standard and Poors.

1		VIII. <u>CONCLUSION</u>
2	Q.	Is Attachment BFW-1 a true and correct copy of the document you state it to be
3		in your testimony?
4	A.	Yes.
5	Q.	Were Attachments BFW-2 and BFW-3 prepared by you or under your direct
6		supervision and control?
7	A.	Yes
8	Q.	Does this conclude your pre-filed direct testimony?
9	A.	Yes.

VERIFICATION

STATE OF TEXAS)	
) ss.	•
COUNTY OF POTTER)	
BENNIE F. WEEKS, first being sworn on he	er oath, states:
I am the witness identified in the precand the accompanying attachments and am fa personal knowledge, the facts stated in the test and based upon my professional experience, testimony are true, valid, and accurate.	timony are true. In addition, in my judgmen
	Lennie & Thick
	Bennie F. Weeks
SWORN TO AND SUBSCRIBED be	efore me this <u>f</u> day of July, 2013.
JAQUITA KAY CRAWFORD	Jaquetaka Cowford
MY COMMISSION EXPIRES February 13, 2014	Notary Public, State of Yexas My Commission Expires: 2/13/14

2013 Request for Proposals For Wind Generation Resources

Southwestern Public Service Company

Released March 15, 2013



Table of Contents SPS 2013 Wind Generation Resource RFP

Sect	ion 1.	RFP Scope	5
1.1		tory Context	
1.2		ce Need Assessment	
Sect	ion 2.	Eligible Project Information	6
2.1		Project Structures	
2.2		Project Resources	
2.3			
2.4		Tax Credits	
2.5	Regula	tory Approvals	8
2.6		ct Lengths	
2.7		and Purchase Option	
2.8		ct Accounting	
2.9		Pricing	
Sect	ion 3.	Delivery and Interconnection Information	11
3.1		Delivery Requirements	11
3.2	Propos	als Requiring SPP Interconnection Service	11
Sec	tion 4.	Proposal Content Requirements and Submission Procedure	12
4.1		ule Estimate	
4.2		m Requirements for Proposals	
4.3		al Content Requirements	
4.4	Propos	sal Submission Deadline	19
4.5		ation Policy	
4.6		aluation Fees	
4.7		ation of Proposals	
4.8		entiality	
4.9	Adden	da to RFP	21
4.10		resentation	
4.11	Affili	ate Bidding	22
	,		
Sec	tion 5	Rid Evaluation	

Appendices

Appendix A
Proposal Forms

Appendix B
Model Renewable Purchase Agreement

Notice of Disclaimer

The information contained in this Request for Proposals ("RFP") for wind generation resources has been prepared solely to assist respondents (a.k.a., Bidders) in deciding whether or not to submit a proposal. Southwestern Public Service Company ("SPS") does not represent this information to be comprehensive or to contain all of the information that a respondent may need to consider in order to submit a proposal. None of SPS, its affiliates, or their respective employees, directors, officers, customers, agents and consultants makes, or will be deemed to have made, any current or future representation, promise or warranty, express or implied, as to the accuracy, reliability or completeness of the information contained herein, or in any document or information made available to a respondent, whether or not the aforementioned parties knew or should have known of any errors or omissions, or were responsible for their inclusion in, or omission from, this RFP.

SPS reserves the right to modify, supplement or withdraw this RFP at any time, whether due to changes in law or otherwise, and including by issuing one or more addenda to this RFP during this solicitation, which addenda shall become a part of this RFP. No part of this RFP and no part of any subsequent correspondence by SPS, its affiliates, or their respective employees, directors, officers, customers, agents or consultants shall be taken as providing legal, financial or other advice or as establishing a contract or contractual obligation. Contractual obligations on the part of SPS will arise only if and when definitive agreements have been approved and executed by the appropriate parties having the authority to approve and enter into such agreements. SPS reserves the right to request from a respondent (a.k.a., Bidder) information that is not explicitly detailed in this document, obtain clarification from respondents concerning proposals, conduct contract development discussions with selected respondents, conduct discussions with members of the evaluation team and other support resources as described in this RFP and in compliance with all FERC Code of Conduct rules.

SPS will, in its sole discretion and without limitation, evaluate proposals and precede in the manner SPS deems appropriate, which may include deviation from SPS's expected evaluation process, the waiver of any requirements and the request for additional information. SPS reserves the right to reject any, all or portions of any proposal received for failure to meet any criteria set forth in this RFP or otherwise and to accept proposals other than the lowest cost proposal. SPS also may decline to enter into any agreement with any respondent, terminate negotiations with any respondent or abandon the RFP process in its entirety at any time, for any reason and without notice thereof. Respondents that submit proposals agree to do so without legal recourse against SPS, its affiliates, or their respective employees, directors, officers, customers, agents or consultants for rejection of their proposals or for failure to execute an agreement for any reason. SPS and its affiliates shall not be liable to any respondent or other party in law or equity for any reason whatsoever for any acts or omissions arising out of or in connection with this RFP. By submitting its proposal, each respondent waives any right to challenge any valuation by SPS of its proposal or any determination of SPS to select or reject its proposal. Each respondent, in submitting its proposal, irrevocably agrees and acknowledges that it is making its proposal subject to and in agreement with the terms of this RFP.

Each respondent shall be liable for all of its costs incurred to prepare, submit, respond or negotiate its proposal and any resulting agreement and for any other activity related thereto, and SPS shall not be responsible for any of the respondent's costs.

SPS 2013 Wind Generation RFP

Section 1. RFP Scope

Southwestern Public Service Company ("SPS"), an operating company subsidiary of Xcel Energy Inc., is issuing this Request for Proposals ("RFP") as a component to SPS's resource planning process. Through this solicitation, SPS is seeking proposals for wind generation.

This RFP can be found online at http://www.xcelenergy.com/ by clicking on the "About Us" menu at the top of the home page, then on the link "Our Company", then on the link "Projects and RFPs", and finally choosing the appropriate RFP. SPS invites proposals from all potential suppliers ("Bidders") who are capable of meeting the conditions of this RFP.

1.1 Regulatory Context

SPS may require certain regulatory approvals from those jurisdictions in which it operates. Such approvals shall include, but may not be limited to, approval of any resulting Power Purchase Agreements ("PPAs"), and regulatory treatment of such costs, which SPS may consider in its sole discretion pursuant to the terms of the model PPA.

1.2 Resource Need Assessment

Through this solicitation, SPS is requesting proposals of wind resources that could begin delivery to SPS on or after January 1, 2014 (but no later than December 31, 2015) and that would be contracted through SPS's PPA. SPS may opt to acquire more or fewer resources, depending, among other things, on the quality of bids received in response to this RFP, on updates to SPS's forecasts, on regional transmission availability, and on changes to regulatory or legal requirements.

Section 2. Eligible Project Information

2.1 Eligible Project Structures

Bidders to this RFP should propose a PPA structure, subject to the accounting considerations and the index pricing considerations discussed in later sections of this RFP. A Model PPA¹ is provided in Appendix B. Bidders should review and respond to the terms and conditions of the Model PPA when submitting their proposals.

In the event SPS desires to proceed with negotiations of a PPA, SPS will work to negotiate the agreements with Bidders selected through this solicitation. The Model PPA attached in Appendix B is provided to familiarize Bidders with the terms and conditions under which SPS purchases wind energy and provide Bidders with an opportunity to respond to the Model PPA when developing their proposals. Bidders should familiarize themselves with the terms and conditions of this Model PPA and should provide proposed modifications, if any, to the Model PPA with their proposals. In preparing proposals, Bidders should also note that certain bid-specific information contained in each proposal would be inserted into a final PPA should an agreement be reached.

SPS is under no obligation to develop the PPA from any other contract form provided by the Bidder, and strongly discourages Bidders from proposing such forms.

To the extent that the validity of a Bidder's proposal, and a Bidder's ability to execute the PPA, is contingent upon changing language in the Model PPA, the proposal must specifically identify the required changes as Model PPA Exceptions (see Narrative Topics under Section 4.3 of this RFP) and should indicate what impact complying with the terms of the Model PPA would have on their bid pricing.

2.2 Eligible Project Resources

Wind generation proposals shall be existing or to-be-built generation resources delivered to the SPS balancing authority.

SPS requires that Bidders provide in their proposals SPS's ownership of 100% of the environmental benefits and renewable energy credits

¹ The Model PPA is a sample agreement containing terms and conditions acceptable to SPS. SPS understands that bidders may desire to modify and supplement the Model PPA when submitting their proposals. If SPS elects to negotiate a PPA with one or more Bidders, SPS will consider any proposed changes.

("RECs") associated with the energy generated by the project and purchased by SPS, and a proposal under which Bidder retains ownership of 100% of such RECs.

For this RFP, SPS has established a minimum proposal size of 10 MW. SPS's experience has been that larger projects have greater economies of scale and, therefore, tend to be more competitive.

All wind proposals shall interconnect directly to the Southwest Power Pool's ("SPP") transmission system or shall be responsible for arrangement and costs associated with directing energy from a system outside of SPP.

2.3 Pricing

Forms C1 and C2 provide the pricing template for wind generation PPA proposals. All pricing must be in terms of current year dollars, also referred to as escalated or nominal dollars. For example, a \$25 per megawatt-hour ("MWh") energy price bid for 2019 means that in 2019, energy from the facility will be purchased at a rate of \$25/MWh. SPS's preference is for fixed price proposals. However, Bidders wishing to submit bids with terms that use price indices to periodically adjust prices should refer to Section 2.9 in developing their proposals.

Proposals should include estimated costs for any new or upgraded interconnection facilities required for the interconnection of the proposed project, and must include the cost of the dedicated radial transmission line(s) from the generation facility to the proposed point of interconnection.

SPS will be responsible for payment of any transmission service and ancillary service costs on the SPS system required to deliver Bidder's proposed energy beyond the point of interconnection at which SPS would receive the energy from Bidder's facility.

All Bidders must complete Forms C1 and/or C2, which requires the Bidders to provide information necessary for an economic evaluation of their proposals.

Bidder's shall provide a base bid price that does not include non-compensatory or discounted curtailed energy. Bidders may also include 5,000 MWh blocks of non-compensatory or discounted (priced anywhere from \$0/MWh to the base bid price) curtailed energy per year in their bid. To the extent a Bidder includes a price for blocks of non-compensatory or discounted curtailed energy in their proposal; they must submit this pricing as an adder to the base bid price and should be noted on Forms C1 and/or C2.

2.4 Federal Tax Credits

As of December 2012, the expiration date for the Renewable Electricity Production Tax Credit ("PTC") has been extended for projects that have met certain thresholds as provided in applicable law as of December 31, 2013. Bidders should clearly state the federal tax credit assumptions they have made in their bids.

2.5 Regulatory Approvals

SPS reserves the right to submit to its Regulatory Agencies any agreements it enters into with successful Bidders to ensure SPS's ability to recover costs associated with such agreements in a manner satisfactory to SPS. SPS further reserves the right to terminate such agreements if, among other things, SPS fails to receive satisfactory assurance that SPS will be able to recover all of its costs associated with such agreements in a manner satisfactory to SPS. These termination provisions are presented in the Model PPA

2.6 Contract Lengths

Eligible Bidders to this RFP may propose one contract term length for each proposal. Bidders may propose contract term lengths of ten (10), fifteen (15), or twenty (20) years. SPS's objectives with respect to contract term lengths are to avoid the concurrent expiration of multiple contracts and to avoid or minimize the adverse financial impact of imputed debt, capital lease, and Variable Interest Entity related obligations. Because SPS's long-term resource needs are highly dependent on the resolution of certain existing sales and purchase arrangements the outcome of which is currently unknown, SPS has no preference for shorter or longer contract term lengths.

A single bid may offer two alternative contract terms for one bid evaluation fee, as further described in the section on bid fees.

2.7 RoFO and Purchase Option

The Model PPA includes certain provisions that allow SPS the right to purchase the facility consistent with the terms and conditions of the Model PPA.

2.8 Contract Accounting

All contracts proposed to be entered into as a result of this RFP will be assessed by SPS for appropriate accounting and/or tax treatment. Bidders shall be required to supply promptly to SPS any and all information that SPS requires in order to make such assessments. SPS's assessment will include, but shall not be limited to, whether the proposal could result in a contract that would either (i) require SPS to account for all or a portion of the arrangement as a capital lease² pursuant to Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 840, or (ii) require consolidation of the seller or assets or liabilities of the seller in SPS's financial statements due to Variable Interest Entity³ ("VIE") issues. The FASB currently expects to release proposed revisions to its standard on accounting for leases for public comment during the second quarter of 2013, potentially resulting in a revised final standard at a later date. To the extent authoritative accounting standards have been approved by the FASB in final form at the time of SPS's assessment and are expected to become effective during the contract term, such assessment shall be performed both under the current and future standards.

SPS prefers arrangements that do not result in a capital lease or VIE consolidation. As a result, all Bidders shall state in their proposals (i) that the Bidder has considered applicable accounting standards in regard to capital leases and variable interest entities, (ii) summarize any changes that the Bidder proposes to the Model PPA in order to attempt to address these issues, and (iii) whether to the Bidder's knowledge and belief, the Bidder's proposal would result in such treatment as of the date of the proposal.

By submitting a proposal, each bidder agrees to make available to SPS at any point in the bid evaluation and throughout any resulting contract negotiation process any and all financial data associated with the Bidder, the facility included in the proposal and/or the PPA and any other information that SPS determines, in its sole discretion, is required to verify or independently determine the accounting and tax treatment associated with a proposal. Such information may include, but shall not be limited to, data supporting the economic life (both initial and remaining) of the facility, the fair market value of the facility, and any and all other costs (including debt specific to the asset being proposed) associated with the Bidder's proposal. This shall be in addition to financial data contained within the Bidder's financial statements (e.g., income statements, balance sheets, etc.).

² "Capital Lease" – shall have the meaning as set forth in FASB ASC 840.

³ "Variable Interest Entity" or "VIE" – shall have the meaning as set forth in FASB ASC 810.

2.9 Index Pricing

If a Bidder believes that escalating its PPA pricing according to movements in an index will reduce its overall bid price, the Bidder may take an appropriate exception on the applicable Form(s) and provide an alternate price that would be escalated from a known and fixed initial contract year price according to a known, published and widely recognized index that is closely related to the appropriate generation segment of the power industry. A Bidder that wishes to propose such alternate pricing tied to an index must submit one pricing form in escalated or nominal dollars and another pricing form tied to an index meeting the requirements of the preceding sentence.

Section 3. Delivery and Interconnection Information

3.1 Power Delivery Requirements

SPS will be responsible for arranging any transmission service required to deliver power obtained under this RFP. SPS will include the estimated costs of transmission service and any associated network upgrades for delivery when evaluating bids. If firm transmission service is delayed beyond the COD, such that non-firm service or service with interim redispatch is required, output from the facility may be curtailed without compensation to the bidder.

3.2 Proposals Requiring SPP Interconnection Service

Energy pricing must include all customer interconnection costs (i.e., capital costs for transmission interconnection facilities for which the Bidder is responsible) as defined by FERC Order No. 2003, Federal Register Volume 68, No. 160 (August 19, 2003).

Due to the current status of the SPP interconnection queue, proposals for new, to-be-constructed wind generation must at a minimum, have an established position within the interconnection queue for aggregate study with the SPP.

Forms C1 and C2 include a section where Bidders must enter information regarding their SPP-determined interconnection cost.

Section 4. Proposal Content Requirements and Submission Procedure

4.1 Schedule Estimate

An indicative schedule for this RFP process is provided below.⁴ SPS reserves the right to revise this schedule at any time in its sole discretion. In the event SPS elects to negotiate a PPA, SPS would plan for the completion of contract development and the signing of project agreements as quickly as possible while still providing sufficient time for the proposal review and evaluation process. Under such circumstances, SPS's goal is to complete contract development discussions, sign contracts and receive Commission approval pursuant to the schedule below.

Proposals are due by 5:00 PM CST Friday, April 12, 2013.

RFP Issued	March 15, 2013
Proposals Due	April 12, 2013
Evaluation & Due Diligence	April 2013
Negotiations with Selected Bidder(s)	May - June 2013
Finalize / Sign Contracts	June 2013
Application for Regulatory Approval	July 1, 2013

4.2 <u>Minimum Requirements for Proposals</u>

This section describes the minimum requirements that all proposals must satisfy to be eligible for this solicitation. Unless SPS in its sole discretion elects otherwise, proposals that do not comply with these requirements will be deemed ineligible and will not be considered further. As stated in this RFP, notwithstanding the terms in this Section 4.2, SPS reserves the right to reject any proposal for any reason in its sole discretion.

- Proposals must include all applicable content requirements described in Section 4.3, including clear and complete written descriptions of all information requested, and completed forms.
- Proposals must clearly specify all pricing terms in accordance with Section 2.3. Except as otherwise indicated in Sections 2.3 and 2.9, proposals with pricing that is subject to change will be rejected.

12

⁴ SPS reserves the right to adjust this schedule appropriately, including (but not limited to) for changes to the regulatory calendar.

- Proposals must clearly demonstrate compliance with all power delivery requirements listed in Section 3.0 of this RFP.
- Proposals must demonstrate an acceptable level of development and technology risk, as determined by SPS's bid evaluation team.
- Proposals must demonstrate that the Bidder's project development team has, within the last 5 years, successfully completed the development, construction and commissioning of at least one project of similar scale and with characteristics similar to the proposed project.
- Bidders must demonstrate to the satisfaction of SPS that they can meet the security requirements contained in the Model PPA.
- Proposals must clearly demonstrate any financing requirements and an indicative financing structure (construction and permanent) for any proposed resources that will be constructed under a Bidder's proposal.
- For plants proposed to be constructed each Bidder must present clear and sufficient proof that it has or can secure an adequate and confirmed supply of turbines sufficient (at a minimum) to meet the required proposal. Bidders shall also identify any other long-lead time items (e.g., step-up transformers) that must be procured and evidence that the Bidder has the wherewithal to successfully complete such procurement in a manner consistent with the proposed project schedule.
- Bidders must provide the appropriate bid fee (described in Section 4.8 below) for each bid submitted.

4.3 Proposal Content Requirements

This section outlines the content and format requirements for all proposals submitted in response to this RFP. Unless SPS in its sole discretion elects otherwise, proposals that do not include the information requested in this section will be ineligible for further evaluation, unless the information requested is not applicable or relevant to a given bid. Although these requirements assist SPS in evaluating bids, SPS reserves the right to conduct any further due diligence it considers necessary to evaluate bids and reject any bids for any reason in its sole discretion. SPS also reserves the right and holds the expectation that it will perform any and all due diligence required to achieve satisfactory knowledge of the proposal prior to entering into any PPA discussions or negotiations.

Proposal Format

The first section of each proposal must contain an Executive Summary that provides an overview of the bid's characteristics, including any unique aspects or benefits. The second section of the proposal must include the applicable set of forms included in Appendix A. These forms will contain essential information about each bid. A separate set of forms and related information must be submitted with each proposal. The third section of the proposal must include other proposal information, which must be presented in narrative form under specific topic headings, with each topic heading beginning on a new page.

A complete proposal will include the following components:

- Executive Summary
- 2. Compete set of applicable forms
- 3. Form attachments (as necessary to elaborate on form information)
- 4. Narrative topics discussion (four topics described below)
- 5. Requested maps and electronic data

Narrative topics to be discussed in each proposal include:

- Development Experience
- Financial Information
- Project Development Schedule
- Model PPA Exceptions

The proposal forms and topic headings are described in the Table of Contents.

Proposal Forms

Appendix A and the proposal forms include any special instructions for completing the forms. Some information may be requested on more than one form. Although such requests may be redundant, Bidders must provide the information requested on each applicable form.

Narrative Topics

In addition to completed forms, each proposal must also include a thorough written discussion of each of the following topics. The narrative topics should be organized under the following headings, with each heading beginning on a separate page. These narratives have been developed based on the assumption of a new build project. Bidders with projects which have already been constructed should develop their

narratives in a manner appropriate for their project.

- Development Experience
- Financial Information
- Project Description and Development Schedule
- Equipment Description
- Real Property Acquisition Description and Plan
- Permitting Plan
- Community/State Reaction Assessment
- Operations and Maintenance ("O&M") Plan
- · Exceptions to Model PPA
- Energy Production Profile (wind generation proposals)

Development Experience - All proposals must describe the Bidder's qualifications and experience in developing, constructing, commissioning and operating generation facilities similar to the proposed facility, including the experience, qualifications and safety record of key personnel who will manage development and an overview of utility scale and utility grade projects the Bidder has developed during the last five (5) years. If an Engineering, Procurement and Construction ("EPC") team is in place, the proposal should identify the members of the team; if such a group is not in place, the proposal must set forth the Bidder's plan for assembling such team (including process and timing).

Financial Information - All proposals must provide two (2) years of audited financial statements or the equivalent for Bidders and other responsible parties (including any entities that would provide parent guaranties of the Bidders' obligations), and as appropriate describe the plan for financing the proposed project during construction and operation. Proposals should also include indications of any financing commitments which have been discussed or obtained at the time the proposal is submitted. Proposals must explain in detail the plan for meeting the security requirements outlined in the Model PPA and must set forth the credit rating (if any) of any entities that would provide parent guaranties of the Bidders' obligations. Proposals must also include an organization chart showing the entities that own the Bidders and a description of the Bidders' organization structure (including primary and secondary businesses). Financial information may be provided primarily in electronic format so long as at least one (1) hard copy of the financial information is provided with the each proposal. Financial information should also include the following:

- An indication of whether the financing for the project (both construction and permanent) will be on-balance sheet or a nonrecourse project financing
- Expected debt/equity ratios for the project
- · Anticipated costs of project debt

Project Description and Development Schedule - All proposals for the construction of new generation facilities must set out a description of the proposed project, including a description and plans for the proposed site and rights of way, utilities services, equipment configuration, transmission and interconnection, construction and equipment procurement, supply of spare parts, opportunities for future expansion of the project, required permits, the nameplate capacity of the resource in MW, the Bidders' key consultants (if known) for wind studies and permitting studies, and the Bidders' construction contractors and prime subcontractors (if known). Such proposals must provide a detailed Gantt chart of project development activities developed using Microsoft Project or similar software (note that .pdf file-type is acceptable for submittal) that includes (at a minimum) entering major equipment and construction subcontracts, target completion dates for financing, engineering, permitting, equipment procurement, construction, startup and commissioning, and guaranteed dates for substantial completion. Proposals must describe the overall development strategy that will ensure that the project can be developed in time to meet the proposed commercial operation date.

It is SPS's expectation that SPS will have first rights to the proposed project during the proposal review and approval process. In support of this, and included in this narrative, Bidders must also provide any and all information which would restrict the Bidder from providing SPS with exclusive rights to negotiate a PPA for the proposed project. Such restrictions could include, but are not limited to, prior active submission or participation in other RFPs, exclusivity rights granted to other parties, rights of first offer or refusal, purchase options, and active auctions for the project as applicable.

Equipment Description - Proposals should indicate for all major equipment (i) the name of the manufacturer and other vendors, (ii) models, (iii) key metrics and characteristics of the equipment, (iv) planned delivery dates, (v) contracting status, and (vi) performance history of the equipment. Proposals must also indicate the following information with respect to the wind turbines: (i) rating and capabilities, (ii) number, (iii) proposed configuration and size (including height and rotor diameter), (iv) order status of the turbines (e.g., whether the turbines have been ordered or are in the manufacturer's queue) and (v) any other relevant equipment information.

Real Property Acquisition Description and Plan - Proposals must provide a description of the status of real property acquisition for the project that is sufficient for SPS to assess the completeness and sufficiency of the Bidder's real property rights, including but not limited to:

The status of current site ownership,

- The plan for acquiring any and all currently uncontrolled necessary real property rights to the project,
- Acreage of real property required for the project and a schedule for the completion of the real property acquisition process, and
- Any subdivision or zoning modifications and all city or county land use permits that will be required, such as conditional use, special use or other similar permits and approvals, which will be required for any phase of development, construction, or operations of the project.

Permitting Plan - Proposals must describe all federal, state and local permits and approvals that will be required (other than land use permits included in the Real Property Acquisition Description and Plan), including, but not limited to, federal environmental assessments under the National Environmental Policy Act ("EA/EIS"), wastewater discharge permits, hazardous waste permits, and no hazard permits/determinations from the Federal Aviation Administration. Proposals must also provide written documentation evidencing that consultation has occurred with appropriate governmental agencies responsible for reviewing potential project development impacts to state and federally listed wildlife species, as well as species and habitats of concern. Proposals must report on the status of all such permit applications and any feedback from permitting agencies. Proposals must provide the status of all required environmental permit applications (such as water, wastewater discharge, and hazardous waste permits) and any feedback Bidders have received from permitting agencies.

Community/State Reaction Assessment - Each Bidder must present a current assessment of, and a plan for continuing to monitor, local community and state reaction to the project, and a plan to work with the local community on project issues. Such plan might include the following elements:

- A list of the references used to assess the community reaction, and the methodology used to draw conclusions,
- A list of key local contacts interviewed and their opinions,
- An assessment of the local community reaction at the time of the bid,
- An action plan for working with the local community/state to successfully complete the project, and
- A description of the Bidder's proposed conflict resolution methodology.

Operations and Maintenance ("O&M") Plan - Bidders shall summarize their O&M plans and labor arrangements for the generation facilities associated with their proposals.

Exceptions to Model PPA - In support of SPS's efforts to complete project evaluation, approval and contract negotiations in a timely manner, Bidders are highly encouraged to review and provide their comments to the Model PPA to the extent they are applicable to the proposal. To the extent that the validity of a Bidder's proposal and/or the Bidder's ability to execute a PPA is contingent upon material changes to the language in the Model PPA, Bidders should specifically identify the terms in the Model PPA they propose to change and should summarize their proposed changes to such terms. Significant exceptions taken to the Model PPA may negatively impact a proposal's likelihood for selection through the bid evaluation process. To the extent that a bidder wishes to propose changes to the Model PPA that (if accepted by SPS) would reduce the Bidder's proposed pricing, the proposal should specifically identify such changes and the associated price reduction. To the extent practicable, Bidders should develop exhibits, schedules, attachments and other supplemental documents required by the Model PPA.

Energy Production Profile (data to be provided in Microsoft Excel format) - All proposals must provide information on expected annual energy production. SPS requests an 8,760 hourly energy production profile as well as the manufacturer's turbine power curve adjusted for the proposed site. In addition, SPS encourages Bidders to provide hourly energy production projections and associated hourly wind data for other years as well. Data should be applicable at the point of interconnection as defined in the Bidder's Interconnection Request. Wind production data that is based on theoretical modeling or a combination of on-site metered data and modeled data will be considered. However, regardless of the source of this data, Bidders must provide the resource data measurement plan used to derive the data. If the measurement plan relies entirely or in part on theoretical data, the Bidder should include background on the firm that conducted the study, the technology employed and any track record attesting to the accuracy of the methods used.

Proposals must answer the following questions concerning projections of wind generation:

- How was wind data collected, certified and correlated to a reference point?
- Who provided this service?
- What is the reference height of the meteorological data?
- · What is the hub height of the reference turbine?
- How was wind data manipulated to get to hub height?

- What is the wind shear, and how was it calculated?
- What is the confidence level of the forecast, i.e., P50, P90 or P99 data?
- What is the basis year of the underlying data? Was it a high, average or low year?
- How was the wind data transformed into generation output? Is this a typical year?
- What derates were used for such factors as array losses, line losses, forced outages, blade degradation, and other factors?
- What is the final, resultant derate from the nameplate MW of the proposed wind farm?

Upon request, Bidders must be prepared to provide SPS with the underlying wind data supporting these estimates with the understanding that SPS may engage an external consultant for an independent verification and evaluation of the wind resource. The provided data shall be sufficient for these purposes.

4.4 Proposal Submission Deadline

Bids will be accepted until 5:00 P.M. Central Time on Friday, April 12, 2013. All bids must be transmitted by express, certified or registered mail, or hand delivered to SPS's RFP point of contact at the following address:

SPS 2013 Wind Generation RFP submission:

Brian Fleming SPS Wind Generation RFP 600 Tyler Street, Suite 2900 Amarillo, TX 79101

Office:

(806) 378-2460

Email:

brian.fleming@xcelenergy.com

Proposals received later than the due date and time indicated will be rejected and returned unopened, unless SPS determines in its sole discretion that extenuating circumstances led to late delivery.

Two (2) bound hardcopies of the proposal must be included in the submittal. In addition, <u>Bidders must submit one electronic copy on a USB drive</u> in a Microsoft Office format. All bid forms must be completed and submitted in MS Excel (.xls) format.

Proposals must be submitted in a sealed package with the following

information shown on the package:

Response to SPS 2013 Wind Generation RFP

Confidential Sealed Bid Proposal

The Bidder's company name and address must be clearly indicated on the package containing the proposal.

4.5 Information Policy

To obtain additional information about this RFP, Bidders may submit written requests to the RFP Project Managers. For requests regarding interconnection procedures, Bidders may submit written requests via email (only) to brian.fleming@xcelenergy.com. For all other information requests, Bidders may submit requests via email (only) to craiq.l.berg@xcelenergy.com.

Questions or requests will only be accepted via email. SPS will maintain a log of all inquiries and coordinate the preparation of written responses. Once a response is prepared, SPS will forward the response to the inquiring party and, at SPS's discretion if the response is deemed by SPS to be relevant to other Bidders, post such response to the RFP web page. As they develop their proposals, Bidders should check the RFP web page for any updates or addenda. Parties without email addresses will not receive these responses. SPS has established this policy in an effort to provide Bidders with information about the bidding process.

4.6 Bid Evaluation Fees

With each proposal submitted, all Bidders are required to pay to SPS a bid evaluation fee as follows:

Project Size:	Bid Fee:
Less than 20 MW	\$2,500
Greater than or equal 20 MW	\$10,000

The bid evaluation fee will be used to compensate SPS for expenses incurred in evaluating the generation bid. Proposals that do not satisfy the requirements for a single proposal may be evaluated as multiple proposals, each of which would be subject to a separate bid evaluation fee. For purposes of clarification, each proposal that triggers interconnection studies for multiple points or levels of interconnection would be deemed separate proposals for each such point or level. If SPS deems a Bidder's proposal to be multiple proposals, SPS will notify the

Bidder and allow it within a reasonable time to elect to pay the incremental bid fee or to revise its proposal to comply with SPS's requirements for a single proposal. Bidders are reminded that, as mentioned previously, Bidders may offer up to two contract terms for a single bid fee.

Checks should be made out to "Southwestern Public Service Company" and must be included with the proposal. For bids which are accepted into the bid evaluation process, bid evaluation fees shall be non-refundable. Bids which are not accepted into the bid evaluation process will have their bid fees refunded. Bidders wishing to provide bid fees by wire transfer should contact the RFP Project Manager for wiring instructions.

4.7 Clarification of Proposals

While evaluating proposals, SPS may request clarification of, or additional information about, any item in the proposal. Such requests will be sent to Bidders by the RFP Project Manager, and Bidders are required to provide a written or electronic response to the RFP Project Manager within five (5) business days, or SPS may deem the Bidder to be non-responsive and stop evaluating the bid. Bidders are encouraged to provide an alternate point of contact to ensure a timely response to clarification questions.

4.8 Confidentiality

Bidders should clearly identify each page of proposal information that Bidders claim should be considered to be confidential or proprietary. Nonetheless, SPS reserves the right to release all proposals to its affiliates and to its and such affiliates' agents, advisors, and consultants for purposes of proposal evaluation. In addition, all information, regardless of its confidential or proprietary nature, may be disclosed by SPS to parties with an interest in a regulatory proceeding, the appropriate governmental authorities or judicial body with jurisdiction relating to these matters, or may be subject to legal discovery. It is not SPS's intent to enter into any separate confidentiality, non-disclosure, or other agreements similar in intent as a condition to receiving a Bidder's proposal.

4.9 Addenda to RFP

Any additional responses required from Bidders by any addenda to this RFP shall become part of each proposal. Bidders must list all addenda received at the bottom of the Proposal Certification Form.

4.10 Representation

SPS is a public utility with an on-going obligation to serve its customers. This RFP does not commit SPS to pay, and SPS shall not pay any costs incurred in the preparation of a proposal in response to this RFP. This RFP does not commit SPS to procure or contract for any products or services offered in response to this RFP. SPS reserves the right to modify or withdraw this RFP, to negotiate with all qualified Bidders to resolve technical or contractual specifications, to reject any or all responses and/or to terminate contract development discussions at any time. Prior to the execution of a contract, SPS reserves the right to:

- request from a Bidder information that is not explicitly detailed in this document,
- reject any or all proposals,
- reject any proposals that, in SPS's sole discretion, are not complete or contain irregularities, or waive irregularities in any bid that is submitted.
- accept or reject any proposals not received on or before the due date specified,
- accept other than the lowest cost proposal(s),
- obtain clarification from Bidders concerning proposals, and
- conduct contract development discussions with selected Bidders.

4.11 Affiliate Bidding

SPS and/or any affiliates of SPS will not submit bids in response to this RFP.

Section 5. Bid Evaluation

SPS desires that Bidders offer power supply proposals that provide maximum value to SPS with minimal risk. To this end, SPS has identified project characteristics that would be viewed more favorably by SPS, including but not limited to the following:

Acceptable Level of Development Risk - SPS seeks to diversify and minimize the development risk in its selected portfolio.

Low Cost - SPS currently provides low cost power to its customers and seeks reasonably priced resources that will allow it to remain a low-cost energy provider.

High Reliability - SPS is committed to providing a reliable supply of electric power to its customers. Therefore, SPS seeks to acquire new power supplies that, at a minimum, meet established industry-wide reliability, availability and performance criteria. Bidders are encouraged to offer proposals that exceed these criteria and thereby provide additional value to SPS.

Maintenance - A willingness of suppliers to coordinate maintenance activities with SPS and provide timely communication of planned and unplanned turbine outages provides considerable value in maintaining adequate reserve levels and controlling wind generation variability on the system. Bidders are encouraged to offer coordinated maintenance scheduling (including SPS approval of maintenance schedules) and proposed wind turbine outage communication protocols in their bids.

NOTE: This list is neither exhaustive nor comprehensive and does not in any way limit SPS's ability to evaluate proposals in any manner it deems necessary in order to identify resources which best meet SPS's needs. Nor does it commit SPS to any particular modeling methodology or approach.

Appendix A

Proposal Forms

The Generation Proposal Forms are posted on SPS's website at:

http://www.xcelenergy.com/About Us/Our Company/Projects and RFPs

Appendix B

Model Renewable Purchase Agreement

The Model Power Purchase Agreement is posted on SPS's website at:

http://www.xcelenergy.com/About Us/Our Company/Projects and RFPs

2013 Wind RFP Bidder Summary

	NPV-	Levelized Cost	NPV -	Levelized Cost	Levelized Avoided) (4)
Bid Number	w/RECs	w/RECs	wo/RECs	w/o RECs	Cost	MWh	MW	Term
SPS 01	\$299.73	\$29.00	:		\$42.49	615,570	150	20
SPS 02_150MW	\$265.51	\$25.69	\$265.51	·	\$42.49	695,472	150	20_
SPS 02_300MW	\$246.55	\$23.85	\$246.55	\$23.85	\$42.49	1,390,944	300	20
SPS 03	\$319.38	\$30.90	\$319.38	\$30.90	\$42.49	1,162,166	299	20
SPS 04	\$297.56	\$28.79	\$297.56	\$28.79	\$42.49	1,201,462	300	20
SPS 05	\$320.13	\$30.97	\$320.13	\$30.97	\$42.49	440,972	103.5	20
SPS 06_50MW	\$294.56	\$28.50	-	-	\$42.49	226,050	50	20
SPS 06_75MW	\$289.40	\$28.00	-	-	\$42.49	343,595	75	20
SPS 06_130MW	\$284.23	\$27.50	-		\$42.49	587,729	130	20
SPS 07	\$258.39	\$25.00	-	-	\$42.49	587,729	130	20
SPS 08_100MW	\$774.65	\$74.95	_	-	\$42.49	422,336	100	20
SPS 08_200MW	\$619.62	\$59.95	-	-	\$42.49	851,953	200	20
SPS 08_300MW	\$567.94	\$54.95	-	-	\$42.49	1,281,570	300	20
SPS 09A	\$361.97	\$35.02	\$355.94	\$34.44	\$42.49	132,200	36.8	20
SPS 09B	\$361.74	\$35.00	\$356.58	\$34.50	\$42.49	132,200	36.8	20
SPS 10	\$689.85	\$66.75	\$659.86	\$63.84	\$42.49	166,328	61.2	25
SPS 11	\$465.10	\$45.00	\$439.26	\$42.50	\$42.49	48,825	20	20
SPS 12	\$465.10	\$45.00	\$439.26	\$42.50	\$42.49	217,150	120	20
SPS 13A	\$252.70	\$24.45		-	\$42.49	868,501	204	20
SPS 13B	\$259.15	\$25.07			\$42.49	868,501	204	20
SPS 13C	\$255.81	\$24.75		-	\$42.49	868,501	204	20
SPS 13D	\$271.14	\$26.23	_		\$42.49	868,501	204	20
SPS 14A	\$283.71	\$27.45	-	-	\$42.49	633,782	150	20
SPS 14B	\$286.14	\$27.68		i -	\$42.49	633,782	150	20
SPS 14C	\$290.33	\$28.09			\$42.49	633,782	150	20
SPS 15A	\$325.78	\$31.52	-	~	\$42.49	683,981	161	20
SPS 15B	\$326.21	\$31.56		-	\$42.49	683,981	161	20
SPS 15C	\$323.50	\$31.30		-	\$42.49	683,981	161	20
SPS 16	\$258.39	\$25.00	\$258.39	\$25.00	\$42.49	429,096	200	20
SPS 17	\$206.71	\$20.00	\$206.71	\$20.00	\$42.49	867,659	200	20
SPS 18	\$304.90	\$29.50	\$304.90	\$29.50	\$42.49	812,082	200	20
SPS 19_20YR	\$257.87	\$24.95	-	-	\$42.49	509,100	108.8	20
SPS 19_15YR	\$207.02	\$20.03	-	-	\$42.49	509,100	108.8	15
SPS 20_150MW	\$276.48	\$26.75	\$255.81	\$24.75	\$42.49	633,817	149.5	20
SPS 20 250MW	\$268.72	\$26.00	\$248.05	\$24.00	\$42.49	633,817	149.5	20
SPS 21	\$315.36	\$30.51	\$277.69	Indian and the state of the sta	\$42.49	926,569	199.5	20
SPS 22A	. \$238.75	\$23.10	\$227.90	The second contract of	\$42.49	1,043,450	199	20
SPS 22B	\$241.75	endon comincer or com-	\$229.15	\$22.17	\$42.49	1,043,450	199	. 20
SPS 23A	\$286.29	entre entre entre entre en la companya de la compan	\$275.44	\$26.65	\$42.49	500,732	100	20
SPS 23B	\$292.38		\$279.78	\$27.07	\$42.49	500,732	100	20
SPS 24A	\$239.27		\$228.42		\$42.49	999,657	199	20
SPS 24B	\$242.71	\$23.48	\$230.11	\$22.26	\$42.49	999,657	199	20
SPS 25	\$256.85		\$246.00		\$42.49	1,420,578	299	20
SPS 26A	\$318.85		\$308.00		\$42.49	281,704	49.3	20
SPS 26B	\$317.45		\$304.86		\$42.49	281,704	49.3	20
SPS 27 10YR	\$291.12		\$267.93		\$42.49	379,640	114	10
SPS 27_15YR	\$309.11	——————————————————————————————————————	\$207.93		\$42.49	379,640	114	15
SPS 28				4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	******************	rare former to reserve a recommendation of the	gradica com a com esta	
SPS 29	\$242.34	· complete the contract of the	\$242.34		\$42.49	888,270	200	15
	\$305.34	embours in error of	\$305.34	The state of the s	\$42.49	453,400	100	20
SPS 30	\$263.94		\$263.94	\$25.54	\$42.49	875,000	199	20
SPS 31	\$384.51	\$37.20	-	· -	\$42.49	180,000	51	15

Avoided Cost Analysis

2021	(55,856)	40.30 6.20	3,239 17.24 6.50	162 43 \$6,972 \$6,527 (\$42,356)
<u>2020</u>		. 15 8	& & & &	\$
%I	(50,215)	\$ 38.51	3,249 \$ 15,46 \$ 6.26	162 42 42 86,865 \$6,256 (\$37,094)
2019	(43,086)	36.36	3,239 13.30 5.90	162 41 \$6,718 \$5,888 \$5,888
2018		\$ 32 \$	\$ 8	
	(46,867)	37.52	3,239	162 41 86,593 \$6,077 (\$34,197)
2017	12)	6.84	5.14 \$ 5.14 \$	
⊘ I	(39,312)	\$ 35.19	3,239 \$ 12.14 \$ 5.14	162 40 \$6,472 \$5,700 (\$27,141)
2016	562)	33.38 6.74	3,249 10.33 \$ 4.95 \$	_
(4)	(33,8	\$ 33 6	8 8 9 7 9 4 4	162 39 \$6,373 \$5,423 (\$21,766)
2015	(21,017) (33,562)	32.25 6.67	2,286 9.19 4.83	
• . •	(21,	8	÷ ÷	114 39 \$4,401 \$3,686 (\$12,930)
20 YR Levelized \$23.39 \$22.26 \$23.35 \$23.05	\$590,439	40.71	\$17.66 \$6.84 \$3.81	\$481,898
. 4	69	↔		v
Roosevelt Wind (250MW) Mammoth Plains Wind (200MW) Palo Duro Wind (250MW) Total 700 MW Wind	NPV Savings	Avoided Cost Gas Implied Heat Rate (MMBtu/MWh)	Wind GWh Avoided cost \$/MWh Natural Gas Price Forecast (\$/MMBtu) Break Even Levelized Gas Price	Curtailments (GWh) Assume 5% PTC Curtailment (\$/MWh) PTC Cost curtailment (\$) Additional cost (for gas generation) NPV Savings Including Curtailment

Avoided Cost Analysis

Proceedit Wind (250MW) \$23.39 Animal Plains Wind (250MW) \$23.35 Animal Plains Wind (250MW) \$40.71 \$10.75	mi		·.		
20 YR \$22.39 \$22.36 \$23.35 \$23.05 \$23.05 \$23.35 \$23.05 \$23.05 2022 2023 2024 2025 2026 2027 \$23.36 \$23.05 \$23.05 \$23.35 \$23.05 \$23.29 \$23.05 \$40.55 \$23.05 \$40.99 \$24.40 \$42.35 \$24.7 \$43.59 \$47.39 \$47.39 \$47.39 \$6.07 \$5.68 \$40.55 \$5.88 \$40.99 \$5.47 \$42.35 \$5.47 \$43.59 \$5.47 \$47.39 \$5.47 \$5.50 \$43.49 \$6.07 \$5.58 \$5.47 \$5.47 \$5.47 \$5.50 \$4.4 \$5.50 \$5.33 \$43.39 \$5.33 \$3.239 \$7.74 \$7.74 \$7.77 \$7.49 \$7.74 \$7.97 \$8.65 \$6.58 \$5.102 \$5.20 \$7.27 \$7.49 \$7.74 \$7.97 \$8.65 \$6.58 \$6.56 \$6.38 \$5.65 \$6.38 \$5.65 \$6.38 \$5.65 \$7.676 \$5.65 \$6.56 \$5.65 \$7.676 \$5.65 \$7.676 \$5.66 \$6.56 \$5.67 \$7.710 \$5.65 \$6.56 \$5.67 \$7.710 \$5.67 \$6.56 \$5.76 \$7.710 \$5.76 \$7.67 \$5.76 \$7.710	2028	(79,319)	4		162 \$7,711 \$71,608)
Levelized 2022 2023 2024 2025 2026 \$23.39 \$22.26 \$23.35 \$22.26 \$23.35 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$24.05 \$24.05 \$4.05 \$23.29 \$23.29 \$24.7 \$24.7 \$24.7 \$23.29 \$23.29 \$23.29 \$20.53 \$20.53 \$23.81 \$23.29 \$20.29 \$20.53 \$20.53 \$20.53 \$3.281 \$23.29 \$27.27 \$7.49 \$7.74 \$7.97 \$7.97 \$3.381 \$23.23 \$26.56 \$6.65 \$6.65 \$6.85 \$6.85 \$7.05 \$5.321 \$6.568 \$6.658 \$6.658 \$6.856 \$7.05 \$7.17 \$6.321 \$6.568 \$6.658 \$6.658 \$6.856 \$7.05 \$7.17 \$6.38,322 \$6.568 \$6.658 \$6.658 \$6.848 \$7.71 </td <td>14</td> <td>~ '</td> <td></td> <td></td> <td></td>	14	~ '			
20 YR \$23.39 \$22.26 \$23.35 \$23.05 \$23.05 2022 2023 2024 2025 2026 \$20.26 \$23.35 \$23.05 \$590,439 (51.745) (56,684) (58,269) (62,491) (66,507) \$607 5.70 5.8 40.99 42.35 43.59 \$17.66 \$15.97 7.75 7.94 9.29 \$20.53 \$6.84 \$6.84 7.27 7.49 7.74 7.97 \$7.102 \$7.27 7.49 7.74 7.97 \$7.102 \$7.26 \$6.65 86.85 \$6.65 \$6.321 \$6.68 \$6.658 \$6.656 \$7.07 \$6.84 \$7.27 \$7.49 \$7.74 \$7.97 \$6.84 \$6.86 \$6.658 \$6.658 \$7.059 \$6.321 \$6.68 \$6.658 \$6.658 \$7.059 \$6.321 \$6.568 \$6.565 \$6.321 \$6.58448	202	(78,844	47.39 5.50	3,239 24,34 8,62	162 \$7,676 71,168)
Levelized 2022 2023 2024 2025 \$23.39 \$22.26 \$23.35 \$22.40 \$22.26 \$23.05 \$23.05 \$23.05 \$23.05 \$23.05 \$40.71 \$39.03 \$40.55 \$40.99 \$42.35 \$40.55 \$6.07 \$5.70 \$5.88 \$5.47 \$5.47 \$5.47 \$5.47 \$6.84 \$6.84 \$7.27 \$7.29 \$7.29 \$7.74 \$7.44 \$6.84 \$6.84 \$7.27 \$7.49 \$7.74 \$7.44 \$6.84 \$6.84 \$7.27 \$7.49 \$7.74 \$7.44 \$6.89 \$6.84 \$7.27 \$7.49 \$7.74 \$7.49 \$6.381 \$6.568 \$6.568 \$6.568 \$6.568 \$7.74 \$7.74 \$6.321 \$6.568 \$6.568 \$6.568 \$6.568 \$7.74 \$7.74 \$6.321 \$6.568 \$6.568 \$6.568 \$6.568 \$7.74 \$7.74 \$6.321 \$6.568 \$6.568 \$6.568 \$6.568 \$7.74 \$7.74 \$6.38,321 \$6.568	(0)				€)
20 YR 2022 2023 2024 2025 \$23.39 \$22.26 \$23.35 \$22.26 \$23.35 \$23.35 \$23.35 \$23.35 \$23.05 \$23	2026	(66,507)		3,239 20.53 7.97	162 \$7,059 59,448)
Levelized 2022 2023 2024 \$23.39 \$22.26 \$23.35 \$22.26 \$23.05 \$23.05 \$6.684 (58.269) (62.23) \$23.05 \$23.05 \$23.05 \$40.55 \$40.99 \$40.99 \$40.99 \$40.71 \$39.03 \$40.55 \$40.99 \$40					
\$23.39 \$23.39 \$22.26 \$23.35 \$23.35 \$23.05 \$40.71 \$ 39.03 \$ 40.55 \$ 40.99 \$ 5.47 \$6.07 \$5.70 \$5.88 \$7.29 \$7.29 \$5.3.81 \$5.40.71 \$ 5.70 \$5.88 \$7.29 \$7.102 \$7.102 \$7.102 \$7.236 \$6.321 \$6.321 \$6.568 \$6.568 \$6.321 \$6.568 \$6.568 \$6.321 \$6.568 \$6.568 \$6.321 \$6.568 \$6.568	202	(62,491)	42.35 5.47	3,239 19.29 7.74	162 \$6,858 55,633)
\$23.39 \$23.35 \$23.35 \$23.05 \$590,439 (51,745) (56,684) (58 6.07 5.70 5.58 4 6.07 5.70 5.58 3 3,239 3,2381 6.84 \$ 7.27 \$ 162 44 45 55,102 \$5,			↔	₩ ₩	9
\$23.39 \$22.26 \$23.35 \$23.05 \$23.05 \$40.71 \$ 39.03 \$ 40.55 6.07 \$ 5.70 \$ 5.88 \$3.239 \$17.66 \$ 15.97 \$ 17.50 \$6.84 \$ 7.27 \$3.81 \$6.321 \$6,328 \$6,321 \$6,328 \$6,321 \$6,568 \$44 \$6,321 \$6,568 \$6,323 \$6,32	2024	(58,269)	40.99 5.47	3,249 17.94 7.49	162 \$6,658 51,610)
20 YR \$23.39 \$22.26 \$23.35 \$23.05 \$	8 1				
20 YR \$23.39 \$22.26 \$23.35 \$22.26 \$23.35 \$23.05 \$23.05 \$40.71 \$ 39.03 \$ 6.07 \$ 5.70 \$6.07 \$ 5.70 \$5.84 \$ 6.84 \$ \$5.84 \$ 6.84 \$ \$5.839 \$7.102 \$6.321 \$44 \$7.102 \$6.321 \$6.321 \$6.321 \$6.321	202:	, 56,684	40.55 5.58	3,239 17.50 7.27	162 45 \$7,236 \$6,568 42,879)
20 YR Levelized \$23.39 \$22.26 \$22.26 \$23.35 \$23.05 \$23.05 \$6.07 6.07 6.07 56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.84 \$56.87 \$56.84	OIL			•	
20 YR Levelized \$23.39 \$22.26 \$22.26 \$23.35 \$23.05 \$23.05 \$6.07 6.07 \$6.07 \$56.84 \$56.84 \$53.81		51,745	39.03 5.70	3,239 15.97 6.84	162 44 \$7,102 \$6,321 38,322)
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	•		↔	↔ ↔	(%
• • • • • • • • • • • • • • • • • • •	20 YR Levelized \$23.39 \$22.26 \$23.35 \$23.05	\$590,439	40.71	\$17.66 \$6.84 \$3.81	481,898
Roosevelt Wind (250MW) Mammoth Plains Wind (200MW) Palo Duro Wind (250MW) Total 700 MW Wind Avoided Cost Gas Implied Heat Rate (MMBtu/MWh) Wind GWh Avoided cost \$/MWh Natural Gas Price Forecast (\$/MMBtu) Break Even Levelized Gas Price Curtailments (GWh) Assume 5% PTC Curtailment (\$/MWh) PTC Savings Including Curtailment			€9		
Roosevelt Wind (250MW) Mammoth Plains Wind (200MW) Palo Duro Wind (250MW) Total 700 MW Wind Avoided Cost Gas Implied Heat Rate (MMBtu/MWh) Wind GWh Avoided cost \$/MWh Natural Gas Price Forecast (\$/MMBtu) Break Even Levelized Gas Price Curtailments (GWh) Assume 5% PTC Curtailment (\$/MWh) PTC Cost curtailment (\$) Additional cost (for gas generation) NPV Savings Including Curtailment			•		
	Roosevelt Wind (250MW) Mammoth Plains Wind (200MW) Palo Duro Wind (250MW) Total 700 MW Wind	NPV Savings	Avoided Cost Gas Implied Heat Rate (MMBtu/MWh)	Wind GWh Avoided cost \$/MWh Natural Gas Price Forecast (\$/MMBtu) Break Even Levelized Gas Price	Curtailments (GWh) Assume 5% PTC Curtailment (\$/MWh) PTC Cost curtailment (\$) Additional cost (for gas generation) NPV Savings Including Curtailment

Avoided Cost Analysis

			*		
2034	(97,570)	53.18	3,239 30.12 9.64	162	\$8,612 (\$88,958)
		€9	⇔ ↔		€)
2033	(97,253)	\$ 53.08	3,239 \$ 30.02 \$ 9.59	162	\$8,597 (\$88,657)
21	4				
2032	(96,264)	\$ 52.68 5.62	3,249 \$ 29.63 \$ 9.38	. 162	\$8,558 (\$87,706)
<u>~</u>	3			0.1	
2031	(92,523)	51.62	3,239 28.56 9.25	162	\$8,360 (\$84,163)
Ol		↔	8 8		8)
2030	(91,773)	51.39 5.67	3,239 28.33 9.07	162	\$8,323 (\$83,450)
		↔	रू ५		€
2029	(87,647)	\$ 50.11	3,239 \$ 27.06 \$ 8.88	162.	\$8,116 (\$79,531)
٠ ١ - ١ - ١ - ١ - ١ - ١					<u> </u>
20 YR evelized \$23.39 \$22.26 \$23.35 \$23.05	\$590,439	40.71 6.07	\$17.66 \$6.84 \$3.81		\$481,898
	₩	↔			↔
Roosevelt Wind (250MW) Mammoth Plains Wind (200MW) Palo Duro Wind (250MW) Total 700 MW Wind	NPV Savings	Avoided Cost Gas Implied Heat Rate (MMBtu/MWh)	Wind GWh Avoided cost \$/MWh Natural Gas Price Forecast (\$/MMBtu) Break Even Levelized Gas Price	Curtailments (GWh) Assume 5% PTC Curtailment (\$/MWh)	PIC Cost curtailment (\$) Additional cost (for gas generation) NPV Savings Including Curtailment