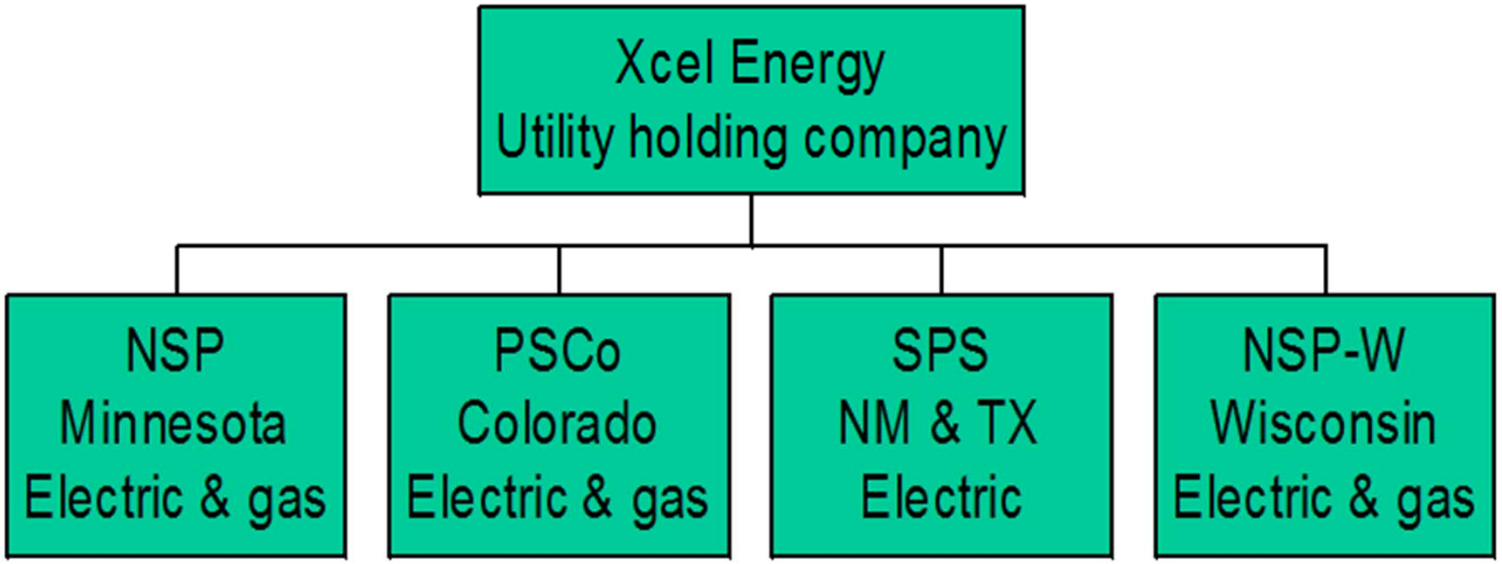
Overview of Xcel Energy and SPS in New Mexico and Texas

Brian Fleming
Analyst – Resource Planning

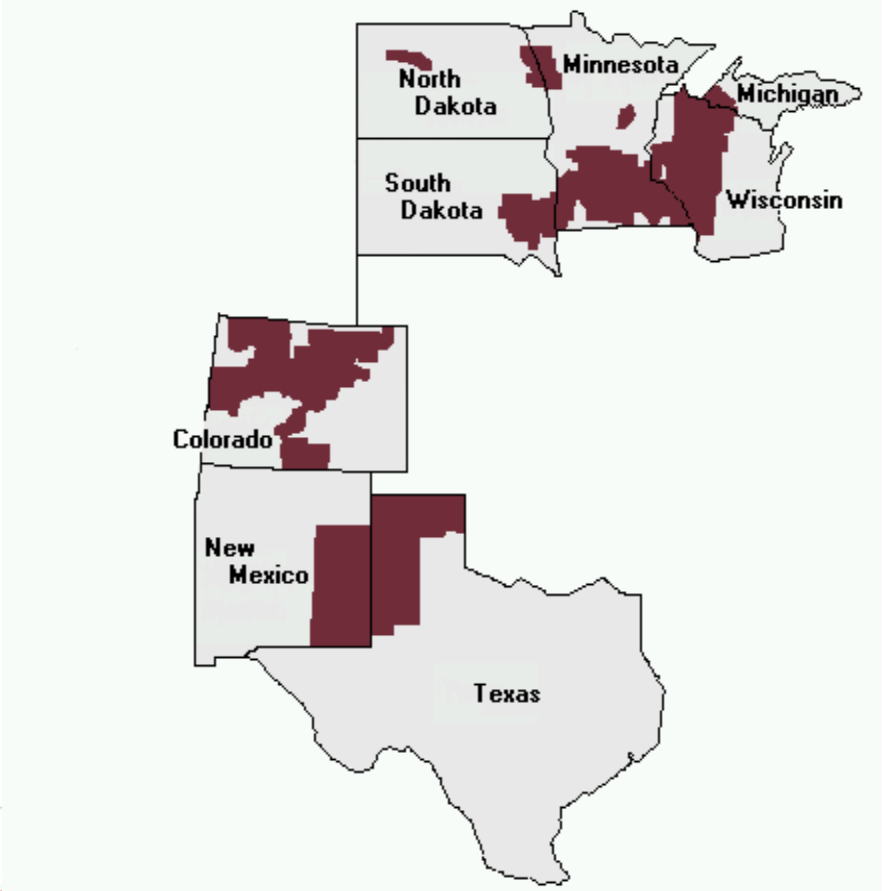
Overview of SPS

- **Southwestern Public Service Company (SPS) is registered in New Mexico**
- **Electric investor-owned electric utility operating in Texas & New Mexico**
- **SPS is a wholly-owned subsidiary of Xcel Energy Inc.**
- **SPS does business under the 'Xcel Energy' brand**

Corporate Structure



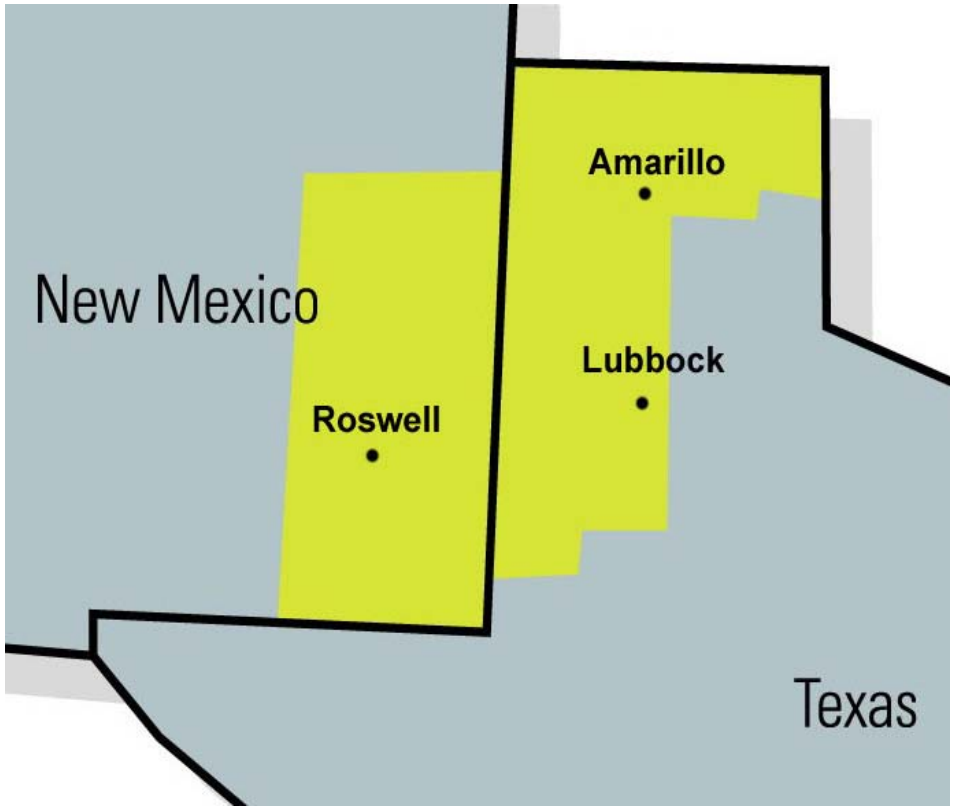
Xcel Energy Operations



XCEL ENERGY	
Electric Customers	3.4 million
Gas Customers	1.9 million

SPS Today

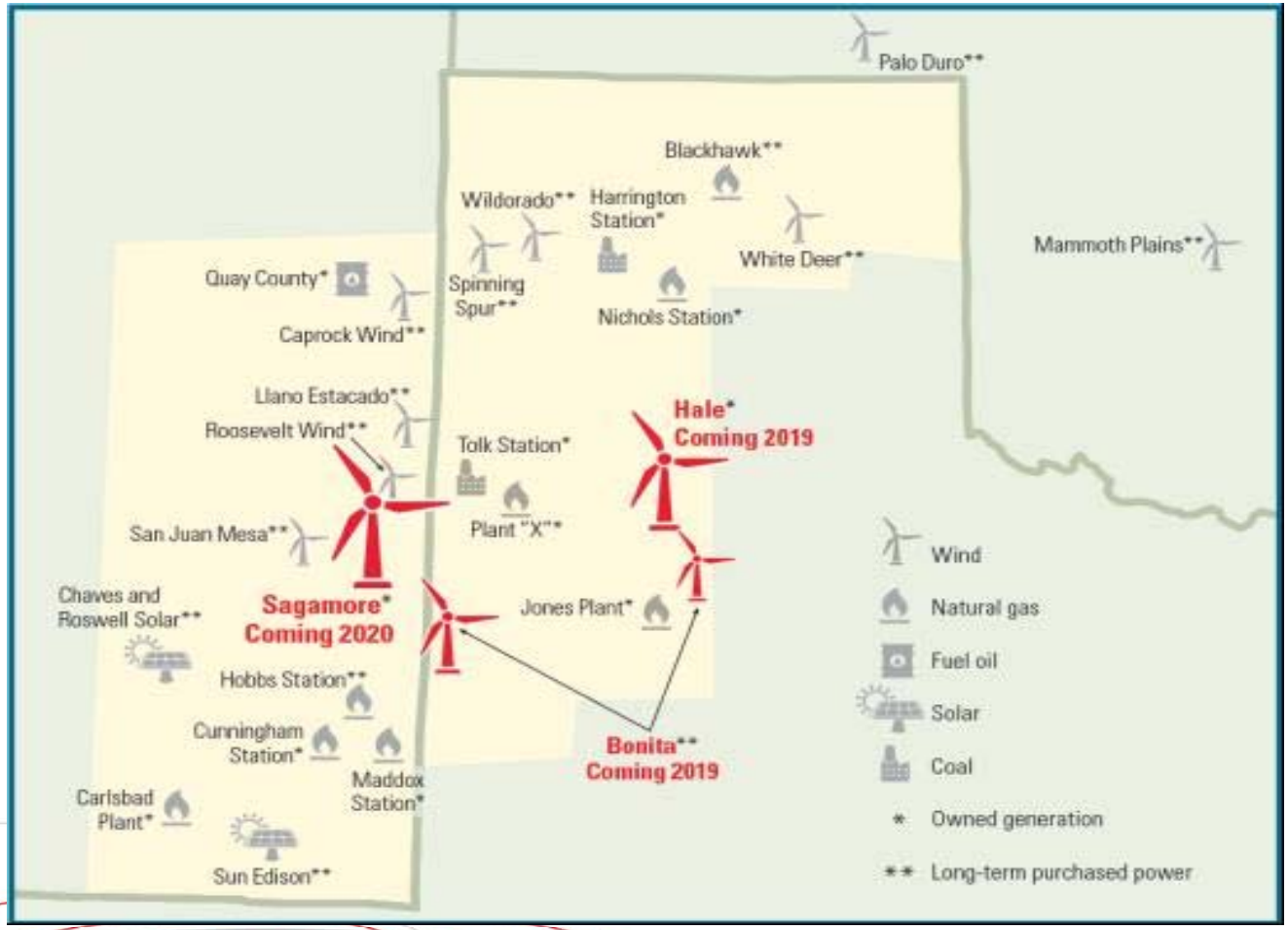
- Customers: 383,000
  - 267,000 in Texas
  - 116,000 in New Mexico
- Employees: 1,000
- Communities Served:
  - 80 in Texas
  - 14 in New Mexico
- Low Rates
- High Reliability



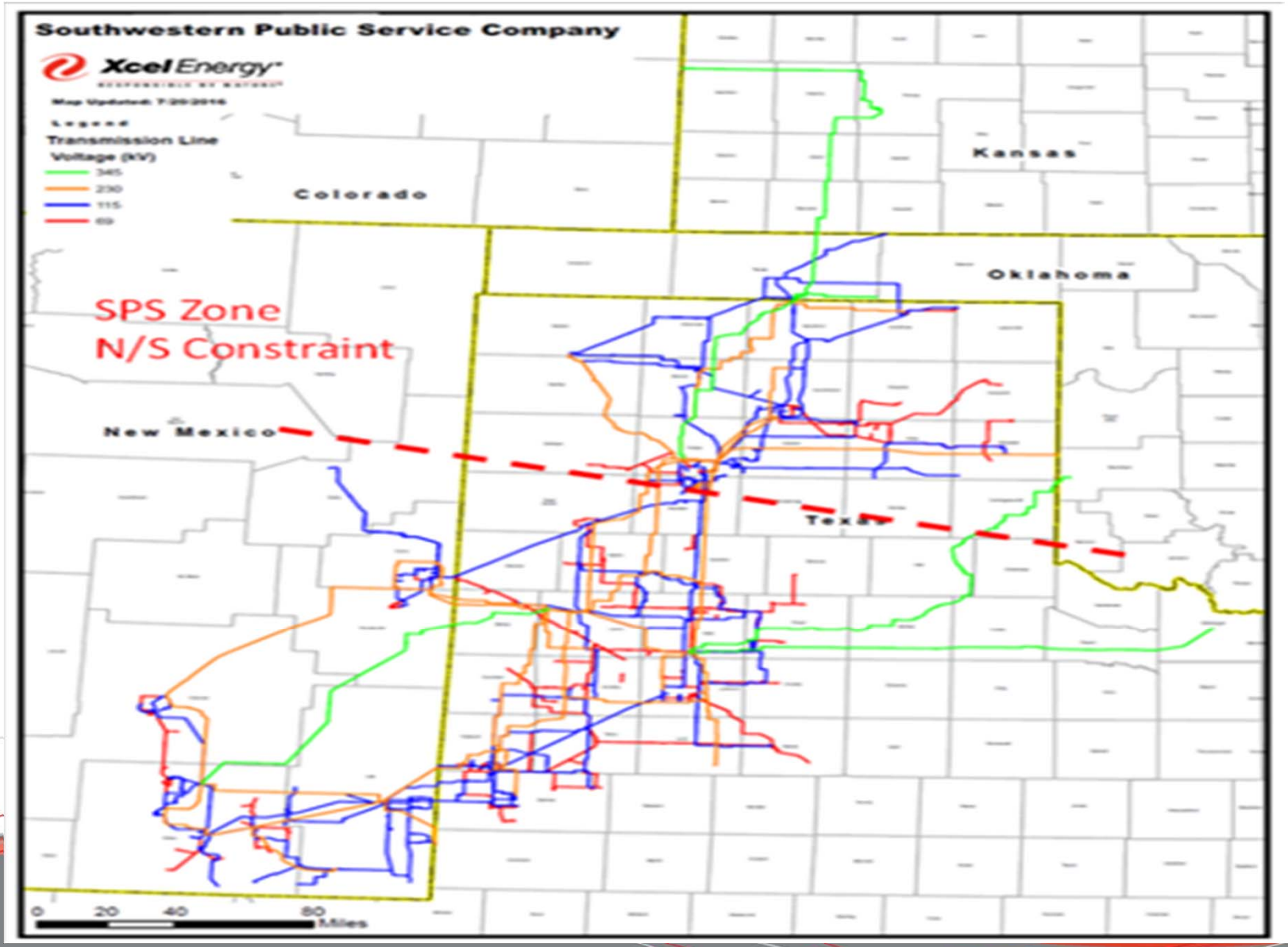
Jurisdictional Composition

- SPS operates its production and transmission system as an integrated whole and allocates costs to all system customers
- New Mexico distribution activities are assigned to New Mexico
- SPS serves in three customer jurisdictions:
  - Texas retail – 50.8%
  - Wholesale – 29.8%
  - New Mexico retail – 19.4%
- SPS is substantially reducing its wholesale power sales in accordance with the settlement in NM Case No. 10-00074-UT

Power Plants/Renewable Energy



SPS Transmission System



SPS Sources of Renewable Energy

New Mexico

- **80 MW Caprock Wind – Quay Co, NM**
- **120 MW San Juan Mesa Wind – Chaves Co, NM**
- **250 MW Roosevelt Wind – Roosevelt Co, NM**
- **50 MW SunEd Solar – Lea Co & Eddy Co, NM**
- **140 MW NextEra Solar Facilities – Chaves Co, NM**
- **1.5 MW FERC Qualifying Facility Wind**

Total New Mexico renewable – 641.5 MW

Texas & Oklahoma

- **160 MW Wildorado Wind – Oldham Co, TX**
- **160 MW Spinning Spur Wind – Oldham Co, TX**
- **250 MW Palo Duro Wind – Hansford Co, TX**
- **200 MW Mammoth Plains Wind – Dewey Co, OK**
- **281.5 MW FERC Qualifying Facility Wind**

Total Texas & Oklahoma renewable – 1,051.5 MW

SPS Landscape

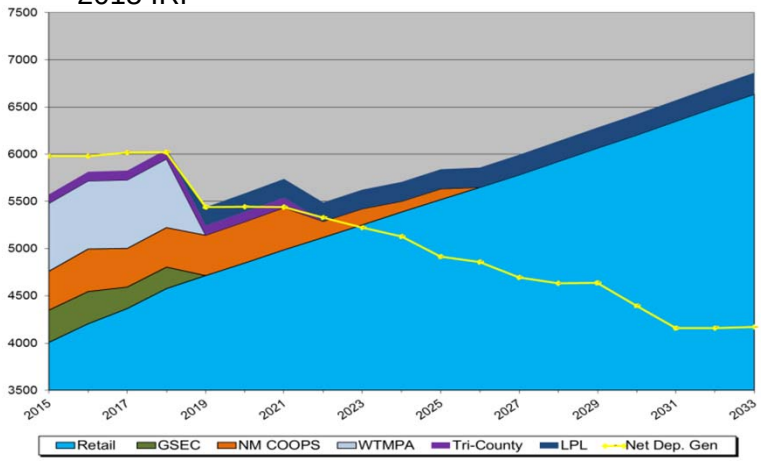
Bennie Weeks
Manager – Resource Planning

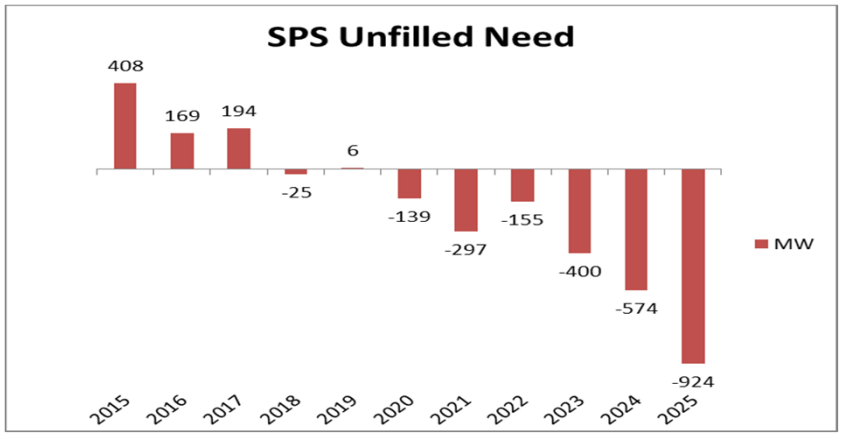
Updates Since 2015 IRP

- Decreased Load Growth Rate
  - Load heavily dependent on industrial activity which is volatile based on commodity prices
- Production Tax Credit (“PTC”) extended
- Approval of solar PPAs
- Clean Power Plan has been stayed
- No current need for new combustion turbine generator in the 2018-2020 timeframe
- SPS filed an update to it IRP Action Plan in March 2017.

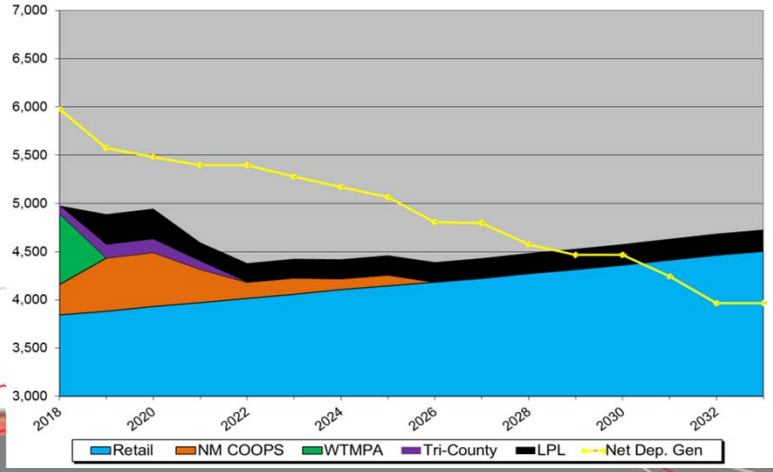
SPS Load and Resources

2015 IRP

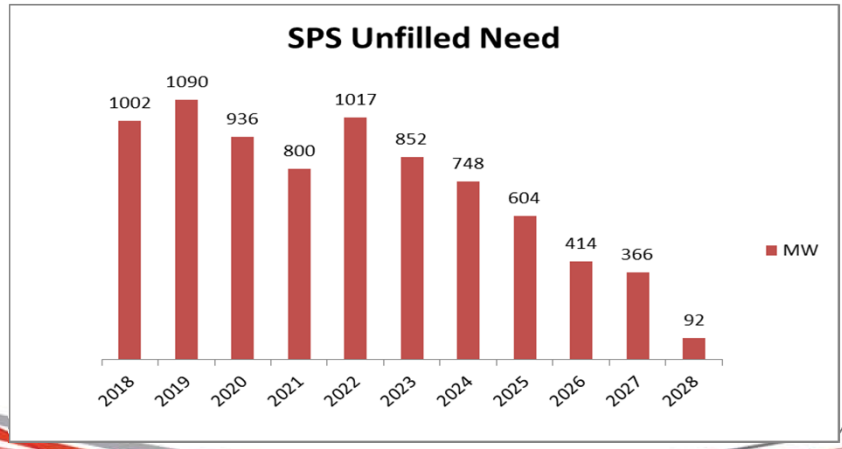




Current



SPS can actively manage the volatility if loads start increasing



SPS Generation Fleet

Steam Units		
Unit	***Emergency Capability (Net - MW)***	**Total by Plant (MW)**
Cunningham 1	71	
Cunningham 2	192	263
Harrington 1	340	
Harrington 2	340	
Harrington 3	351	1031
Jones 1	243	
Jones 2	243	486
Maddox 1	112	112
Nichols 1	113	
Nichols 2	111	
Nichols 3	249	473
Plant X 1	41	
Plant X 2	90	
Plant X 3	95	
Plant X 4	190	416
Tolk 1	537	
Tolk 2	539	1076
Steam Subtotal	**3857**	

Simple Cycle CT Units		
Unit	***Emergency Capability (Net - MW)***	
Carlsbad	0	0
Cunningham 3	106	
Cunningham 4	106	212
Jones 3	168	
Jones 4	170	338
Maddox 2	61	61
Quay Co	17	17
CT Subtotal	**628**	

SPS System Total Capability – 4485 MW

SPS Landscape

- System length due to slower load growth; resource need in 2028
  - Declining wholesale firm power sales
  - Decreasing oil and gas load growth rates until world supply rebalances
- Water availability and environmental regulations
  - Regional Haze, CPP, NAAQS
  - Tolk Station base load groundwater input constraint

SPS Landscape (cont'd)

- Coal plant situation
  - All five coal generating units do not have scrubbers
    - Harrington has NAAQS monitor installed by the Texas Commission on Environmental Quality
    - Tolk has been designated under regional haze. The regional haze case has been stayed
  - Harrington uses city affluent for cooling water; Tolk uses groundwater
  - Units were originally planned and certificated for a 35-year life; extended to 60 years in rate case settlements

Coal Generation	Year Installed	NDC	Book Retirement
Harrington 1	1976	339 MW	2036
Harrington 2	1978	339 MW	2038
Harrington 3	1980	340 MW	2040
Tolk 1	1982	521 MW	2042
Tolk 2	1985	524 MW	2045

SPS Landscape (cont'd)

- Market Structure & Transmission Planning/Ownership
  - Transmission investment dependent upon SPP
  - Increasing wind in northern sub-zone impacts Harrington coal plant operations
  - Congested market, long in generation

SPS Landscape (cont'd)

- Managed operation of two coal plants
  - Harrington is now in last third of life
    - No major pollution control investment
  - Tolk Station is now 32-35 years old
    - Groundwater operational considerations
    - No major pollution control investment
- Managed decline of old high heat-rate NG units
  - Minimized capital investment
  - Minimized O&M closer to retirement date
- Substantial generation expansion required in the late 2020's

Renewable Energy Landscape

- Significant merchant renewable investment (older QF market wind winding down as PTC's expire)

Existing renewable generation	MW
wind in SPS footprint	2,586
PPA wind outside SPS footprint	550
solar in SPS footprint	217
TOTAL	3,353

New renewables under study in SPS	MW
wind in SPS footprint	1,230
wind by others	2,224
solar by others	1,211
TOTAL	4,665

SPS Generation Transition Opportunities

- Complete SPS Wind Initiative
  - Develop other renewable opportunities
- Explore Tolk Station operating plan given groundwater costs
- Develop environmental plan for Harrington dependent on NAAQS determination
- Mindful of long-term environmental pressure

Summary of SPS's 2017 RPS Filing Filed July 3, 2017

Ruth Sakya
Manager, Regulatory Policy

2016 Compliance Position

Line No.	Description	Solar	Other	DG	Wind - Remaining	Total
1	2016 NM Retail Sales					5,279,147
2	Less Qualifying Large Customer Sales (Total)					2,231,085
3	Adjusted NM Retail Sales (L1 - L2)					3,048,062
4	Overall RPS Requirement (%)					15%
5	RPS Obligation, Excluding Qualifying Large Customers (L3 * L4)					457,209
6	Qualifying Large Customer MWh for the RPS (Appendix F)					137,632
7	Final RPS Obligation (L5 + L6)					594,842
8	Diversity Requirement (% of RPS)	20.0%	5.0%	3.0%	72.0%	100.0%
9	RPS Obligation (L7 * L8)	118,968	29,742	17,845	428,287	594,842
10						
11	Beginning REC Balance	-	-		1,515,699	1,515,699
12						
13	Caprock Wind Generation	-	-	-	324,238	324,238
14	San Juan Wind Generation	-	-	-	397,581	397,581
15	Mesalands Wind Generation	-	-	-	2,990	2,990
16	SunEdison Solar Generation	108,879	-	-	-	108,879
17	Company Owned Solar Generation	-	-	154	-	154
18	SolarRewards (Distributed Generation) Generation	-	-	13,102	-	13,102
19	Total Annual Generation (Sum L13:L18) (Page 3)	108,879	-	13,256	724,808	846,943
20	Less Transfers to Wholesale Customers	-	-	-	157,820	157,820
21	Less REC Sales (all vintages) (Page 2)	-	-	-	-	-
22	Less Expiring RECs	-	-	-	-	-
23	Less Annual RPS Obligation (L9)	118,968	29,742	17,845	428,287	594,842
24	REC Adjustments from Prior Years	-	-	102	(3)	99
25	Annual Excess/(Deficiency) (L19 - L20 - L21 - L22 - L23 + L24)	(10,089)	(29,742)	(4,487)	138,699	94,380
26						
27	Cumulative Excess/(Deficiency) (L11 + L25)	(10,089)	(29,742)	(4,487)	1,654,398	1,610,079
28	Replace Solar, DG & Other with Wind for Overall RPS Compliance1	10,089	29,742	4,487	(44,318)	-
29	Impact of Replacements (Ending REC Balance)	-	-	-	1,610,079	1,610,079

Forecasted RPS Need & Position - 2018

Line No.	Description	Solar	Other	DG	Wind /Remaining	Total
1	2018 NM Retail Sales					5,396,067
2	Less Qualifying Large Customer Sales (Total)					2,231,085
3	Adjusted NM Retail Sales (L1 - L2)					3,164,982
4	Overall RPS Requirement (%)					15%
5	RPS Obligation, Excluding Qualifying Large Customers (L3 * L4)					474,747
6	Qualifying Large Customer MWh for the RPS (Page 3)					80,554
7	Final RPS Obligation (L5 + L6)					555,302
8	Diversity Requirement (% of RPS)	20%	5%	3%	72%	100%
9	RPS Obligation (L7 * L8)	111,060	27,765	16,659	399,817	555,302
10						
11	Beginning REC Balance	-	-	-	1,709,301	1,709,301
12						
13	Caprock Generation	-	-	-	311,122	311,122
14	San Juan Generation	-	-	-	400,407	400,407
15	Mesalands Generation	-	-	-	-	-
16	SunEdison Solar Generation	108,556	-	-	-	108,556
17	Company Owned Solar Generation	-	-	151	-	151
18	SolarRewards (Distributed Generation)	-	-	13,866	-	13,866
19	Total Annual Generation (Sum L13:L18)	108,556	-	14,017	711,529	834,102
20	Less Transfers to Wholesale Customers	-	-	-	140,955	140,955
21	Less REC Sales (all vintages)	-	-	-	-	-
22	Less Expiring RECs	-	-	-	-	-
23	Less Annual RPS Obligation (L9)	111,060	27,765	16,659	399,817	555,302
24	REC Adjustments from Prior Years	-	-	-	-	-
25	Annual Excess/(Deficiency) (L19 - L20 - L21 - L22 - L23 - L24)1	(2,504)	(27,765)	(2,642)	170,756	137,845
26						
27	Cumulative Excess/(Deficiency) (L11 + L25)	(2,504)	(27,765)	(2,642)	1,880,057	1,847,146
28	Replace Solar, Other, & DG with Wind for Overall RPS Compliance	2,504	27,765	2,642	(32,911)	-
29	Impact of Replacements (Ending REC Balance)	-	-	-	1,847,146	1,847,146

Forecasted RPS Need & Position - 2019

Line No.	Description	Solar	Other	DG	Wind /Remaining	Total
1	2019 NM Retail Sales					5,483,283
2	Less Qualifying Large Customer Sales (Total)					2,231,085
3	Adjusted NM Retail Sales (L1 - L2)					3,252,198
4	Overall RPS Requirement (%)					15%
5	Unadjusted RPS Obligation (L3 * L4)					487,830
6	Qualifying Large Customer MWh for the RPS (Page 3)					90,118
7	Final RPS Obligation (L5 + L6)					577,948
8	Diversity Requirement (% of RPS)	20%	5%	3%	72%	100%
9	RPS Obligation (L7 * L8)	115,590	28,897	17,338	416,123	577,948
10						
11	Beginning REC Balance	-	-	-	1,847,146	1,847,146
12						
13	Caprock Generation	-	-	-	311,059	311,059
14	San Juan Generation	-	-	-	400,392	400,392
15	Mesalands Generation	-	-	-	-	-
16	SunEdison Solar Generation	105,723	-	-	-	105,723
17	Company Owned Solar Generation	-	-	151	-	151
18	SolarRewards (Distributed Generation)	-	-	13,795	-	13,795
19	Total Annual Generation (Sum L13:L18)	105,723	-	13,946	711,451	831,120
20	Less Transfers to Wholesale Customers	-	-	-	137,126	137,126
21	Less REC Sales (all vintages)	-	-	-	-	-
22	Less Expiring RECs	-	-	-	-	-
23	Less Annual RPS Obligation (L9)	115,590	28,897	17,338	416,123	577,948
24	REC Adjustments from Prior Years	-	-	-	-	-
25	Annual Excess/(Deficiency) (L19 - L20 - L21 - L22 - L23 - L24)1	(9,866)	(28,897)	(3,393)	158,203	116,046
26						
27	Cumulative Excess/(Deficiency) (L11 + L25)	(9,866)	(28,897)	(3,393)	2,005,349	1,963,192
28	Replace Solar, Other, & DG with Wind for Overall RPS Compliance	9,866	28,897	3,393	(42,157)	-
29	Impact of Replacements (Ending REC Balance)	-	-	-	1,963,192	1,963,192

Questions and Discussion

Topics For Future Meetings

- Environmental Update
- Aging Generation Fleet
- Gas & Power Markets
- Coal Supply
- Demand-side Management and Energy Efficiency
- Storage

Information

For more information on the overall transmission plan and individual projects:

Power for the Plains

www.powerfortheplains.com

IRP Information

- **Web Page**
  - www.xcelenergy.com/About_Us/Rates_&_Regulations/Resource_Plans

- **Bennie Weeks – Xcel Energy/SPS Contact**
  - **Address – 790 Buchanan, Suite 700, Amarillo TX 79101**
  - **Phone - (806) 378-2508**
  - **Email – bennie.weeks@xcelenergy.com**

Next Meeting

- **Date:**
  - **Thursday, November 9, 2017**
- **Time:**
  - **10:00am to 12:00pm (Mountain Time)**
- **Location:**
  - **Webinar meeting**