SPS Initial Public Advisory Meeting

July 15, 2014

Appendix I
Page 1 of 157

Agenda

- SPS System Overview
- 2014 RPS Filing Update
- Overview of 2012 IRP
- Discussion of SE NM Load Growth
- Questions / Next Meeting

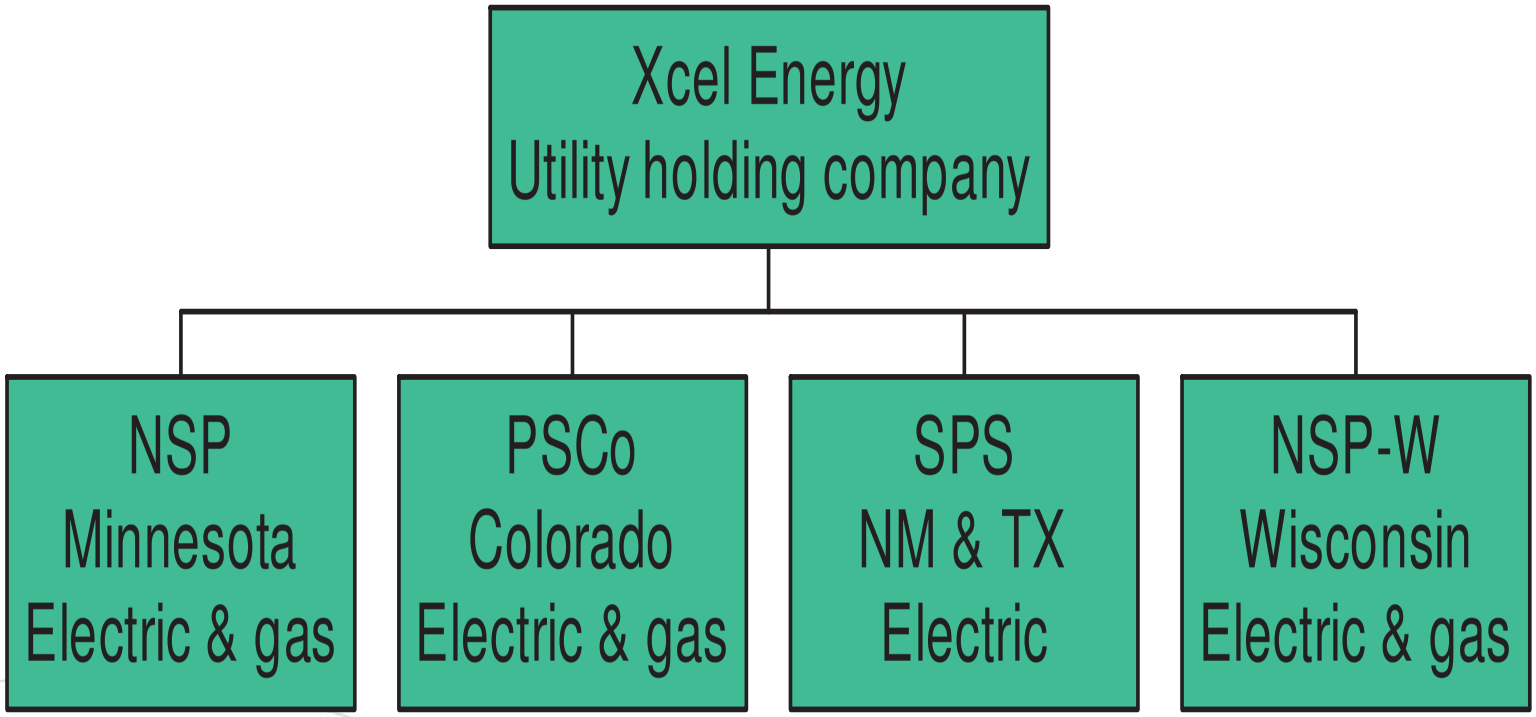
Overview of Xcel Energy and SPS in New Mexico and Texas

Brian Fleming
Regulatory Consultant – Resource Planning

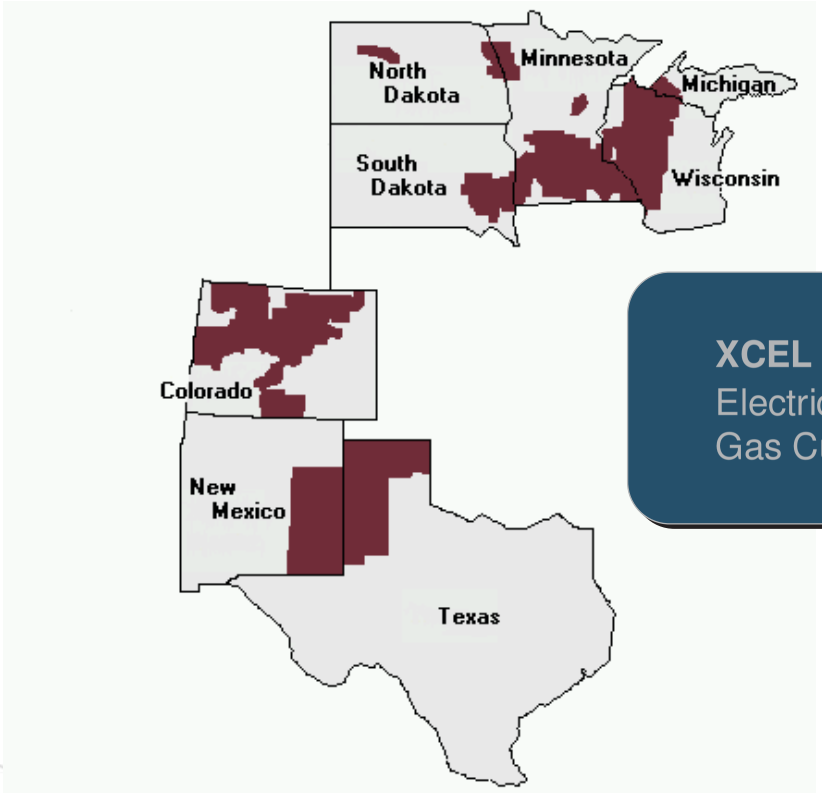
Overview of SPS

- Southwestern Public Service Company (SPS)
- 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

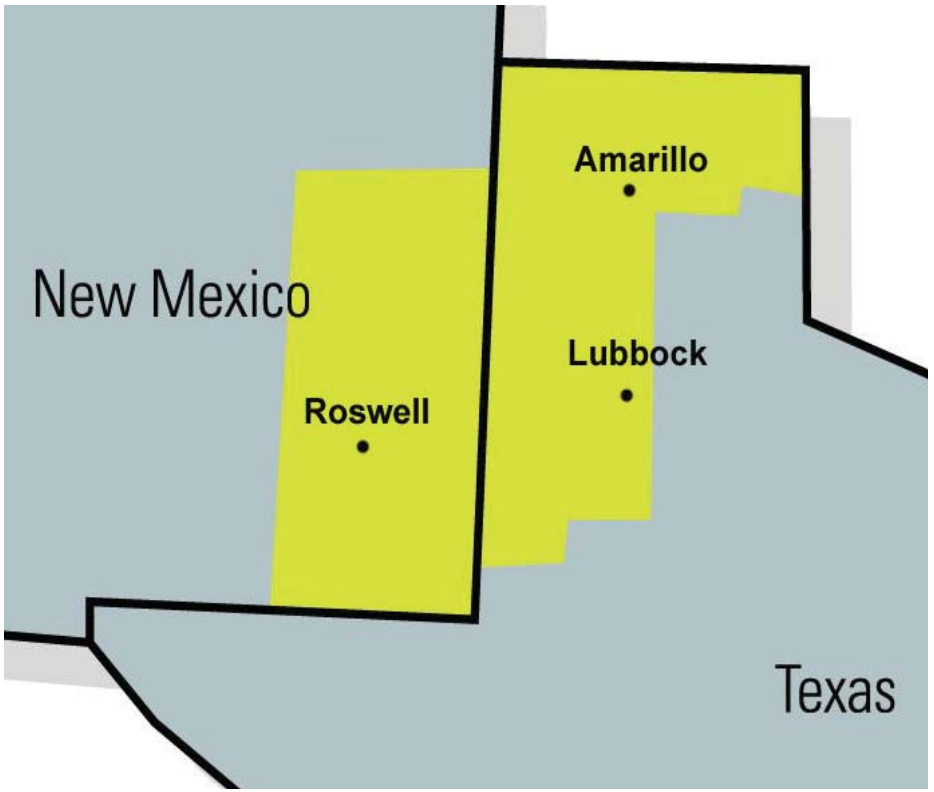


XCEL ENERGY

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: 1,100
- Communities Served:
  - 82 in Texas
  - 11 in New Mexico
- Low Rates
- High Reliability



More than a century of service

- Started in 1904 as Roswell Electric Light Co.
- Became Roswell Public Service Co. in 1921
- Moved into Texas Panhandle in 1925 and became Southwestern Public Service Company
- Integrated and connected to other towns in NM and TX over a number of years
- Merged with Public Service Co. of Colorado in 1997 to form New Century Energies
- New Century and Northern States Power Co. combined in 2000 to form Xcel Energy

Customer Composition

- **Customers Classes Served**
  - **15.7% Residential**
  - **53.8% Commercial & Industrial**
  - **28.5% Wholesale**
  - **2.0% Public Authorities, Street Lighting, & Area Lighting**

Jurisdictional Composition

- SPS operates its system as an integrated whole and allocates costs to all system customers
- SPS serves in three customer jurisdictions:
  - Texas retail – 52.8% of sales
  - Wholesale – 28.5%
  - New Mexico retail – 18.7%

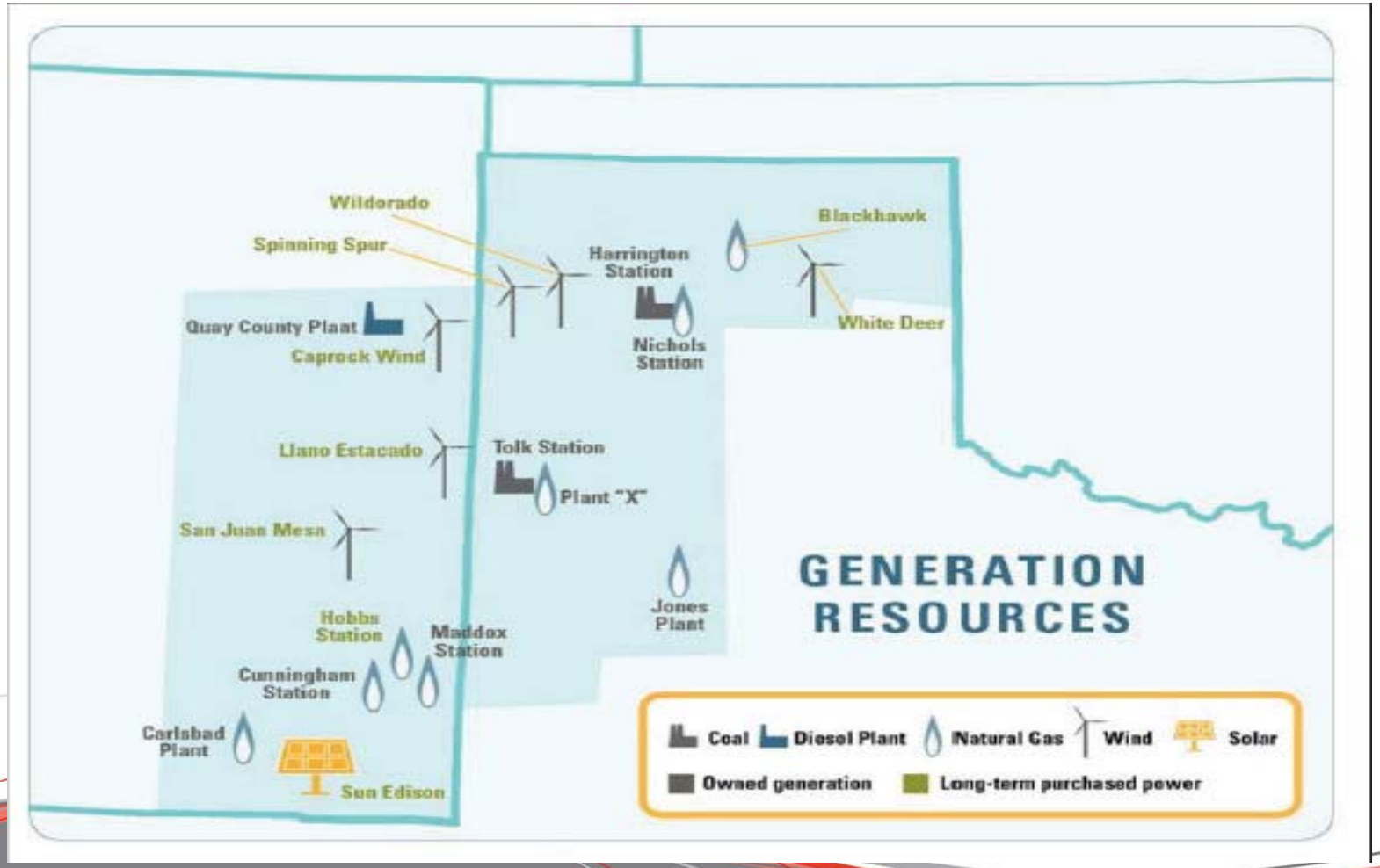
Regulators

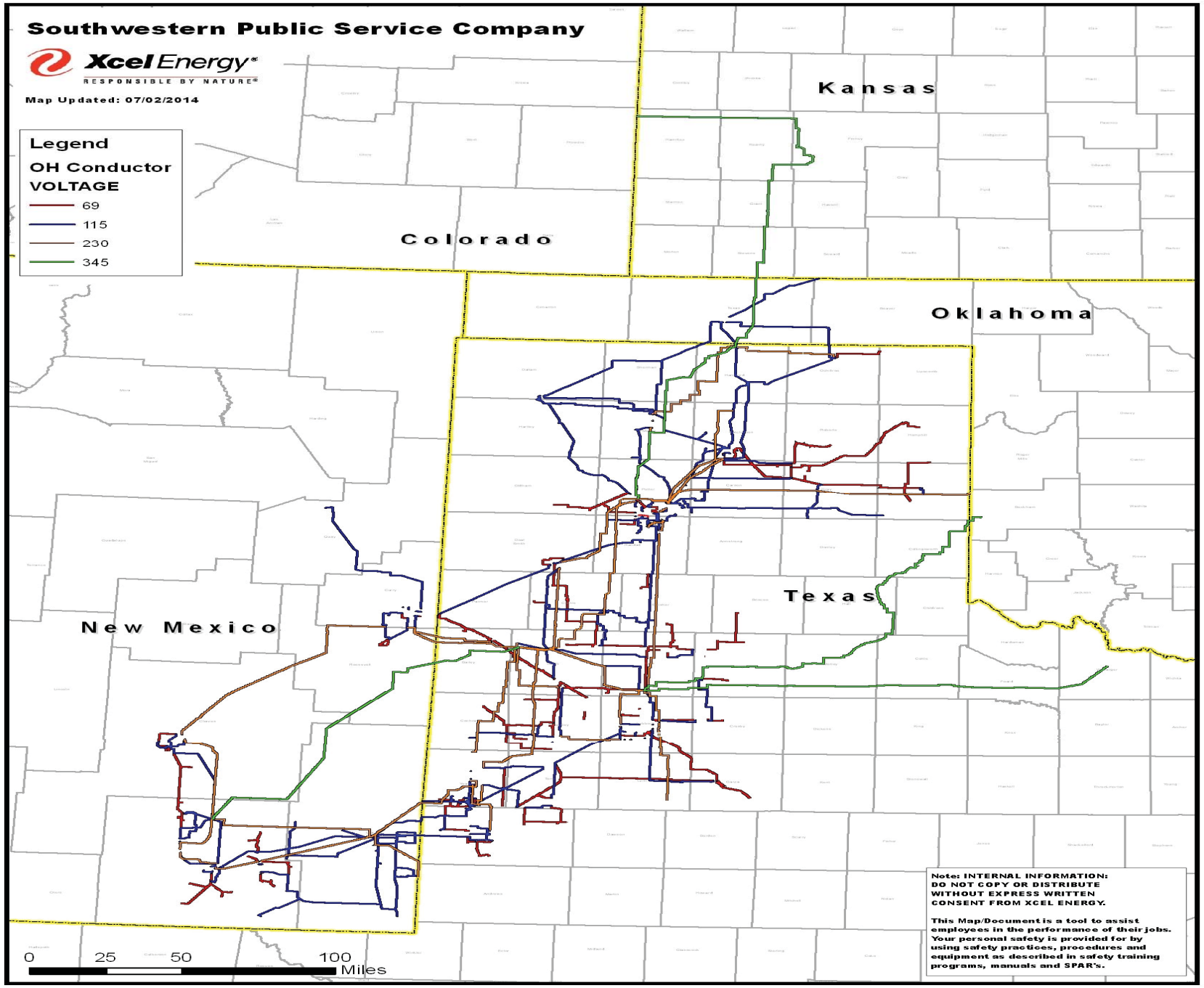
- New Mexico
  - New Mexico Public Regulation Commission (NMPRC)
    - Consists of five elected commissioners
- Texas
  - Public Utility Commission of Texas (PUCT)
    - Consists of three appointed commissioners
    - Created in 1975
- Wholesale
  - Federal Energy Regulatory Commission (FERC)
    - Consist of five appointed commissioners

Activities regulated

- Rates and tariffs
- Issuance of securities
- Affiliate transactions
- Construction of new facilities
  - Power plants
  - Transmission lines
- Service areas

Power Plants




Southwestern Public Service Company
Xcel Energy
RESPONSIBLE BY NATURE
Map Updated: 07/02/2014
Legend
OH Conductor
VOLTAGE
69
115
230
345
Kansas
Colorado
Oklahoma
Texas
New Mexico
0
25
50
100
Miles
Note: INTERNAL INFORMATION:
DO NOT COPY OR DISTRIBUTE
WITHOUT EXPRESS WRITTEN
CONSENT FROM XCEL ENERGY.
This Map/Document is a tool to assist
employees in the performance of their jobs.
Your personal safety is provided for by
using safety practices, procedures and
equipment as described in safety training
programs, manuals and SPAR's.

Xcel Energy – A Renewable Leader

- No. 1 wind-purchasing utility in the nation
- 5,753 megawatts at end of 2013
- Approx. 1,150 megawatts of hydro power
- Approx. 300 megawatts of refuse-derived and biomass energy
- Approx. 310 megawatts of solar generation

SPS Sources of Wind Power

- 80 MW Llano Estacado Wind Ranch – White Deer, TX
- 80 MW Caprock Wind Ranch - Tucumcari, NM
- 120 MW San Juan Mesa facility - Elida, NM
- 160 MW Wildorado Wind Ranch - Wildorado, TX
- 160 MW Spinning Spur Wind Ranch - Wildorado, TX
- Approximately 283 MW other smaller facilities

Total wind interconnected – ≈ 1800 megawatts

SPS's Environmental Commitment

- Nichols-Harrington complex near Amarillo began using treated municipal sewage effluent in 1961
- Jones Station near Lubbock, began using treated municipal sewage effluent in 1973
- Since 1960, we have saved more than 178 billion gallons of fresh water at these facilities
- In 2004, we signed a contract with Amarillo to purchase an additional, ongoing supply of effluent
- Lea Power Plant is dry cooled, reducing water usage
- Commitment to and long record of exceeding clean air standards

Summary of SPS 2014 RPS Filing and 2012 IRP Filing

Craig Berg
Sr. Resource Planning Analyst

SPS 2014 RPS Filing Summary

- Filed July 1, 2014
- Currently meeting 2015-16 Total RPS Requirements
- Currently meeting 2015 Diversity Requirements for Wind, DG, and Discretionary resource categories
- Not meeting 2015 Solar & Other Diversity Requirements
  - Reasonable Cost Threshold (3%) currently exceeded and would be negatively impacted by the addition of solar and/other renewable energy resources

Forecasted RPS Need & Position

	2015	2016	2017	2018	2019	2020
Projected NM Retail Sales (MWh)	5444310	6334718	7542925	8049766	8531423	9013790
Total RPS Requirement	623321	735874	876226	935103	991055	1330813
Requirements						
Wind Diversity (30% of RPS)	186996	220762	262868	280531	297316	399244
Solar Diversity (20% of RPS)	124664	147175	175245	187021	198211	266163
DG Diversity (3% RPS)	18700	22076	26287	28053	29732	39924
"Other" Diversity (5% RPS)	31166	36794	43811	46755	49553	66541
Discretionary	261795	309067	368015	392743	416243	558941
Total	623321	735874	876226	935103	991055	1330813
Purchases						
Wind/Discretionary	697070	698040	697070	697070	697070	698040
Solar	115930	115200	114070	113150	112250	111540
DG	13337	13337	13336	13335	13334	13333
Other	0	0	0	0	0	0
Shortfall/Surplus						
Wind/Discretionary	248279	168211	66188	23796	(16489)	(260145)
Solar	(8734)	(31975)	(61175)	(73871)	(85961)	(154623)
DG	(5363)	(8739)	(12951)	(14718)	(16398)	(26591)
Other	(31166)	(36794)	(43811)	(46755)	(49553)	(66541)

SPS 2012 IRP Summary

- Filed July 16, 2012
- IRP Action Plan (2013-2016) included:
  - Jones Unit 4 CT (Summer 2013)
  - Spinning Spur Wind – 160 MW (January 2013)
  - 100 MW PPA – GSEC (2013)
  - 25 MW PPA – GSEC (2014)
  - 200 MW PPA - Calpine 2 (June 2014 – May 2019)
- Deployment of DSM Programs
- Evaluate Moore County retirement
  - Current plan – retire Fall 2013

L&R Reflects 2012 Action Plan

	2013	2014	2015	2016	2017	2018
Existing Generation	**4,365**	**4,365**	**4,365**	**4,365**	**4,365**	**4,365**
Purchased Capacity:						
Lea Power Partners (Hobbs, NM)	533	533	533	533	533	533
Blackhawk Plant (Borger, TX)	219	219	219	219	219	219
Calpine 1 (Oneta)	200	200	200	200	200	200
City of Lubbock (Cooke)	125	125	125	125	125	125
ty of Lubbock (Brandon & Massengale)	96	96				
Orion	15					
Sid Richardson/Huber	9	9	9	9	9	9
GSEC	100	25				
Total Thermal	1,297	1,207	1,086	1,086	1,086	1,086
Total Wind	33	33	33	33	33	33
Sun Edison Solar	5	5	5	5	5	5
SPS-PSCo Tieline	101	101	101	101	101	101
Total Purchased Capacity	**1,436**	**1,346**	**1,225**	**1,225**	**1,225**	**1,225**
Expansion Plan:						
Jones CT	171	171	171	171	171	171
Total Renewable	0.3	6.3	12.5	12.5	12.5	12.5
Total Retirements	-	(32)	(32)	(32)	(32)	(32)
Calpine 2 (Oneta)	-	200	200	200	200	200
Total Expansion Plan	**171**	**345**	**352**	**352**	**352**	**352**
Net Dependable Capacity	***5,972***	***6,056***	***5,942***	***5,942***	***5,942***	***5,942***
Full Requirements Load:						
Retail	3,460	3,538	3,622	3,701	3,772	3,845
Total Wholesale	1,321	1,209	1,223	1,240	1,181	1,198
DSM Impact	(8)	(13)	(18)	(24)	(30)	(36)
Interruptibles	(32)	(38)	(45)	(51)	(57)	(60)
Total SPS Firm Load	**4,742**	**4,695**	**4,782**	**4,865**	**4,866**	**4,947**
Total PR Contract Load Oblig	**500**	**500**	**300**	**300**	**200**	**200**
System Peak Responsibility	***5,242***	***5,195***	***5,082***	***5,165***	***5,066***	***5,147***
Capacity Margin (%)	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**
Target Capacity (MW) - 12%	**715**	**708**	**693**	**704**	**691**	**702**
Other Reserves-NM Coop	**7**	**7**	**7**	**7**	**17**	**17**
Total Required Reserves	**722**	**715**	**700**	**711**	**708**	**719**
Existing Excess Capacity	**731**	**861**	**860**	**776**	**875**	**795**
Planning Reserve Margin (%)	**13.6%**	**13.6%**	**13.6%**	**13.6%**	**13.6%**	**13.6%**
Capacity Position	***2013***	***2014***	***2015***	***2016***	***2017***	***2018***
Long (Short)	***9***	***146***	***160***	***65***	***167***	***76***

Extension of Federal PTC (Dec 2015)

- Enabled SPS to acquire through PPAs 700 MW additional economic wind

- Three discrete wind contracts:
  - Palo Duro Wind (250 MW) (Beaver County OK – border TX/OK)
  - Roosevelt Wind (250 MW) (Roosevelt County NM)
  - Mammoth Plains Wind (200 MW) (Blain & Dewey Counties OK)

- Agreements were not pursued for REC compliance purposes
  - Each agreement currently exclude REC's
  - Permits purchase of RECS at future date for compliance purposes

Meeting the Electricity Need in SE New Mexico

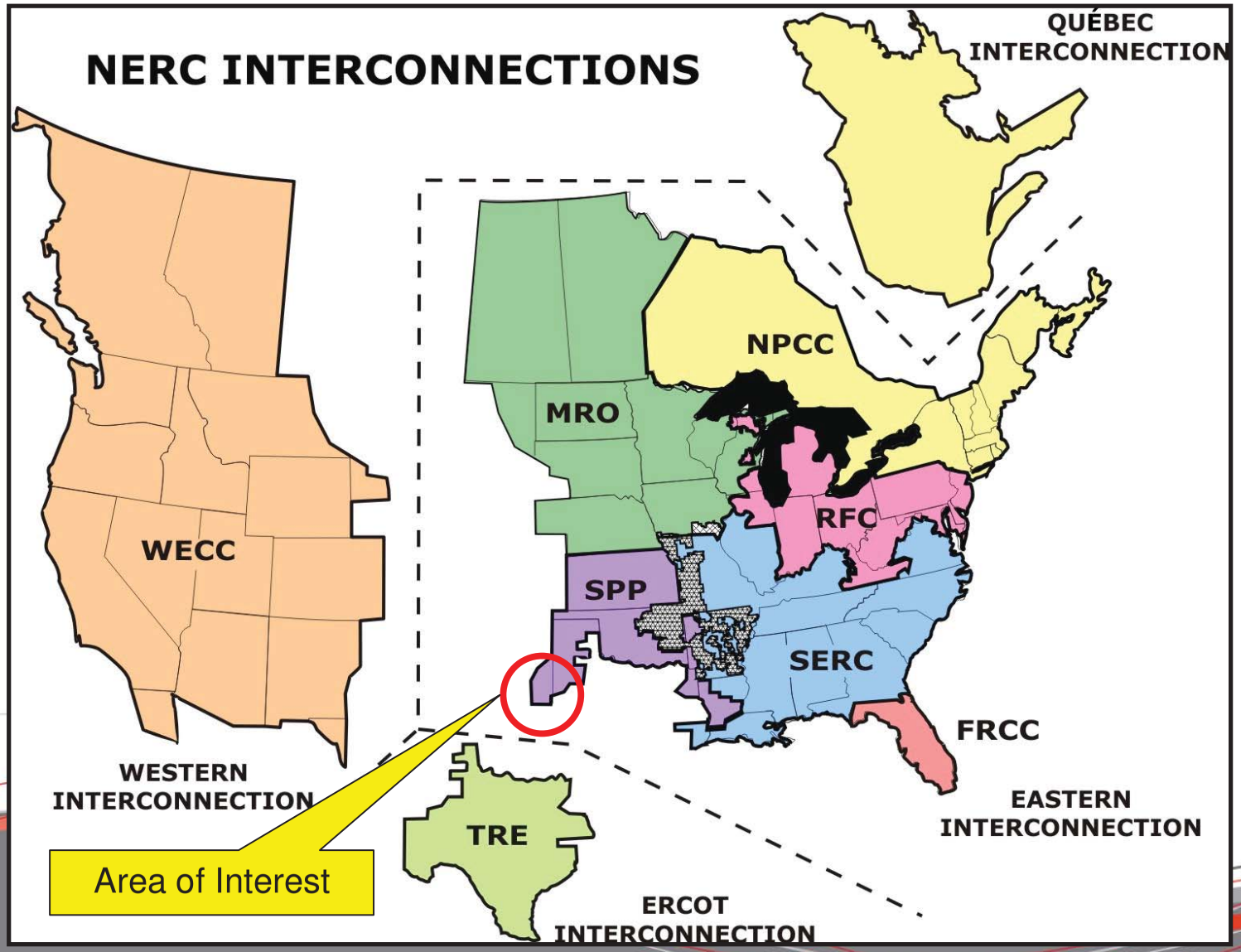
Bennie Weeks
Manager, Resource Planning

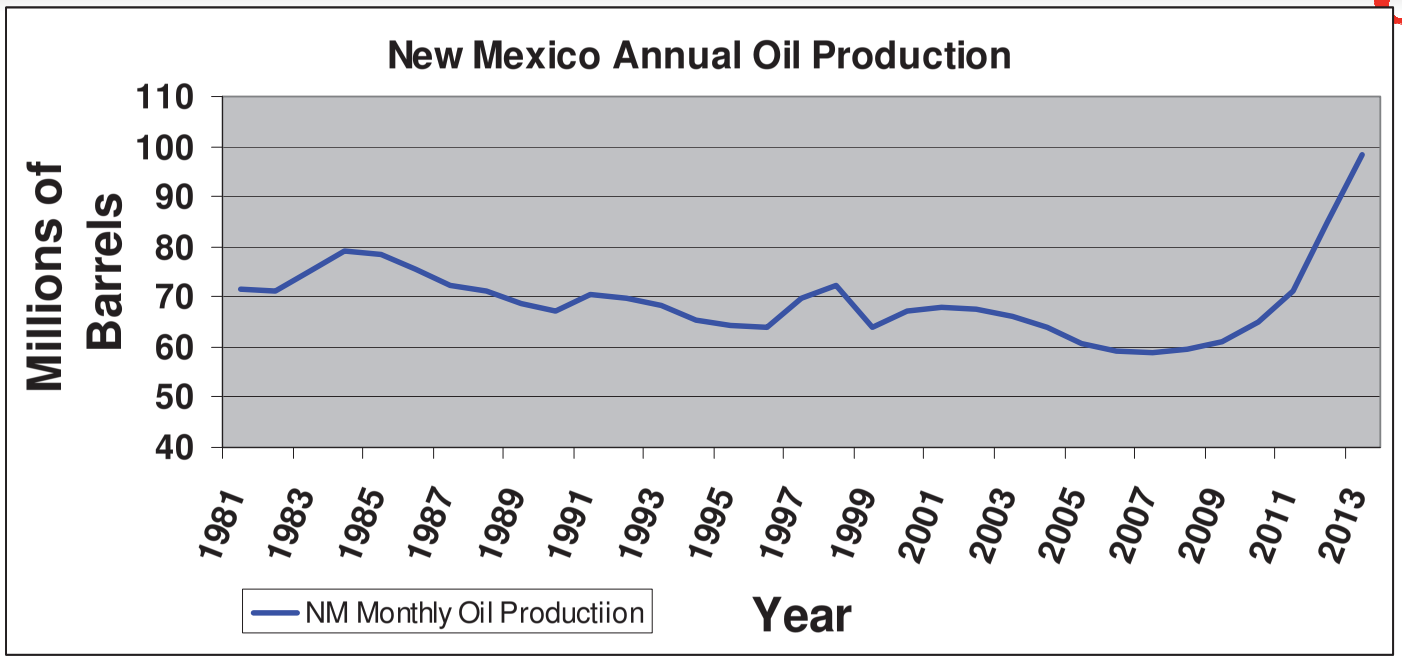


Agenda

- Current Situation in SE NM
- Xcel Energy's Ongoing Response
- Future Plans

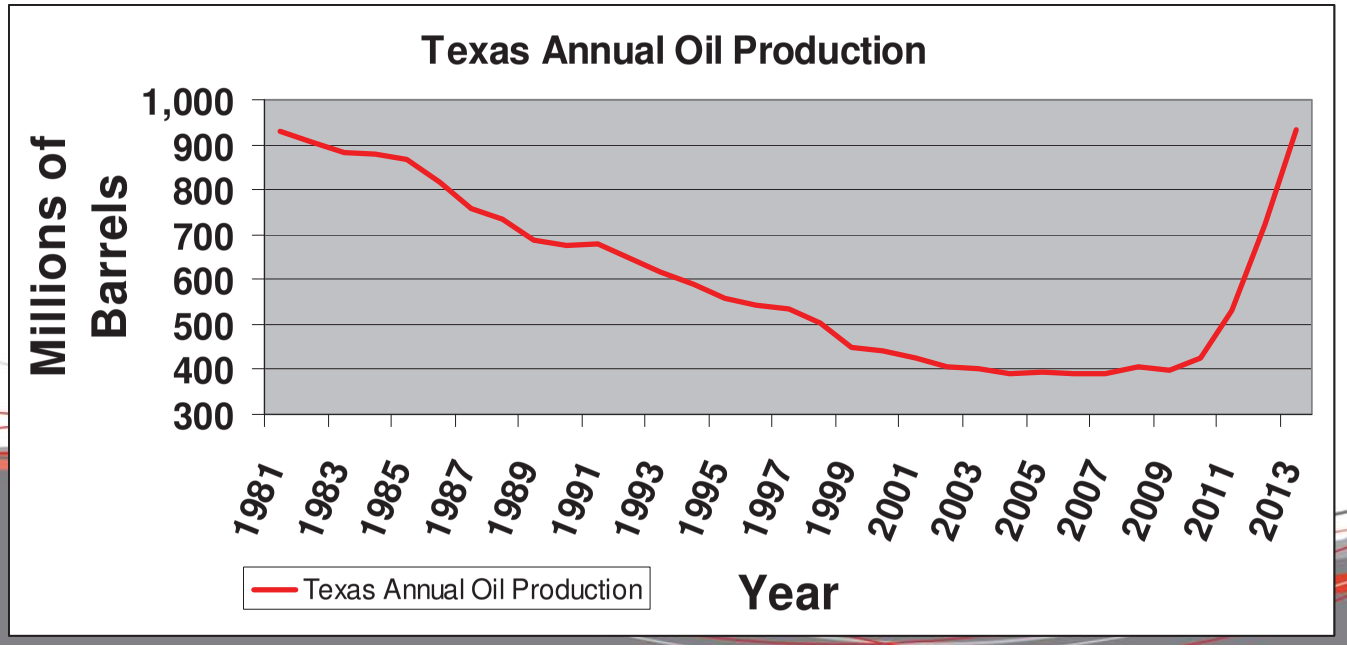
US Power Grids





Annual Oil Production Charts for NM and TX

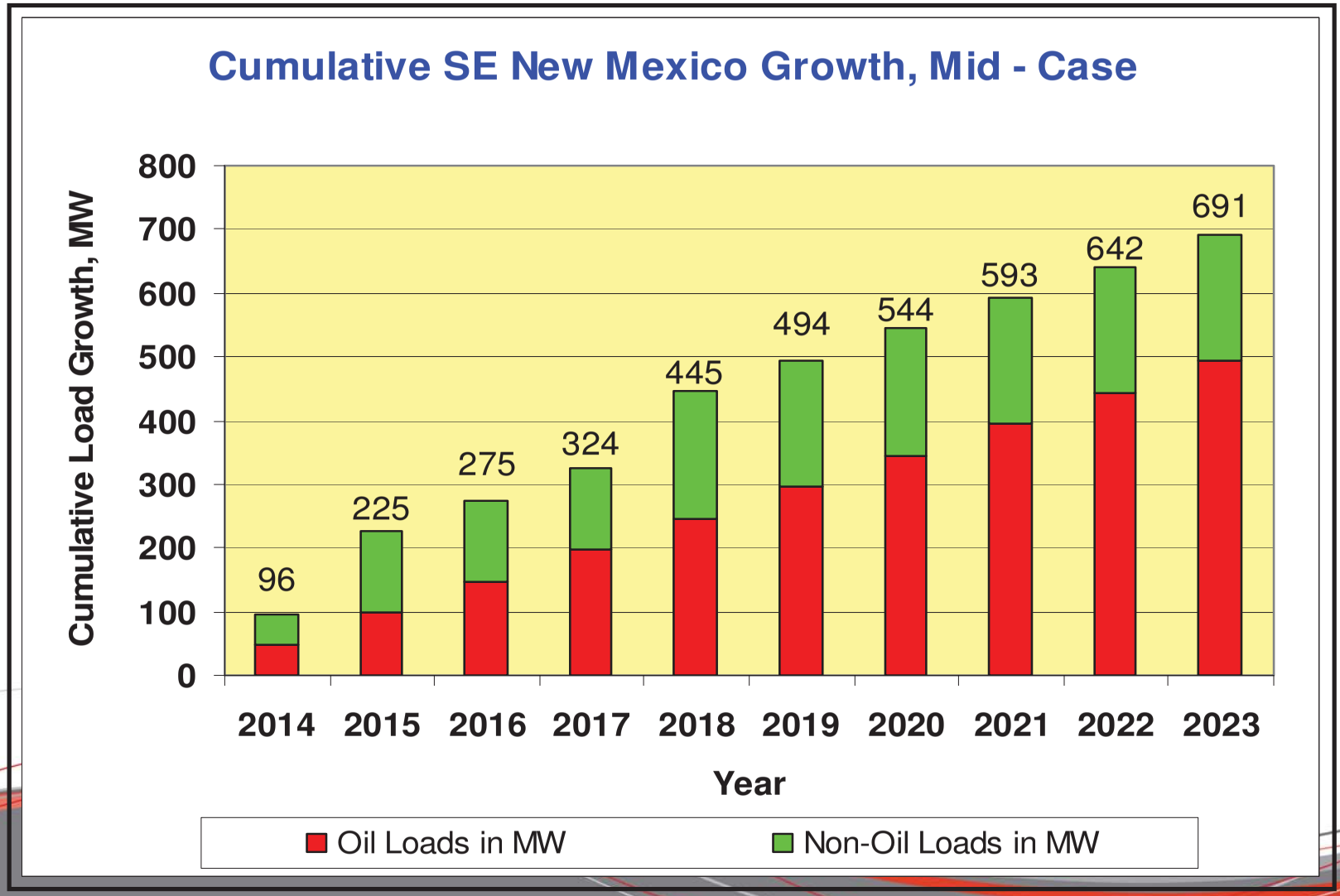
Source:
http://www.eia.gov



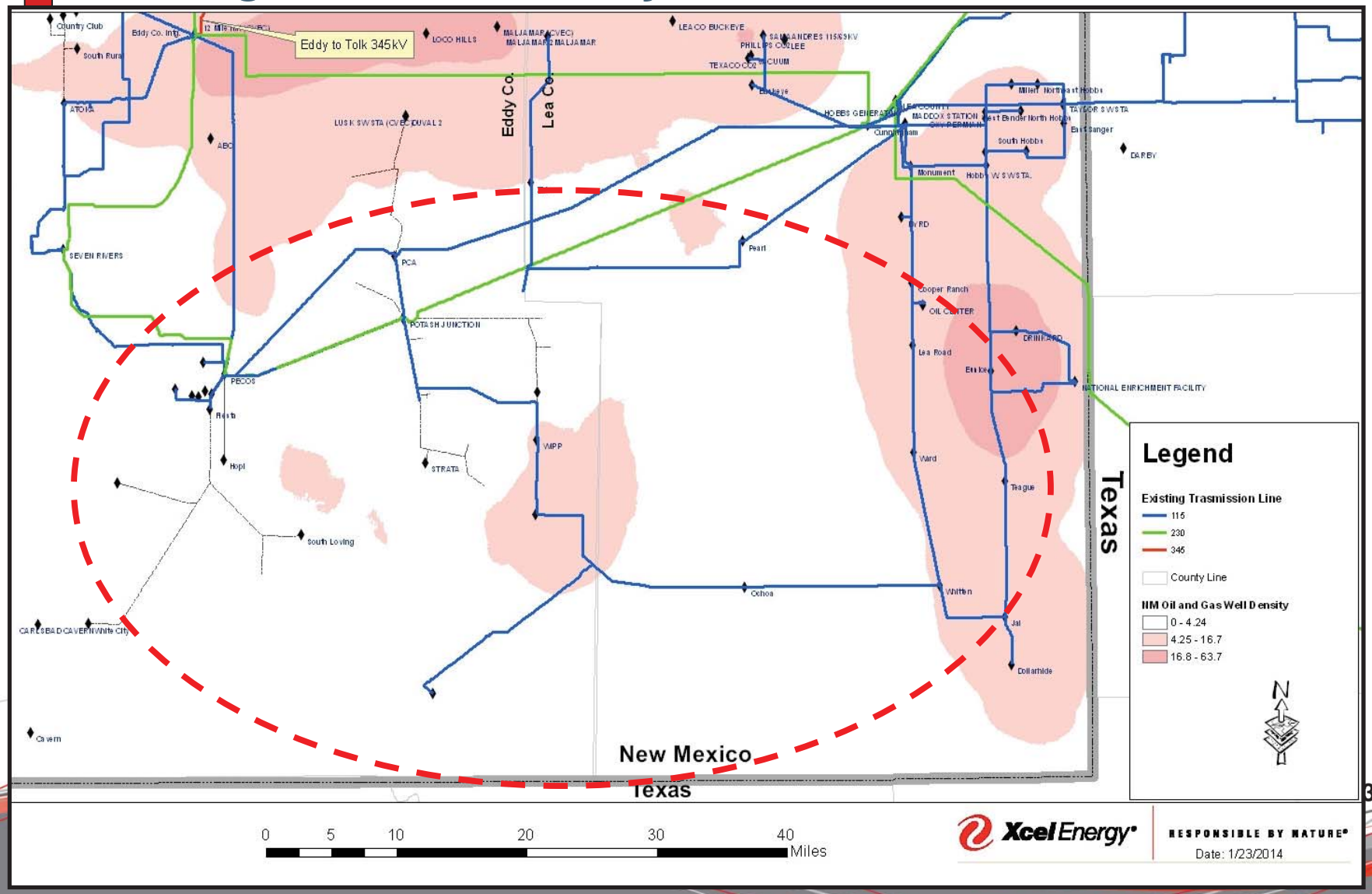
New Load Diversity

- Projecting 200-700 MW within next 10 years
- Diverse New Loads
  - Oil companies and related industries
  - Natural gas processing and compression
  - Potash mining and processing
  - Uranium enrichment
  - CO_2 injection (oil recovery)
  - Related growth in surrounding cities

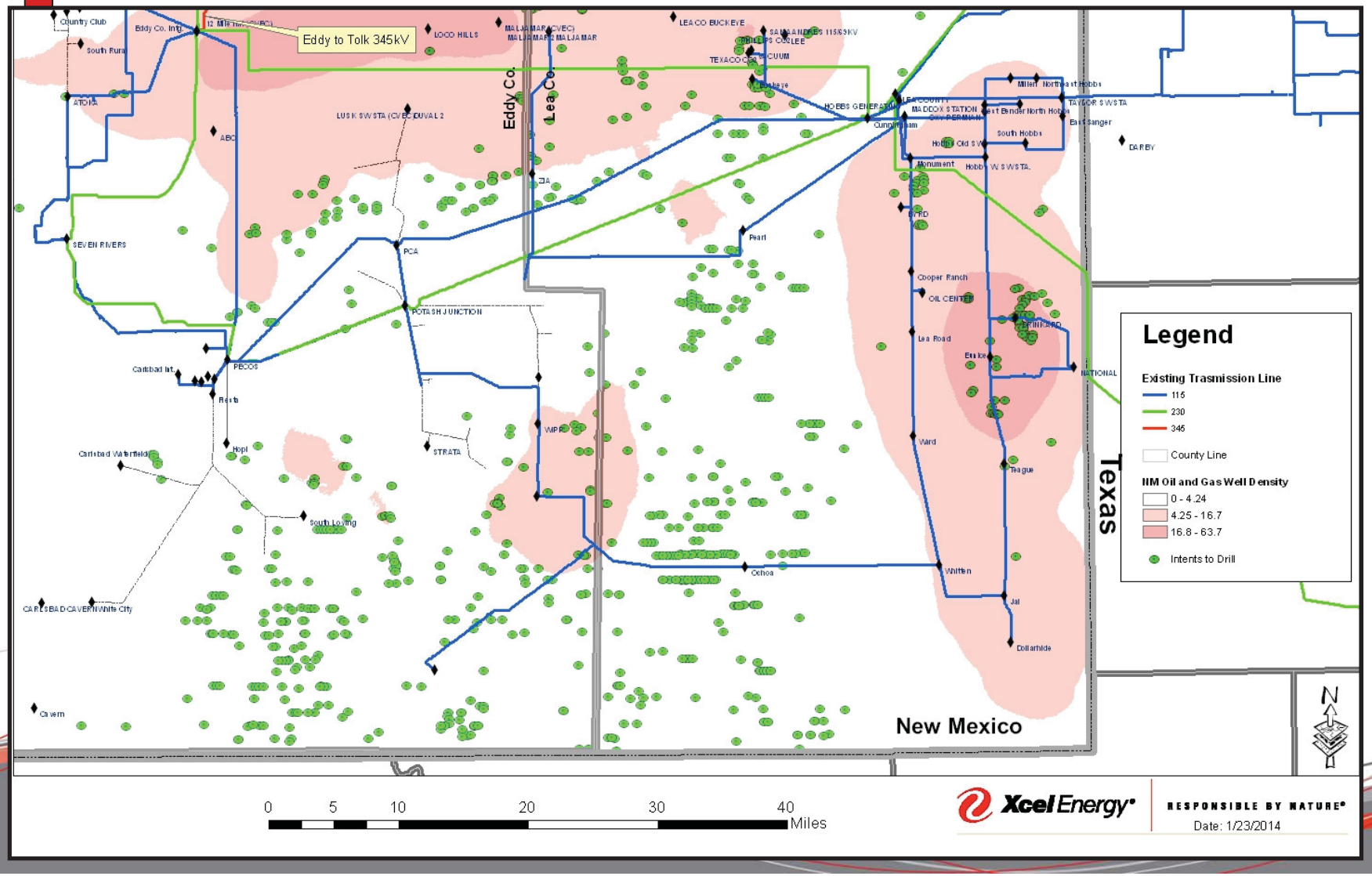
Projected Oil and Industrial Load Growth



Existing Transmission System in SE New Mexico



2013 Filed "Intentions to Drill"



Large Service Requests in SE NM

	Hobbs	Carlsbad	Total
2012	139	185	324
2013	287	285	572
2014*	150	63	213

*** 3 months**

Distribution Line Construction

Miles constructed --

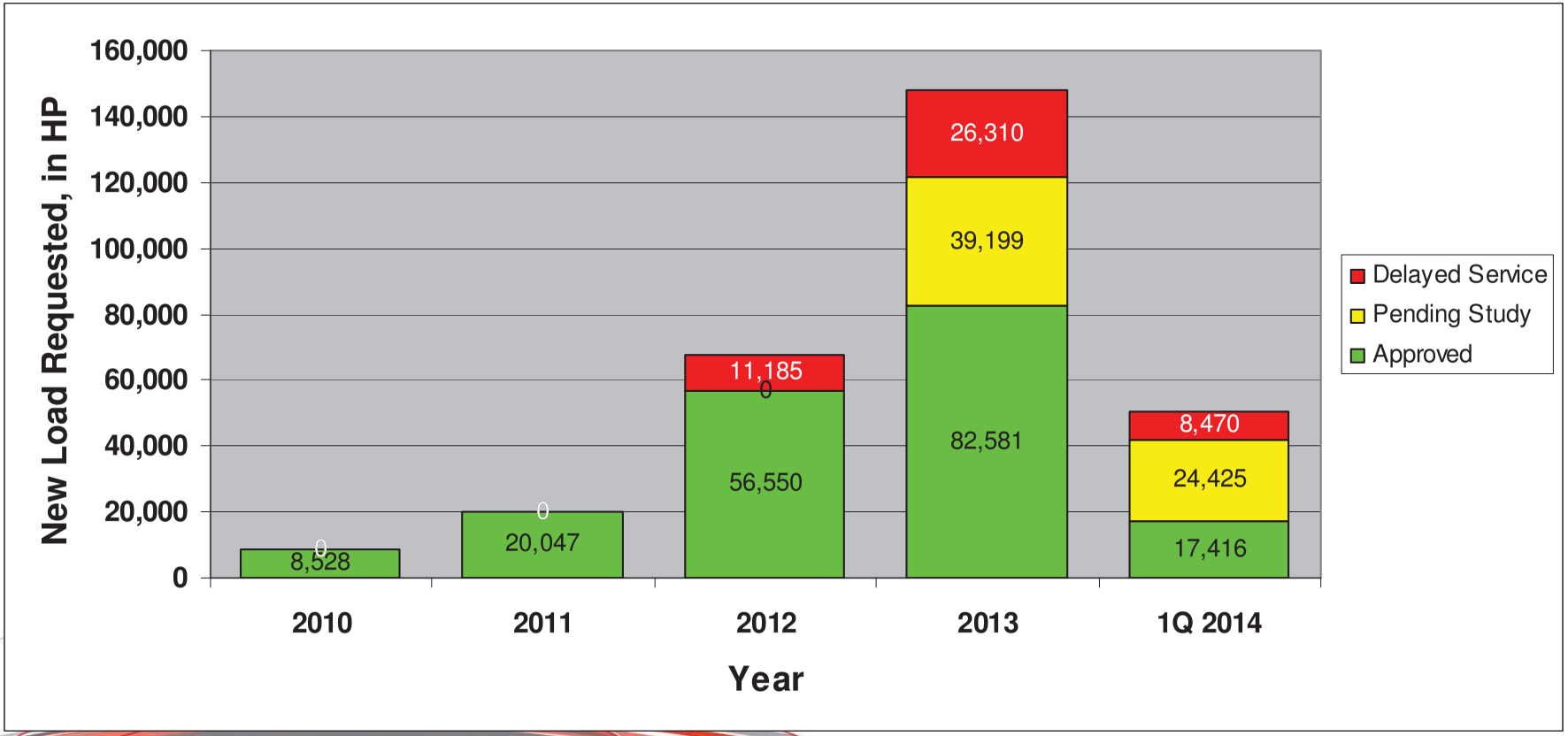
2011: 20 miles

2012: 45 miles

2013: 120 miles

2014: 230 miles (projected)

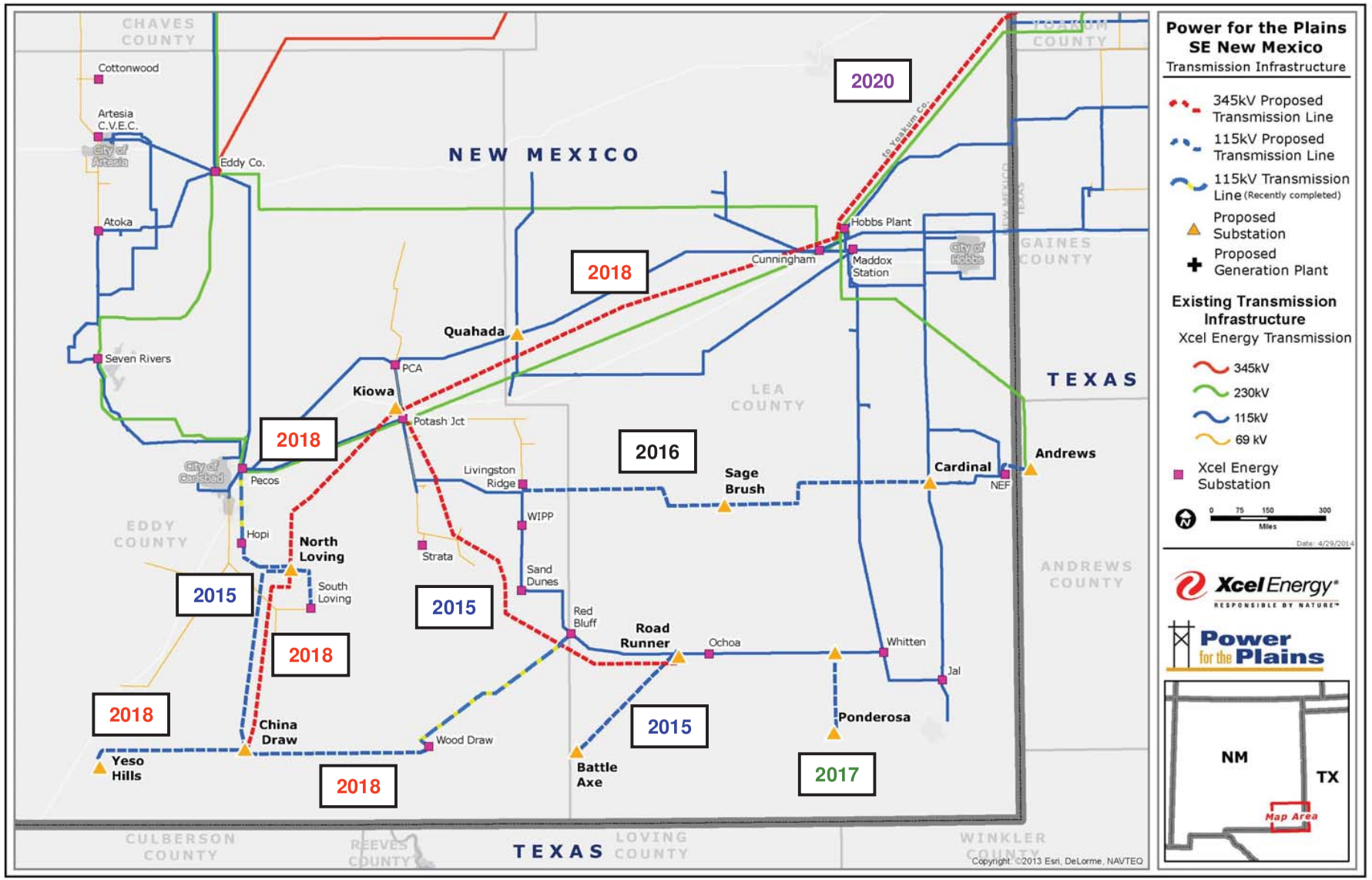
Requests for Service (HP)



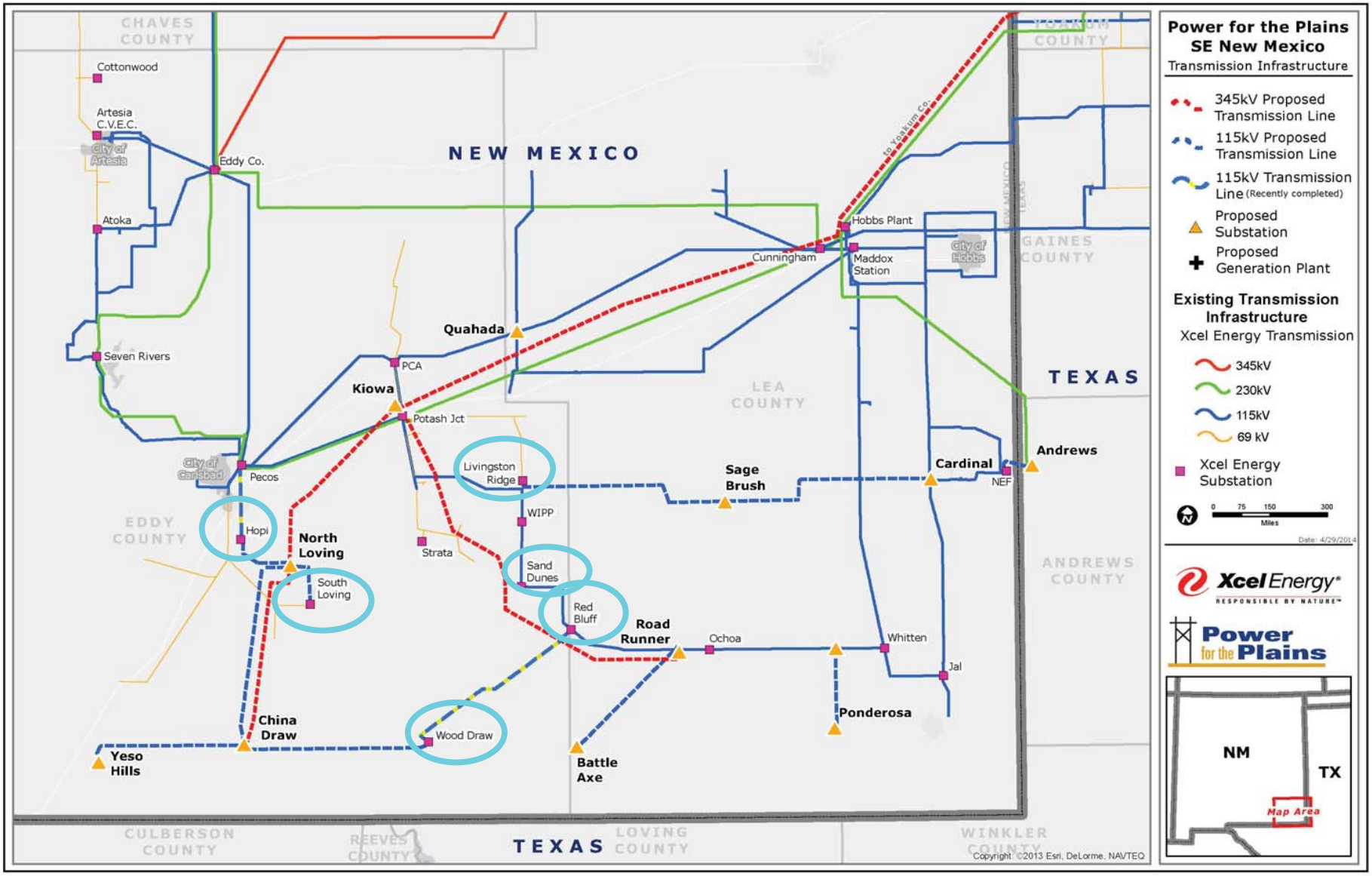
Responding to Unprecedented Growth

- Multidisciplinary Team
- Dramatic Increase in Field Personnel
- Joint Planning
- Aim – “right line at the right time”

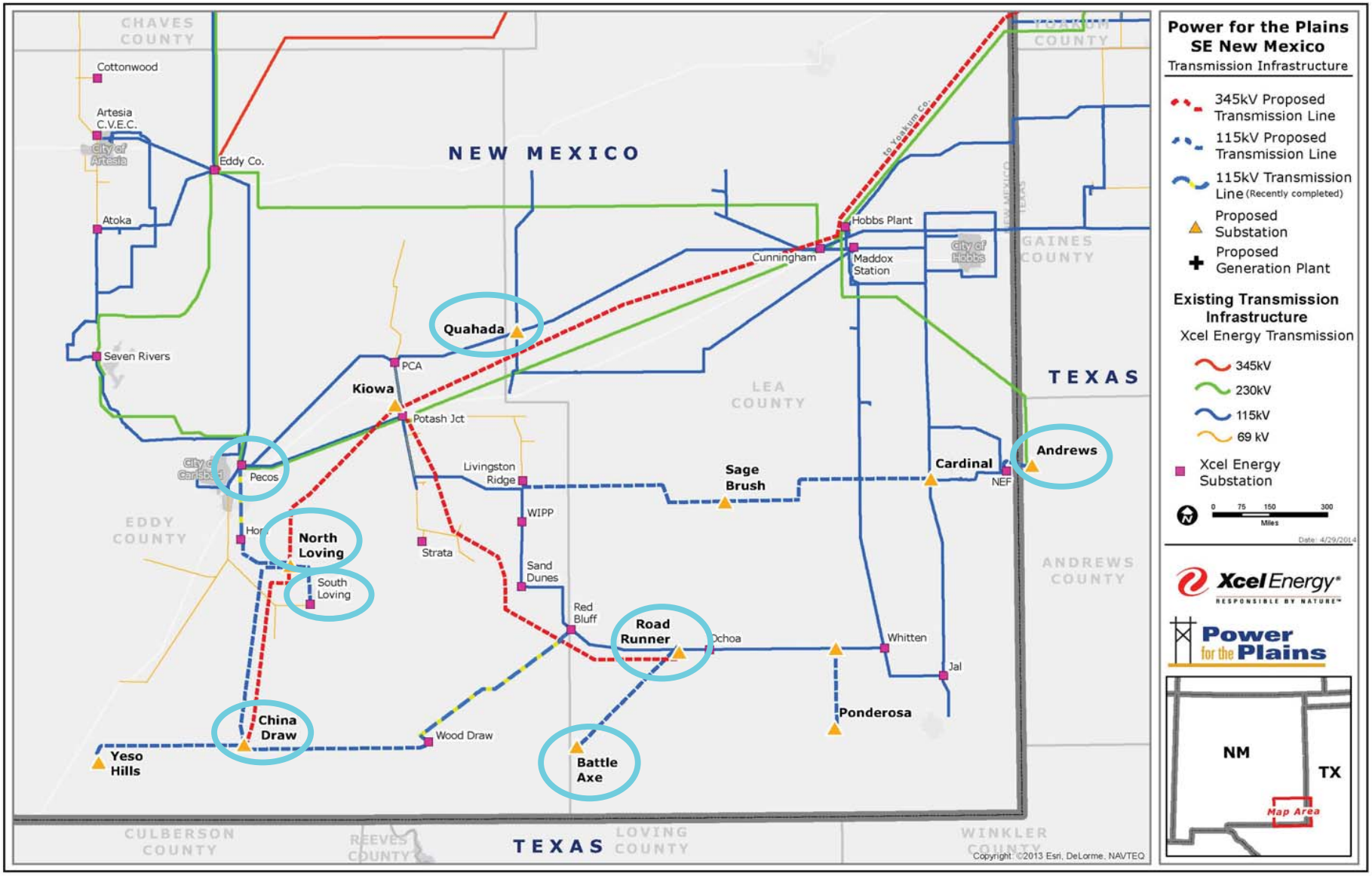
Approved Initial Transmission Infrastructure



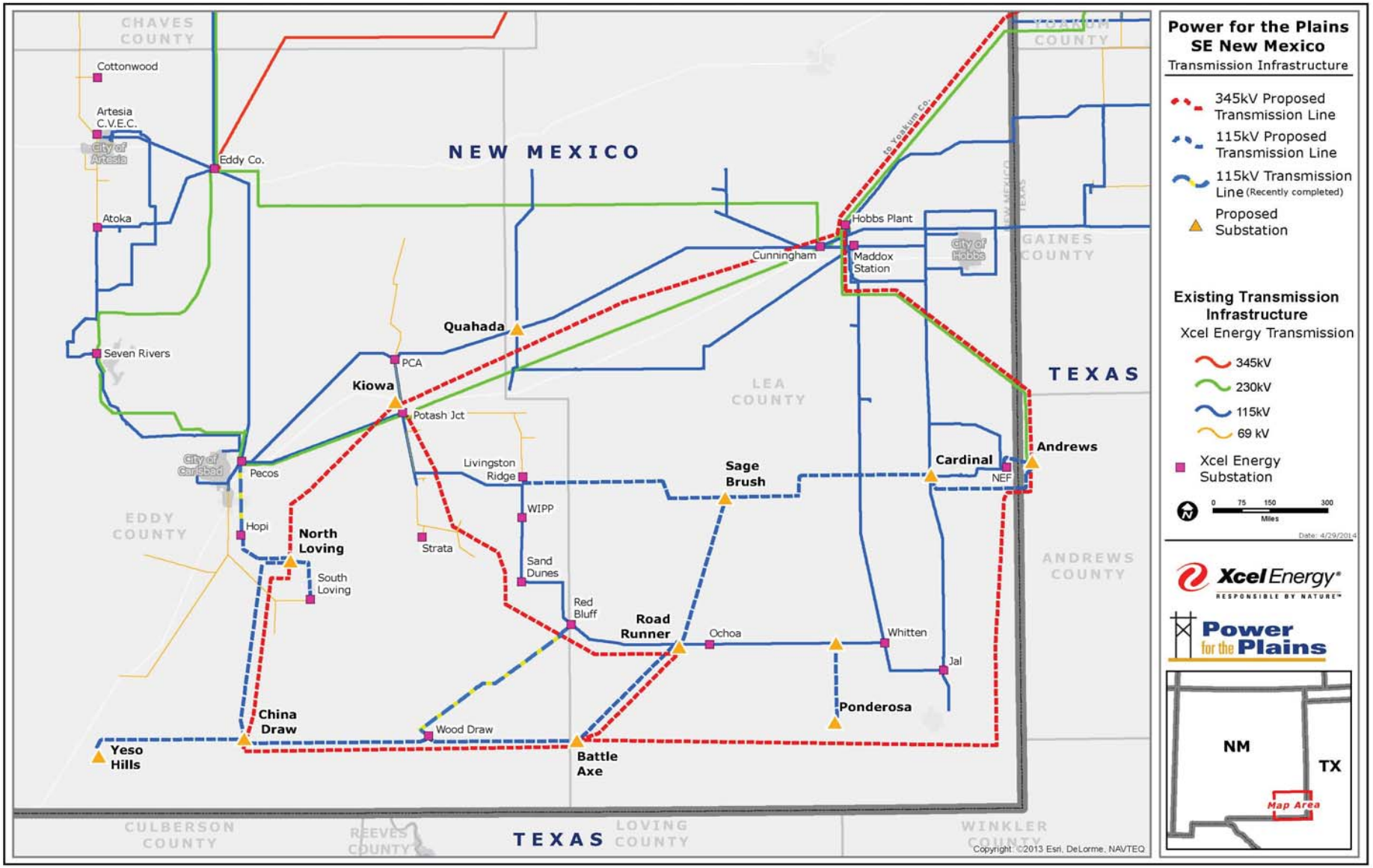
Recently New and Substations Being Upgraded in 2014



New Substations in 2015



Expected Final Transmission System 2023+



L&R – April 2014 Load Forecast

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Existing Generation	**4,513**	**4,513**	**4,513**	**4,513**	**4,513**	**4,513**	**4,513**	**4,513**	**4,513**	**4,513**	**4,513**
Total Purchased Power	1,278	1,278	1,278	1,278	761	761	753	753	753	532	532
Total Renewable	33	33	33	33	33	68	68	68	68	68	68
SPS-PSCo Tieline	101	101	101	101	101	101	101	101	101	101	101
Total Purchased Capacity	**1,412**	**1,412**	**1,412**	**1,412**	**895**	**930**	**922**	**922**	**922**	**701**	**701**
Total Renewable	0.0	3.0	3.3	3.3	4.3	4.6	5.7	5.7	5.7	5.7	5.7
Total Retirements	-	-	-	-	(131)	(131)	(131)	(202)	(202)	(202)	(370)
Total Contract Extensions	-	-	-	-	-	-	-	-	-	220	220
Total Expansion Plan	**-**	**3**	**3**	**3**	**(127)**	**(126)**	**(125)**	**(196)**	**(196)**	**24**	**(144)**
Net Dependable Capacity	***5,925***	***5,928***	***5,928***	***5,928***	***5,281***	***5,317***	***5,310***	***5,239***	***5,239***	***5,238***	***5,070***
Full Requirements Load:											
Retail	3,578	3,744	3,945	4,083	4,202	4,322	4,440	4,630	4,750	4,874	4,998
Total Wholesale	1,161	1,196	1,142	1,157	483	494	505	-	-	-	-
DSM Impact	(6)	(11)	(15)	(20)	(25)	(31)	(36)	(41)	(47)	(53)	(59)
Interruptibles	(33)	(36)	(38)	(40)	(41)	(43)	(44)	(45)	(47)	(48)	(47)
Total SPS Firm Load	**4,699**	**4,893**	**5,033**	**5,180**	**4,618**	**4,743**	**4,865**	**4,543**	**4,656**	**4,773**	**4,892**
Total Partial Requirements Oblig	**300**	**300**	**200**	**200**	**170**	**172**	**174**	**326**	**328**	**280**	**283**
System Peak Responsibility	***4,999***	***5,193***	***5,233***	***5,380***	***4,788***	***4,915***	***5,040***	***4,869***	***4,985***	***5,054***	***5,174***
Capacity Margin Required by SPP (%)	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Target Capacity (MW) - 12%	682	708	714	734	653	670	687	664	680	689	706
Other Reserves = NM Coops	7	7	13	13	13	13	13	-	-	-	-
Total Required Reserves	689	715	727	747	666	683	700	664	680	689	706
Actual Existing Excess Capacity	926	735	695	549	493	401	270	370	254	184	(105)
Planning Reserve Margin (%)	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%	13.6%
Capacity Position	***2015***	***2016***	***2017***	***2018***	***2019***	***2020***	***2021***	***2022***	***2023***	***2024***	***2025***
Long (Short)	***237***	***19***	***(31)***	***(198)***	***(172)***	***(282)***	***(430)***	***(294)***	***(426)***	***(505)***	***(810)***

Information

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

Power for the Plains

www.PowerForThePlains.com

Questions and Discussion



Conclusion

IRP Information

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

- **Brian Fleming – Xcel Energy/SPS Contact**
  - Address - 600 S. Tyler, Suite 2900, Amarillo TX 79101
  - Phone - (806) 378-2460
  - Email – brian.fleming@xcelenergy.com

Next Meeting

- **Date:**
  - **Thursday, September 25, 2014**
- **Time:**
  - **10:00am to 12:00pm (Mountain Time)**
- **Location:**
  - **Webinar meeting**


Xcel Energy®

2014 SPS Solar Generation RFP

Bennie Weeks

Manager, Resource Planning

AGENDA

I. Welcome

II. SPS Solar RFP – Bennie Weeks

III. Environment 101 Update – Dean Metcalf

IV. EPA's "Clean Power Plan" – Nicholas Martin

V. Conclusion

- Next Meeting
- IRP Contact Information

REQUEST

- **SPS is requesting up to 200 MW of photovoltaic solar generation.**
- **Solar generation proposals shall be either: 1) to-be-built generation resources to be interconnected on nine designated distribution facilities @ 10 MW AC for each, and/or 2) remaining resources to be interconnected at distribution or transmission at site(s) proposed by the developer.**
- **Projects must begin delivery to SPS on or before December 31, 2016 and that would be contracted through SPS's PPA.**

SCHEDULE

- **Proposals are due by 5:00 PM CST Friday, October 10, 2014.**

RFP Issued	September 12, 2014
Proposals Due	October 10. 2014
Evaluation & Due Diligence	October 2014
Negotiations with Selected Bidder(s)	November 2014
Finalize / Sign Contracts	December 2014
Application for Regulatory Approval	January 2015

Interconnection

- 3 MW and greater must be studied by the SPP for transmission impacts
- Require distribution interconnections to provide initial funding of $30,000
  - SPS will submit distribution request into the October study cycle
- Transmission interconnection
  - Bidder responsible for interconnect request at SPP


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Emerging Environment Impacts for SPS NMIRP

Dean Metcalf
Manager, Environmental Services and Media Compliance
September 25, 2014

Major Regulations Affecting SPS

Clean Air Interstate Rule (CAIR)

- Began March 5, 2005
- Permanently caps SO2 and NOx
- Cap and Trade Program
- Vacated via litigation and then re-instated while EPA proposes replacement rule
- CSAPR proposed June 2010 to replace CAIR

Major Regulations Affecting SPS – (Cont.)

Cross-State Air Pollution Rule (CSAPR)

- Published August 2011
- Litigated October 2011
- DC Circuit Court Stayed CSAPR - December 30, 2011
- DC Circuit vacated CSAPR and remanded to EPA
- Appealed. April 2014 Supreme Court Reversed and Remanded Case Back to DC Circuit
- Two Main Issues – Texas' Inclusion and EPA Disapproval of Texas State Plan
- EPA Requested Lifting Stay Effective January 1, 2015
- Changes in SPS since 2011
- Compliance Strategy – Dispatch and Allowance Purchase

Major Regulations Affecting SPS (Cont.)

EGU MACT – MATS Rule Regulates

- Mercury (Hg)
- Particulate Matter (PM) – surrogate for toxic non-mercury metals
- HCl – surrogate for all toxic acid gases
- Compliance Strategy - ACI and Averaging

Major Regulations Affecting SPS (Cont.)

Regional Haze

- BART – Phase 1 (Harrington 1 and 2 Eligible)
- Reasonable Further Progress – Phase 2
- 2009 Texas submitted RH SIP
- 2013 EPA Region 6 Began Reviewing SIP
- 2014 EPA Headquarters told R6 SIP would be rejected and Texas would be under a FIP.
- May 2014 Tolk received Section 114 request for information about SO2 Studies

Major Regulations Affecting SPS (Cont.)

National Ambient Air Quality Standards

- NAAQS for SO2, Ozone, PM, NO2
- Potential for nonattainment areas to expand
- Increased controls to meet standards

WE ARE CONNECTED...TO A CLEAN ENERGY FUTURE...TO OUR CUSTOMERS...TO THE COMMUNITIES WE SERVE.

Major Regulations Affecting SPS (Cont.)

Coal Combustion Residuals (CCR) Rules

- Regulation of coal ash as hazardous/nonhazardous
- Increased landfill construction & monitoring requirements
- Potential to affect ash sales – 100% beneficial use

Major Regulations Affecting SPS (Cont.)

Clean Power Plan – GHG 111(d)

- Proposed rules for GHG regulation from existing sources
- Compliance will be determined by states in approved State Plan
- Final rule – June, 2015
- SIP – 2016 (1 year extension may be granted)

Major Regulations Affecting SPS (Cont.)

Threatened and Endangered Species

- Sand Dune Lizard
- Lesser Prairie Chicken

Avian Protection

- APP

Questions?

Dean's office phone
806-378-2194
cell – 720-480-5632
Office location – 25C05 SPS Tower

Overview of EPA's "Clean Power Plan" (Proposed Section 111(d) Rule)



SPS New Mexico IRP Public Meeting
September 25, 2014

Background

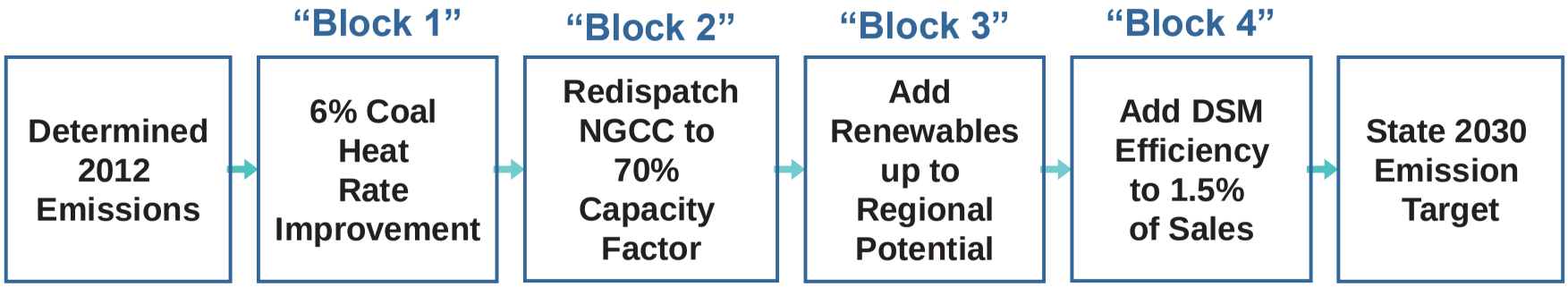
- In 2007, the Supreme Court found EPA has authority to regulate CO_2 under the Clean Air Act
  - New power plants: Section 111(b)
  - Existing power plants: Section 111(d)
- President Obama's climate action plan
  - Goal: 17% below 2005 by 2020 (economy-wide)
  - Much greater reductions in later years
  - Significant political interest in bigger reductions (e.g. for utility industry, 30% reduction below 2005 by 2030)

EPA's "Clean Power Plan" Proposal

- Proposed structure and targets
  - Achieves President's goals
  - Derives state emission targets
  - Requires state plans to meet targets
- The good news: state flexibility
  - States may use any enforceable method to achieve targets
    - Renewables, efficiency, coal plant retirements, etc.
- The bad news:
  - Uneven, stringent state-by-state targets
  - Undercut value of early action credit

But EPA emphasizes the preliminary nature of this proposal…

How EPA Set State Targets Under Section 111(d) Rule

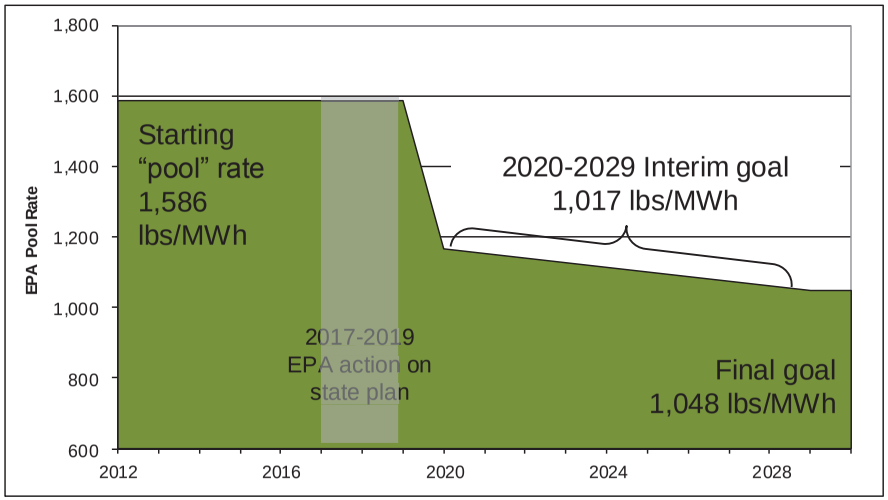


Note: State does not have to comply with these specific blocks, just the end target

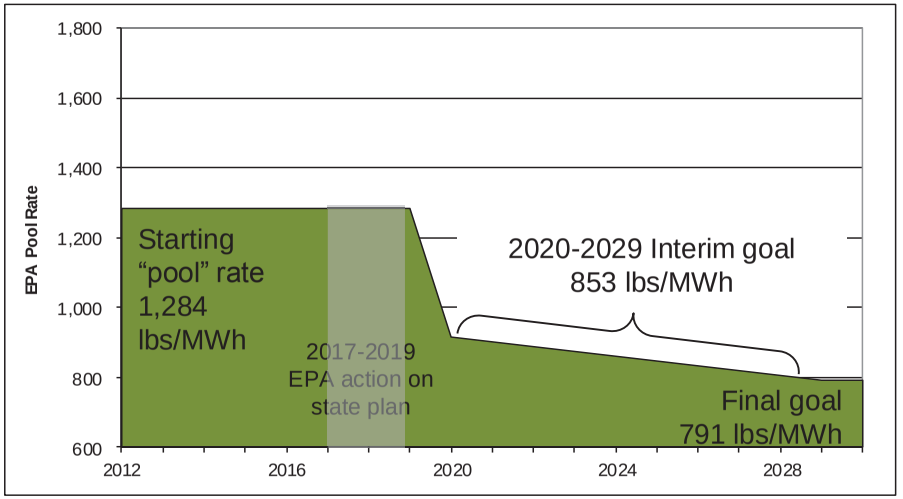
Targets for Xcel Energy States

		Base Goal (lb CO_2/MWh)		
	2012 Rate	Interim (2020-2029)	Final Goal (2030 on)	Reduction From 2012
CO	1,714	1,159	1,108	35%
MI	1,814	1,227	1,161	31%
MN	1,470	911	873	41%
NM	1,586	1,107	1,048	34%
ND	1,994	1,817	1,783	11%
SD	1,135	800	741	35%
TX	1,284	853	791	38%
WI	1,827	1,281	1,283	30%

CO_2 Emission Reductions Required For SPS Under Proposed Rule



New Mexico



Texas

111(d) and SPS in New Mexico

- **New Mexico SPS customers are potentially affected by the 111(d) rule through impacts in both New Mexico and Texas**
- **New Mexico and Texas statewide targets are not the same:**
  - New Mexico: 1,048 lb CO_2/MWh
  - Texas: 791 lb CO_2/MWh
- **The targets must be met statewide**
  - New Mexico as a state may be relatively well-positioned due to planned retirements and continued clean energy investments
- **SPS response:**
  - We are still analyzing how this rule may impact our customers across both states. Our challenge in Texas may be significant.
  - We are continuing to make cost-effective emissions reductions
    - Adding wind and solar where it is cost-effective
    - SPS has reduced CO_2 by 10% since 2005 and planning for 20% from 2005 to 2020

Affected Units

- **Rule does not set limits by unit, but emissions of affected units in a state must achieve state targets**

Unit Type	IN/OUT	Notes
Coal+Gas Steam	IN	If > ~25 MWe
Simple Cycle CT	OUT	Unless over 33% CF
NGCCs	IN	Controversy over 33% trigger

- **Xcel Energy Affected Units: MN, CO, NM, TX**
  - Other states still affected through cost implications and possibly other implementing policies.
- **New NGCC units: states have the option to include into "111(d) pool" of existing units**

Implications for Xcel Energy Fleet

- **Outcomes depend strongly on the final rule, and on state compliance plans**
  - Also, legal challenges are a certainty
- **The rule puts pressure on coal plants**
- **The rule puts a greater focus on NGCCs' role in operations**
  - Not necessarily to the degree EPA sets forth in targets
- **The rule sets higher expectations for additional renewable energy and energy efficiency**

Key Questions for State Compliance Plans

1. Adopt a mass-based (tons) or rate-based (lb/MWh) approach to compliance?
2. Use an EGU-based (focus on plants) or portfolio-based (focus on the system) approach to enforcement?
3. Will new NGCC units be included into the 111(d) plan or kept separate?
   a) Affected by state targets
   b) Implications for mass or rate-based approach
4. Will interstate collaboration be sought?
   a) Renewable crediting issues
5. How to apportion compliance burden among entities in the state?

Key Problem with the Proposed 111(d) Rule: Early Action Credit

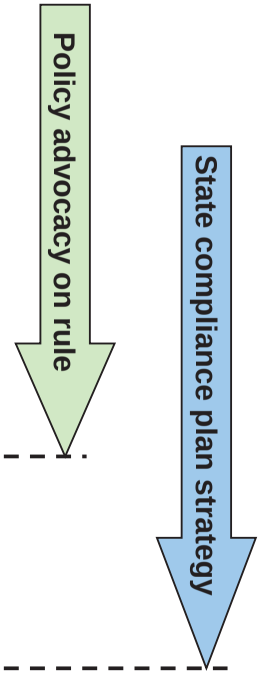
- Rule puts greater burden on states that are leaders in clean energy
  - Pre-2012 coal plant retirements
  - Renewable energy leadership
  - Interim targets
- Result:
  - Greater costs for leading states and utilities
  - Disincentive to pursue future clean energy leadership
- Simple, narrowly focused changes can help mitigate this burden without dramatically changing rule structure

Proposed Solutions

- Recognize the role of NGCCs in balancing intermittent renewables – eliminate the penalty
- Let states set a "glide path" to the 2030 target
- Provide stronger incentives to continue clean energy leadership prior to 2020 in renewable energy and other areas
- Correct technical problems (e.g. use of nameplate capacity for NGCC re-dispatch)

111(d) Rule: Timeline and Process Overview

- June 2014: EPA proposes 111(d) rule
- Summer 2014: Analyze rule and develop positions
- August 2014: Present proposed changes to rule to internal executives, White House and EPA
- September 2014: Stakeholder outreach on proposed changes
- December 1, 2014: Comments due to EPA
- June 2015: EPA issues Final Rule
- 2014-2016: States develop compliance plans
- 2016-2018: State compliance plans due
- 2017-2019: EPA approves state compliance plans
- 2020: First compliance year (under proposed rule)




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Conclusion

IRP Information

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

- **Brian Fleming – Xcel Energy/SPS Contact**
  - **Address - 600 S. Tyler, Suite 2900, Amarillo TX 79101**
  - **Phone - (806) 378-2460**
  - **Email – brian.fleming@xcelenergy.com**

Next Meeting

- **Date:**
  - **Thursday, December 11, 2014**
- **Time:**
  - **10:00am to 12:00pm (Mountain Time)**
- **Location:**
  - **Webinar meeting**


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2015 SPS Integrated Resource Plan ("IRP")

Public Advisory Meeting #3

Bennie Weeks, Craig Berg, & Brian Fleming

SPS Resource Planning

AGENDA

I. Welcome

II. Gas & Power Markets – Kyle Martinez & Amanda Guerrero

III. Coal Supply – Dana Echter

IV. Demand-Side Management ("DSM") – Shawn White

V. Load Forecasting – Luke Jaramillo

VI. Conclusion

- Next Meeting
- IRP Contact Information


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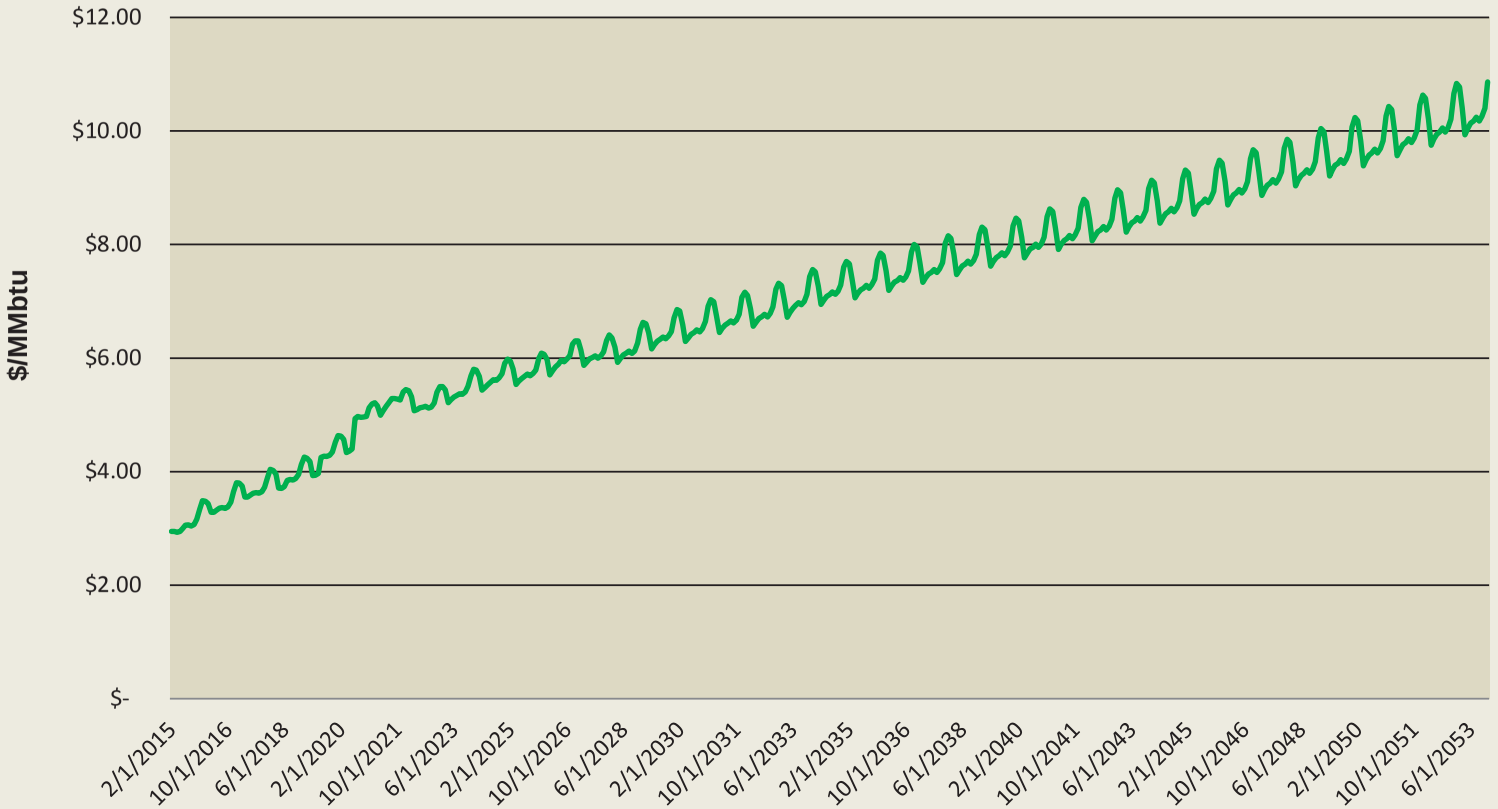
Gas and Power Market Price Forecasting

Kyle Martinez & Amanda Guerrero
Market Pricing Analytics
January 15, 2015

Natural Gas Price Forecasting Methodology

- **Henry Hub forecast "4-Source Blend" is an average of three consultants' long term forecasts and the current NYMEX strip**
- **Forecasts are generally updated semi-annually**
  - **CERA** (April and October)
  - **PIRA** (October)
  - **Wood Mackenzie** (April and October)

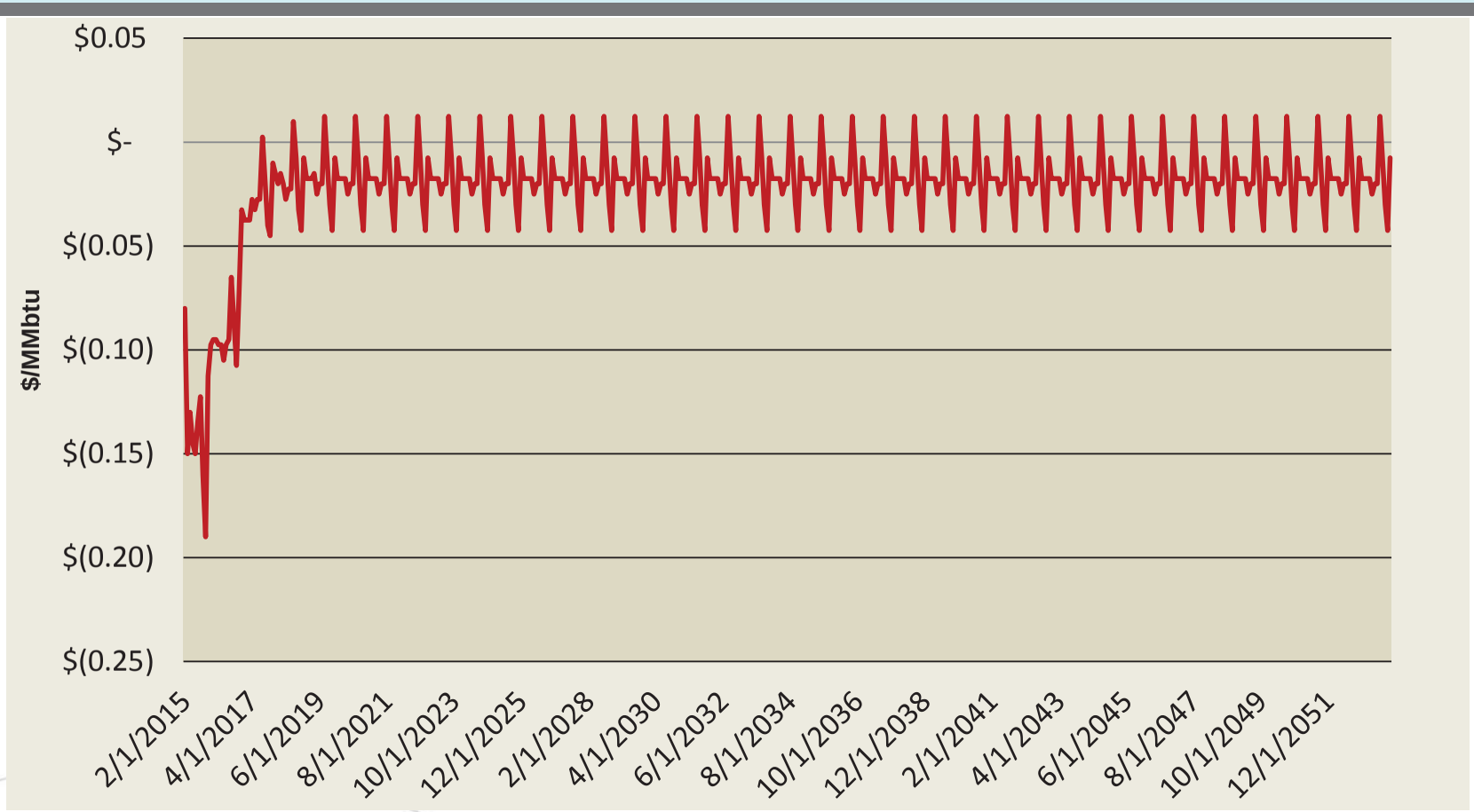
Recent Henry Hub 4-Source Blend Forecast
(Jan. 9, 2015)



Natural Gas Delivered Price

- Basis differential is the current market price
  - Current data source: ICE
- The price from the last year quoted is carried forward through the end of the study period
  - Existing units: Use the hub from where gas is traditionally procured
  - New Units: Determine most likely general location of unit and associated hub
- Add transportation, storage and fuel surcharge to hub forecast for plant delivered cost

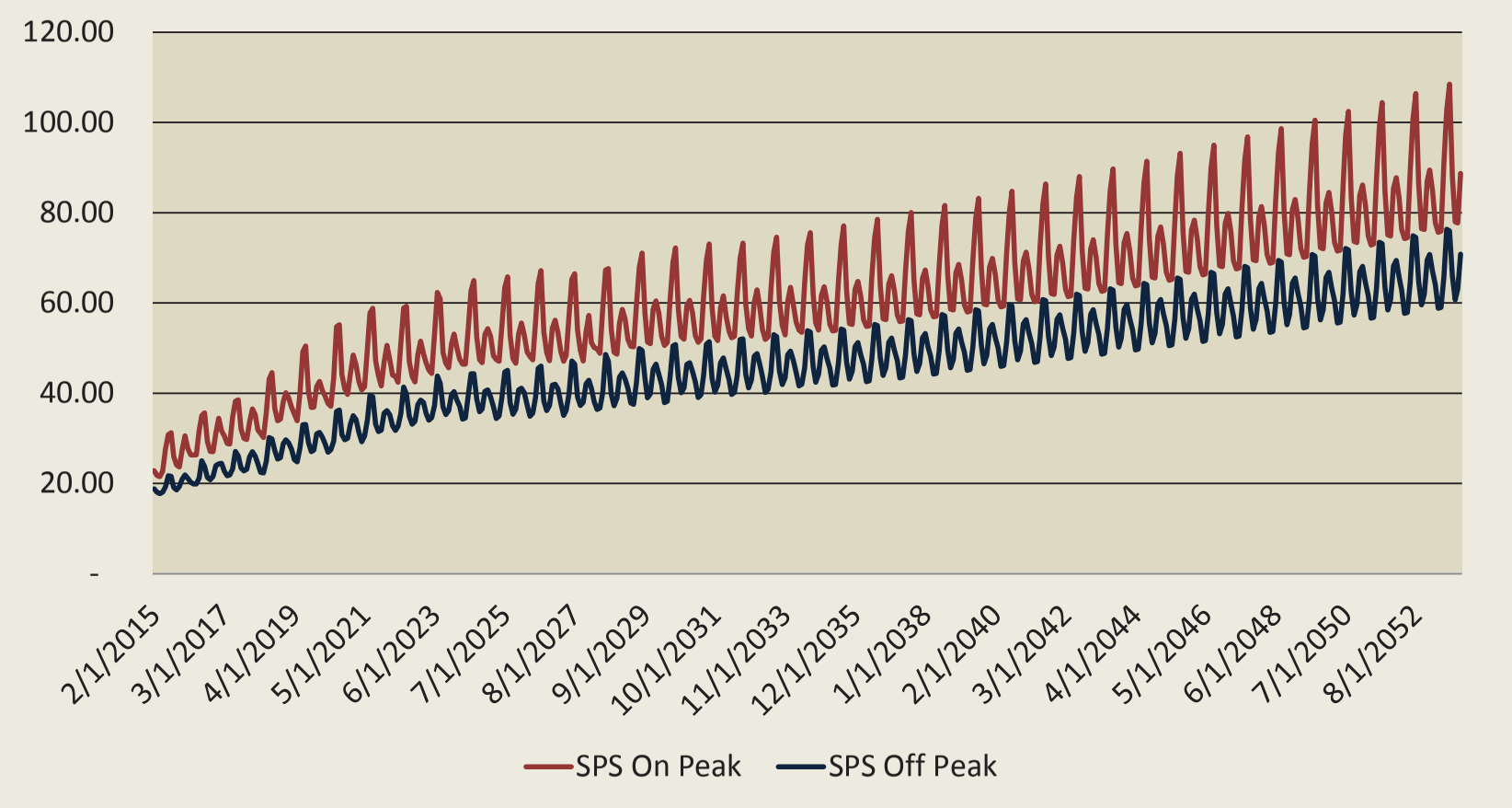
Recent Waha Basis Forecast
(Jan. 9, 2015)



Electricity Market Prices

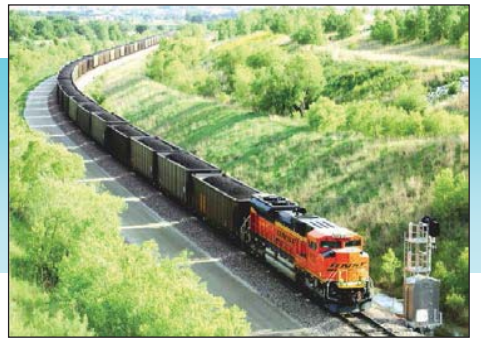
- Based on the "4-Source Blend" natural gas price and …
- The average of PIRA, CERA, and Wood Mackenzie implied heat rate forecasts to derive the electricity price ($/MWh)
  - Base forecast does not include an embedded CO_2 price

Recent SPP Electricity Forecast
(Jan. 9, 2015)




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Coal Supply Presentation

Craig Romer
Director, Fuel Supply Operations
January 15, 2015

Coal-Fired Power Plants Statistics

- Harrington Station: Amarillo, Texas
  - Three coal-fired units: 1,066 net MW
  - Coal sources
    - Low-sulfur Southern Powder River Basin ("PRB") coal mines - North Antelope Rochelle, Antelope and Black Thunder
  - Rail Transportation: Burlington Northern Santa Fe (BNSF)
  - Trestle unloading system
  - Historical average annual consumption: ~4m tons

Coal-Fired Power Plants Statistics

- Tolk Station: Muleshoe, Texas
  - Two coal-fired units: 1,130 net MW
  - Coal sources
    - Low-sulfur Southern Powder River Basin ("PRB") coal mines - North Antelope Rochelle, Antelope and Black Thunder
  - Rail Transportation: Burlington Northern Santa Fe (BNSF)
  - Rotary unloading system
  - Historical average annual consumption: ~4m tons

SPS Contract Information

- **TUCO, Inc.**
  - **TUCO is a third-party supplier responsible for managing contracts with coal suppliers, rail transportation and coal handling.**
  - **SPS purchases coal from TUCO at the plant bunkers**
  - **Xcel Energy's Fuel Supply Operations manages the TUCO contract**
  - **The TUCO contract expires on Dec 31, 2016 for Harrington and on Dec 31, 2017 for Tolk**

TUCO Coal Contract Information

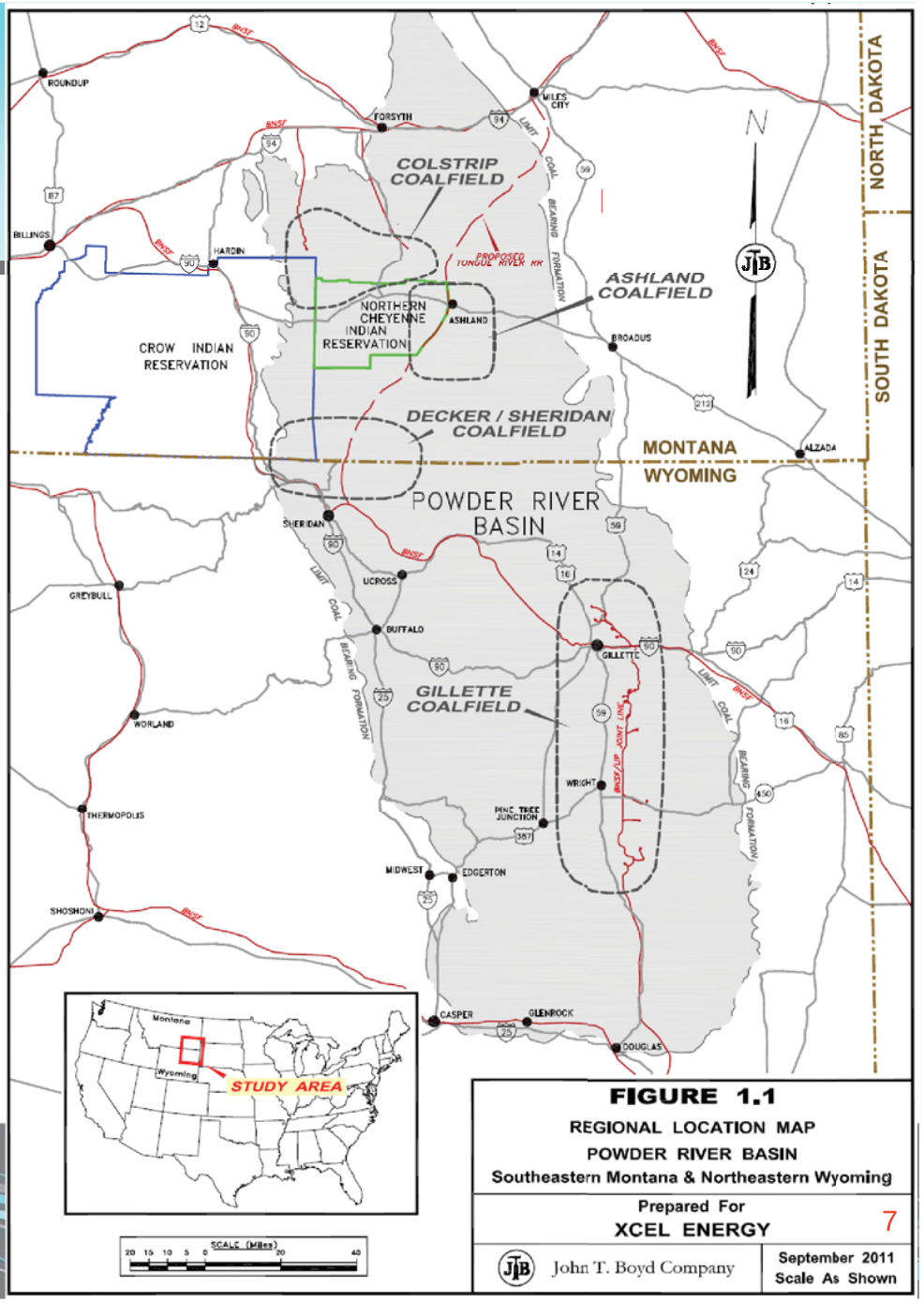
- Coal suppliers are Peabody Energy (North Antelope Rochelle), Cloud Peak Energy (Antelope) and Arch Coal (Black Thunder)
- Coal contracts are fixed price, term and quantity
- Coal supply agreements expire concurrently with the TUCO agreements

TUCO Transportation Contract Information

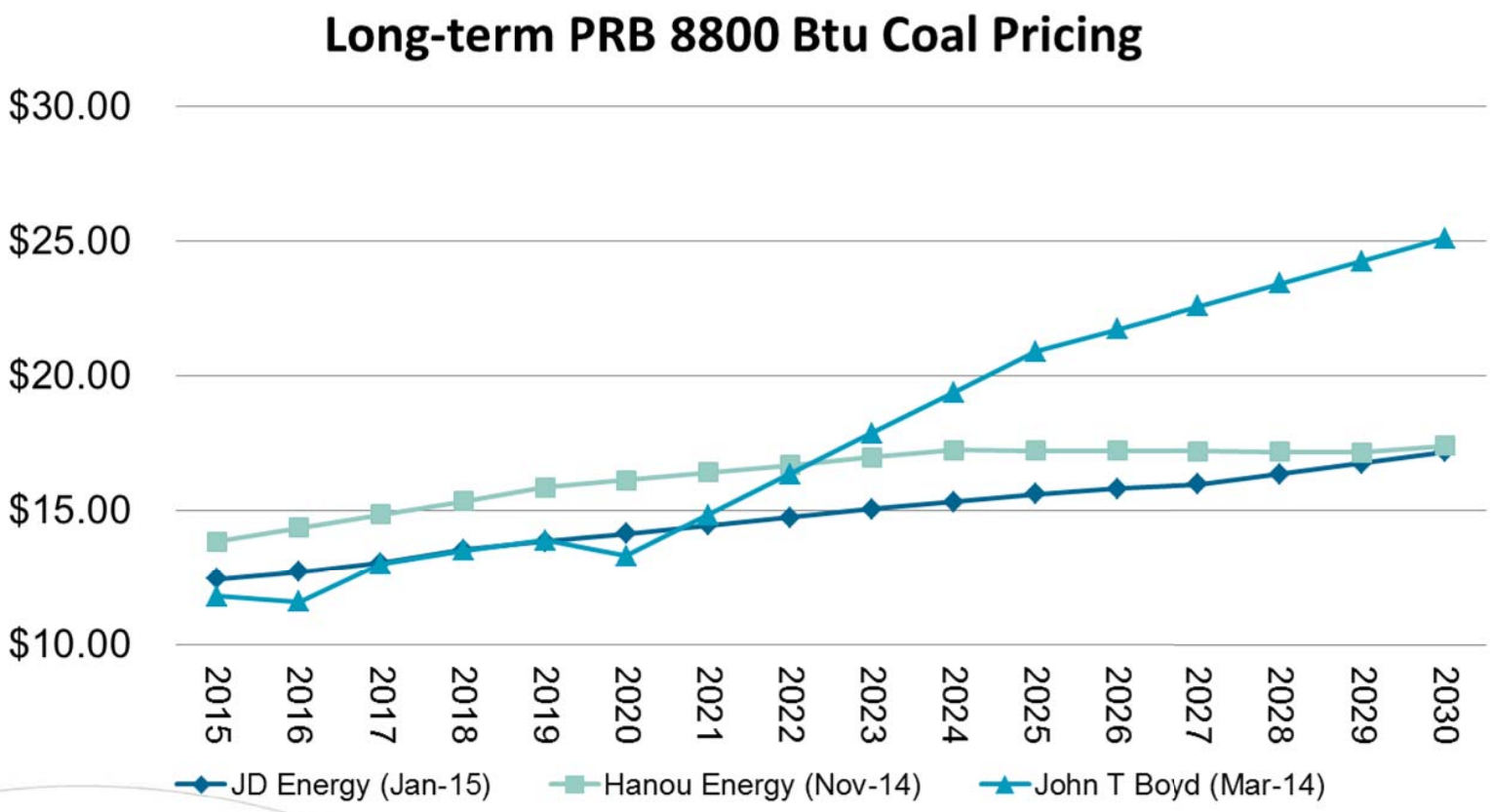
- Transportation
  - Tolk and Harrington served by BNSF Railway
  - The Harrington rail agreement expires in Dec 2016
  - The Tolk rail agreement expires in Dec 2017
  - Current rail contracts include Mileage Based Fuel Surcharges
- Railcars
  - Railcars are provided by long-term lease held by TUCO and expire concurrently with the TUCO Coal Supply Agreements

PRB Map

- Powder River Basin
  - Roughly 300mi x 100 mi
  - USGS
    - 140b tons of resources in areas of most interest
    - 77b tons in Gillette Coalfield alone



Long Term PRB Coal Market Trends



Long-Term Forecasting Methodology for Resource Planning Purposes

- Coal
  - Coal price forecasts result from review and consideration of multiple expert sources including but not limited to JD Energy, John T Boyd and Hanou Energy
  - Beyond the term of provided long-term forecasts, an escalation factor is applied to the coal price for the remaining term
- Transportation
  - Each plant is individually analyzed and a plant-specific delivered price forecast is derived using the forecasted coal prices
  - Known contracted transportation costs are used and upon contract reopeners or extensions are adjusted to reflect known transportation market conditions and experience with rail rates in the company's other regions

SPS Coal and Transportation Risks

- The most significant risk is the current regulatory environment and the uncertainty about rules and regulations affecting coal generation
- PRB demand and pricing has the potential to be affected by CSAPR and other environmental rules and legislation
- Rail pricing could be higher with new contracts to be in place starting in 2017 and 2018


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Load Management and Energy Efficiency

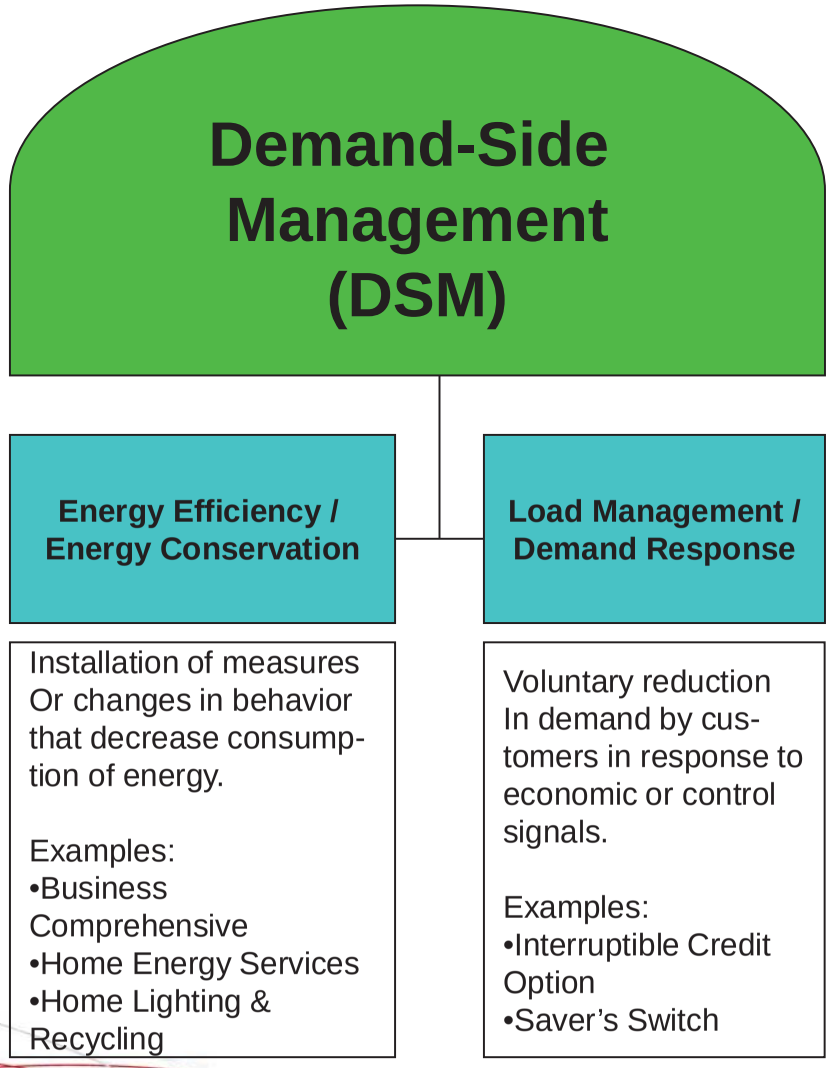
Southwestern Public Service
New Mexico
Presented by: Shawn White

Overview

- Historical & Forecasted Performance
- 2014 & 2015 Programs*
  - Load Management Programs
  - Energy Efficiency Programs
- 2014 Program Performance

* Programs approved on June 25, 2014 in Case No. 13-00286-UT

Demand-Side Management (DSM)



Historical / Forecasted Performance

SPS Achieved/Forecasted Savings Achievement				
Year	Net Gen. GWh Achievement/Forecasted	Net Customer GWh Achievement/Forecasted	% of 2005 Retail Sales*	Demand Savings - MW (Generator - EE Only)
2008	3.767	3.355	0.089%	0.256
2009	15.758	14.136	0.466%	2.682
2010	26.019	23.231	1.086%	6.403
2011	39.284	35.642	2.036%	6.439
2012	37.123	33.336	2.925%	9.524
2013	41.916	37.674	3.929%	10.405
2014	32.162	29.621	4.719%	8.181
2015	33.186	30.564	5.463%	8.441
2016	28.926	26.640	6.155%	7.357
2017	28.926	26.640	6.865%	7.357
2018	28.926	26.640	7.576%	7.357
2019	28.926	26.640	7.799%	7.357
2020	28.926	26.640	8.000%	7.357

**2005 retail sales were 3,750.469 GWh*

Load Management Programs

	Load Management				
2014 & 2015 Filed Forecast	Annual Forecasted Electric Participants	Annual Forecasted Electric Budget	Annual Forecasted Net Generator kW	Annual Forecasted Net Generator kWh	Annual Forecasted Utility Cost Test Ratio
Residential Saver's Switch	945	$432,268	809	24,490	2.83
Saver's Switch for Business	82	$129,604	87	560	1.00
Interruptible Credit Option	2	$29,970	881	7,584	9.92
Total	**1,029**	**$591,842**	**1,777**	**32,634**	**13.75**

Energy Efficiency Programs

2014/15 Residential & Business Programs

	Residential & Business Programs				
2014 & 2015 Filed Forecast	Electric Participants	Electric Budget	Net Generator kW	Net Generator kWh	Utility Cost Test Ratio
Residential					
Energy Feedback Pilot	13,565	$218,114	1,093	4,160,198	1.64
Evaporative Cooling Rebates	385	$252,592	398	196,648	3.10
Home Energy Services	1,753	$1,696,392	459	2,748,524	1.34
Home Lighting & Recyling	79,000	$1,385,351	1,353	9,252,844	2.17
Refrigerator Recycling	650	$133,648	64	574,529	1.37
School Education Kits	2,500	$116,751	28	889,705	2.94
Residential Segment Total	**97,853**	**$3,802,848**	**3,395**	**17,822,448**	**1.93**
Business Comprehensive	**444**	**$2,866,942**	**2,366**	**15,622,290**	**4.18**

2014 Program Year Performance – Residential, Business & LM Programs*

	Residential, Business & LM Programs			
2014	Electric Participants	Electric Budget	Net Generator kW	Net Generator kWh
Residential				
Energy Feedback Pilot	12,038	$190,221	1,093	3,345,344
Evaporative Cooling Rebates	132	$114,381	289	334,353
Home Energy Services	1,603	$1,389,227	750	3,600,000
Home Lighting & Recyling	137,479	$1,494,445	2,258	14,500,000
Refrigerator Recycling	515	$110,883	43	401,216
School Education Kits	2,654	$121,833	26	791,200
Residential Segment Total	**154,421**	**$3,420,990**	**4,459**	**22,972,113**
Business Comprehensive	**373**	**$3,189,751**	**1,222**	**9,165,952**

* Savings are Claimed Savings. M&V Verification process expected to be complete by May 1, 2015
** Excludes costs associated with administrative line items

Timelines for 2014 & 2016 Plans

- 2014 Plan Filed August 28, 2013
  - Budget $7,883,614
  - Forecasted Portfolio Savings of:
    - 33.5 GWh
    - 7.5 MW
- 2016 Plan to be filed no later than May 1, 2015
- 2016 Plan Approval Expected Q4 2015

Contact Information

- **Shawn White: (612) 330-6096, shawn.m.white@xcelenergy.com**


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Southwestern Public Service Company

Sales and Load Forecasting

New Mexico Resource Plan Public Advisory Meeting

January 15, 2015

Agenda

- Energy and peak demand forecasting process
- Economic and demographic assumptions
- Weather assumptions
- Energy and peak demand forecast results
- SE New Mexico oil development
- Demand-side management impacts
- Forecast scenarios

Forecasting Process

- 30-year forecasts of monthly customers, sales and peak demand are developed using primarily regression analysis
- Retail sales are forecast by major rate class and by state
- Retail peak demand is forecast at the aggregated company level
- Wholesale sales and peak demand are forecast by individual customer

Regression Analysis

- Use statistical relationships between monthly sales or demand and explanatory variables such as economics, weather, customers, and price of electricity. Once a statistical relationship is established from historical data, the relationship is applied to the forecast of the explanatory variables to derive a sales or demand forecast. This process is referred to as regression analysis.
  - For example: Residential sales = *f* (number of customers, weather, household income)
- Strengths: industry standard, robust, test results, defines relationships, adaptable/flexible
- Weaknesses: historical relationships can change, limited by available data, extremes can create challenges

Other Methodologies

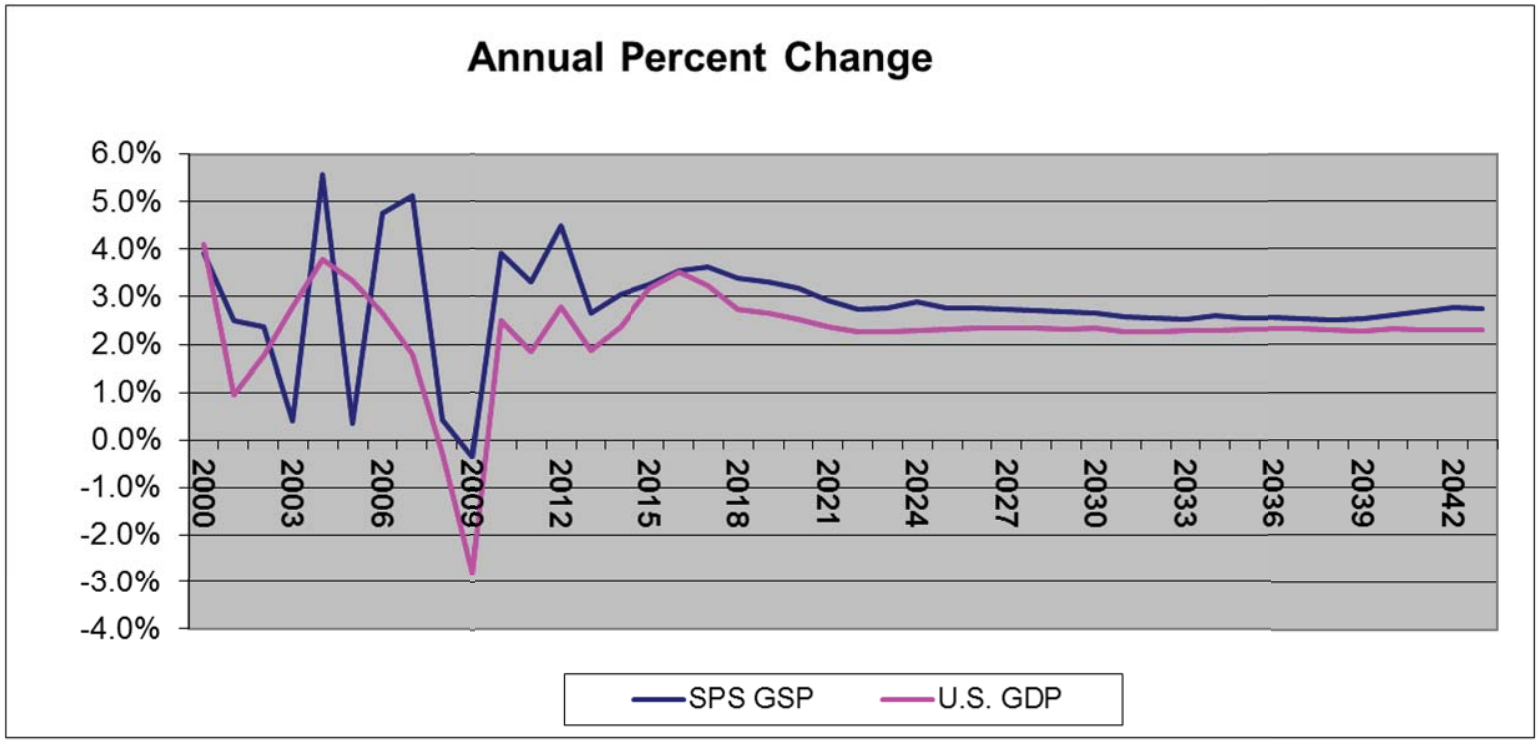
- Load factor analysis
- Historical trends
- Contractual requirements
- Exogenous adjustments

Economic and Demographic Assumptions

- Economic and demographic data obtained from IHS Global Insight, Inc. (both historical and forecast) for U.S., state, metropolitan areas and counties. County level data aggregated to service territory.

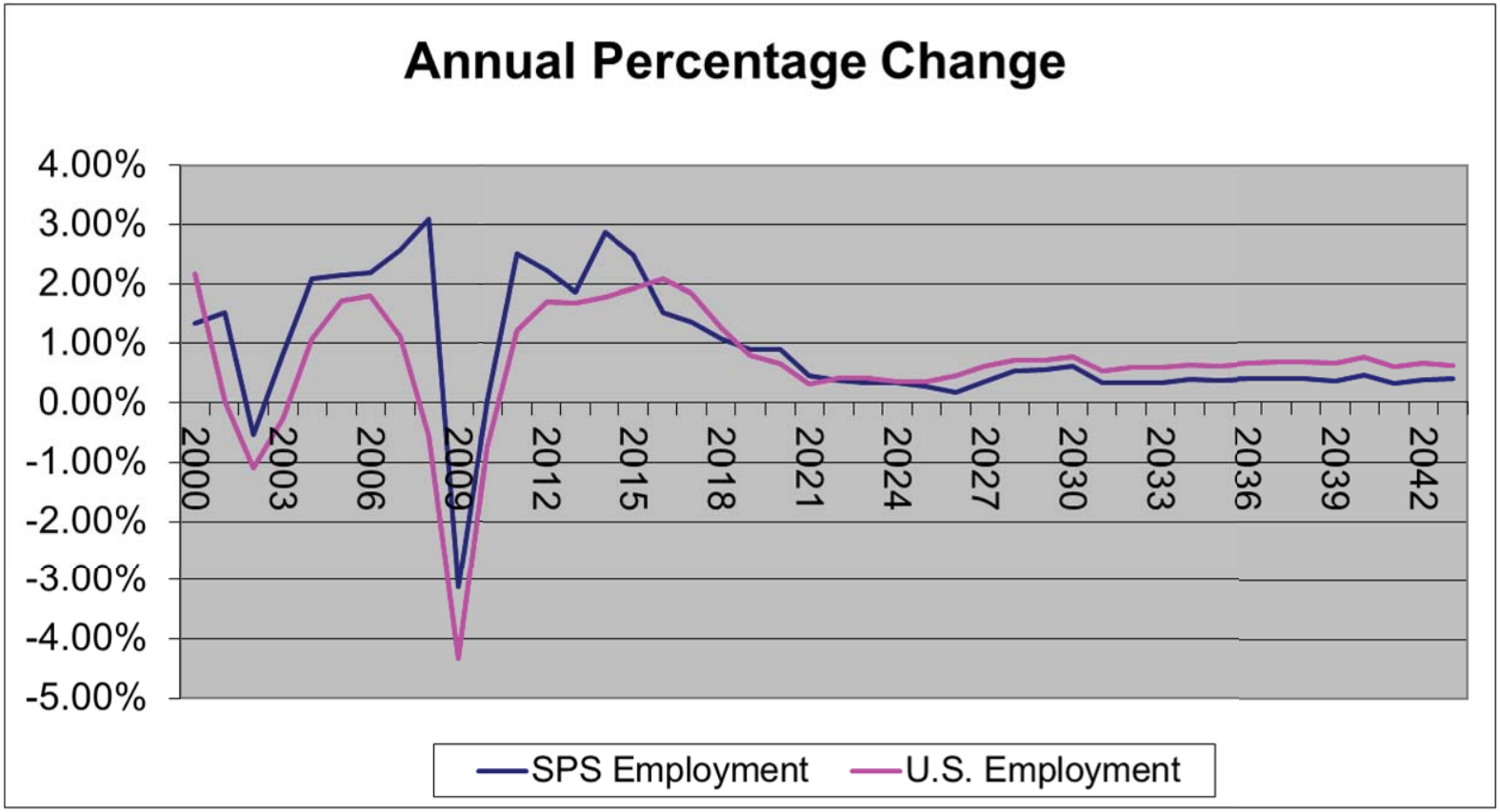
- Economic and demographic variables used in modeling include: employment, households, personal income, Gross Domestic Product (GDP), Gross State Product (GSP), population, and oil prices.

U.S. GDP and SPS GSP Growth

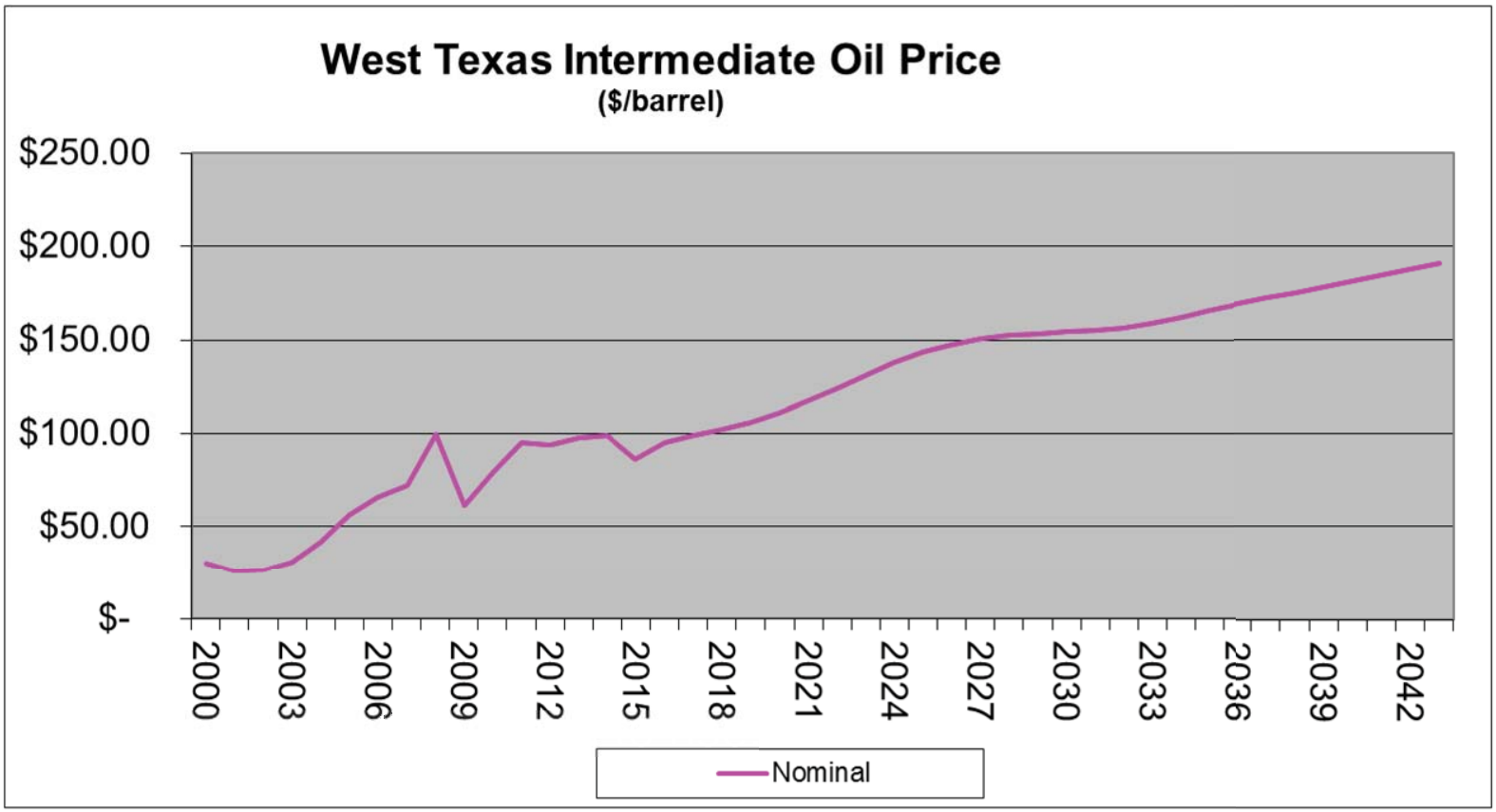


The energy sector is a boom for the SPS service territory economy.

Job Growth


Annual Percentage Change
4.00%
3.00%
2.00%
1.00%
0.00%
-1.00%
-2.00%
-3.00%
-4.00%
-5.00%
2000
2003
2006
2009
2012
2015
2018
2021
2024
2027
2030
2033
2036
2039
2042
SPS Employment
U.S. Employment

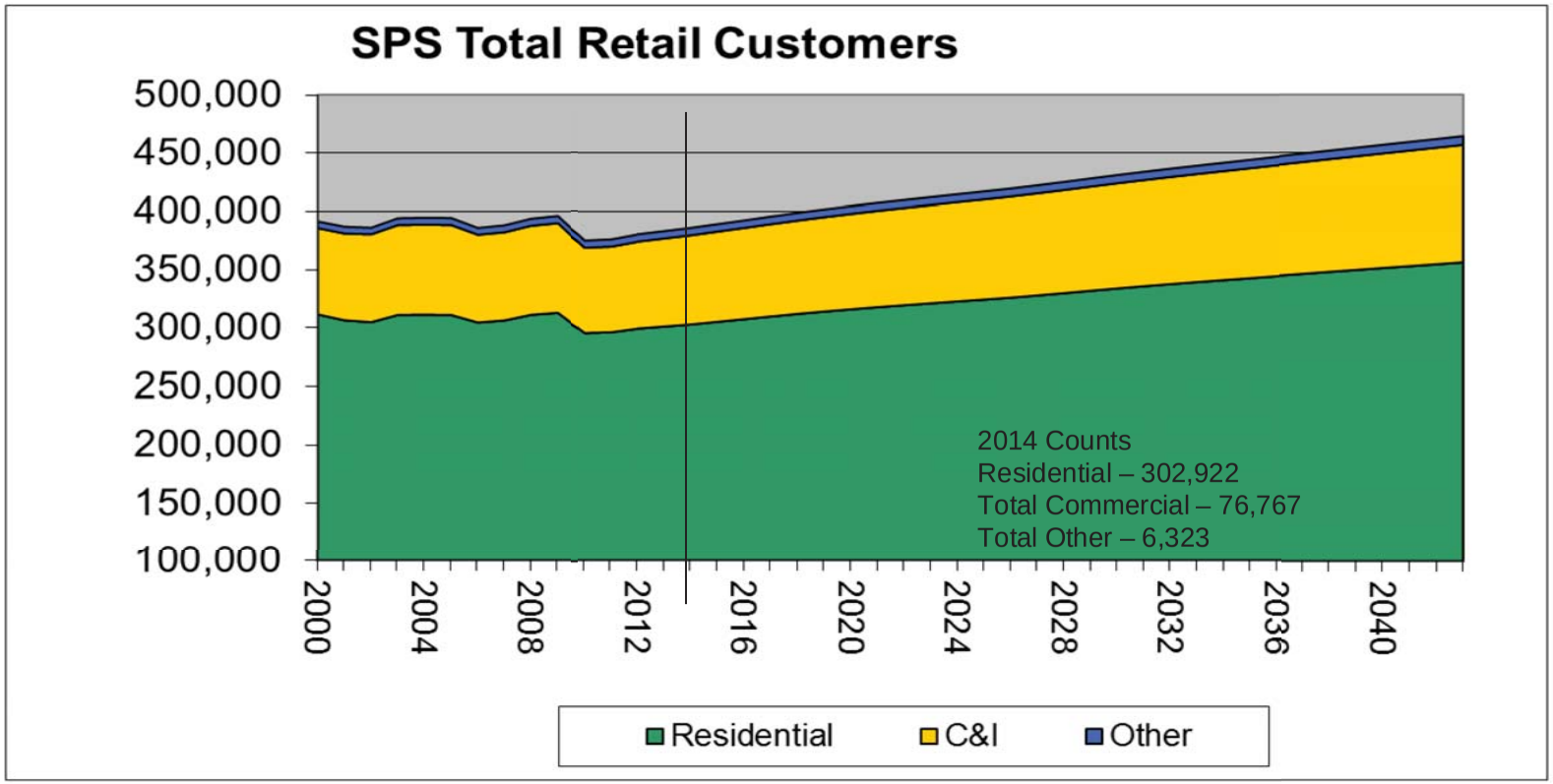
Oil Prices


West Texas Intermediate Oil Price
($/barrel)
$250.00
$200.00
$150.00
$100.00
$50.00
$-
2000
2003
2006
2009
2012
2015
2018
2021
2024
2027
2030
2033
2036
2039
2042
Nominal

Weather Assumptions

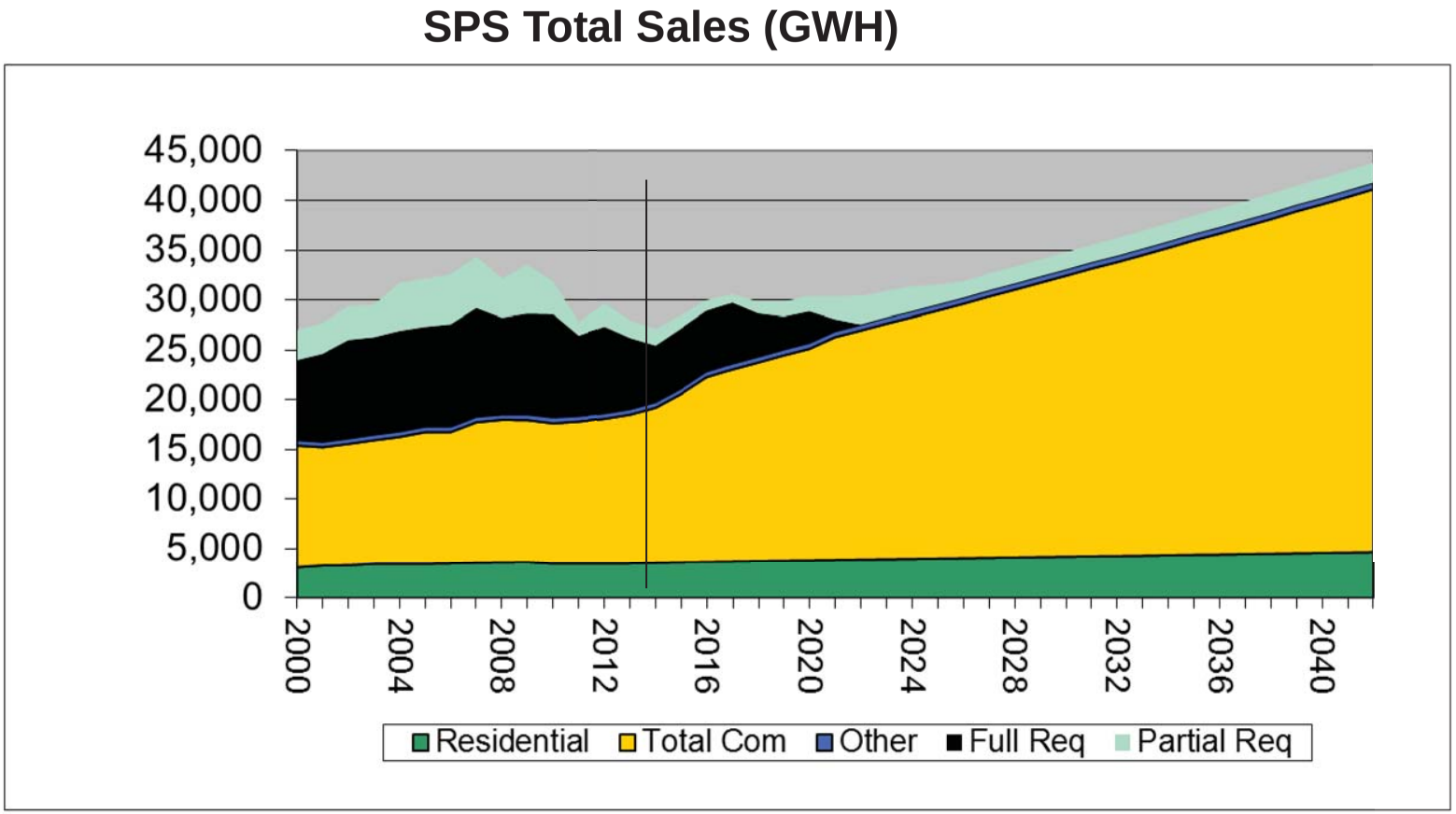
- Weather data collected from NOAA for Amarillo, Lubbock, and Roswell
- Forecast assumes normal weather defined as 30-year rolling average
- Includes temperature, Heating Degree Day (HDD), Cooling Degree Day (CDD), and precipitation
- Historical sales and peak demand are weather normalized for variance analysis

Customer Forecast



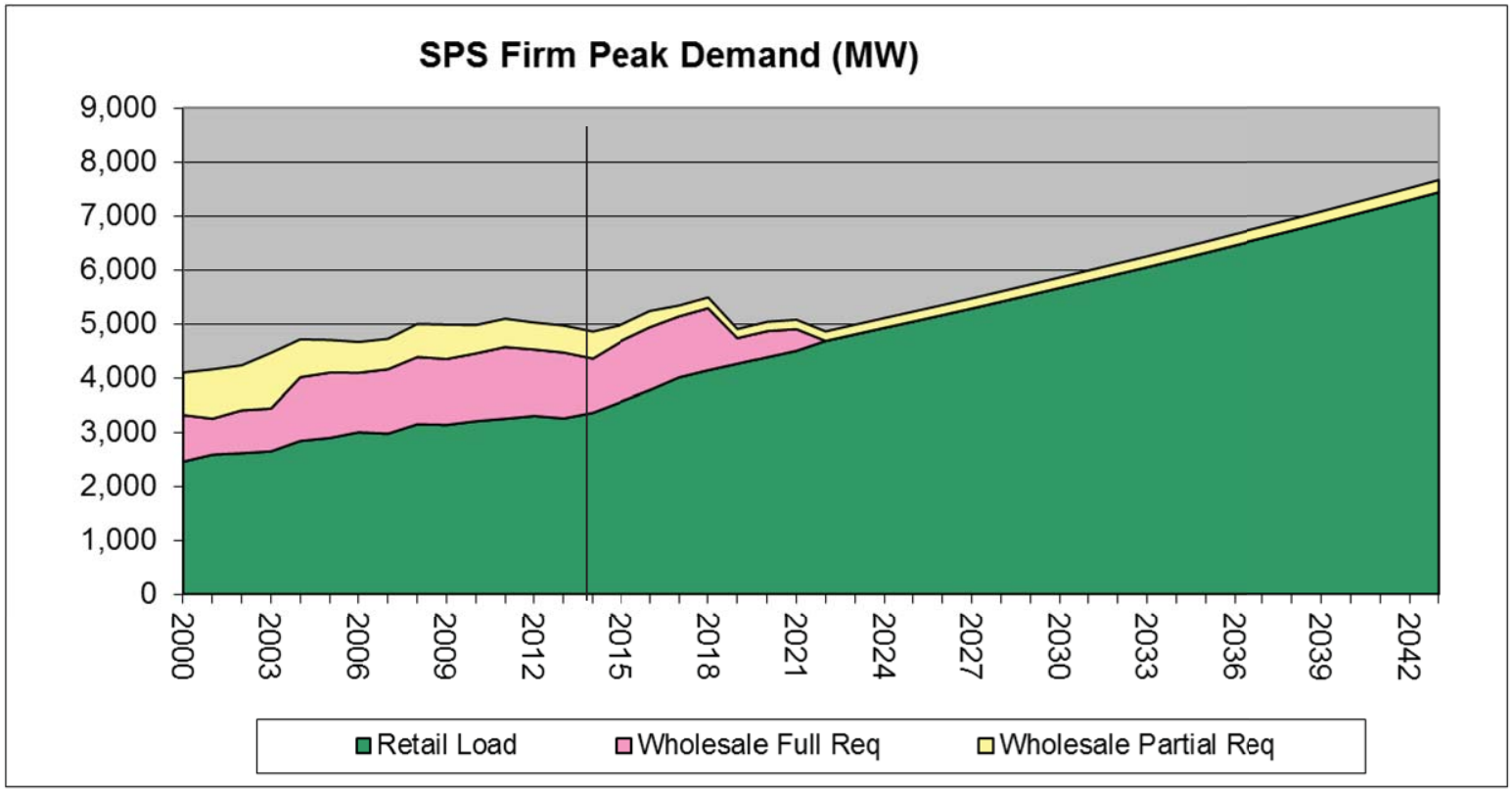
Retail Avg. Annual % Ch. 2010-2014 = 0.7% 2015–2043 = 0.6%

Sales Forecast



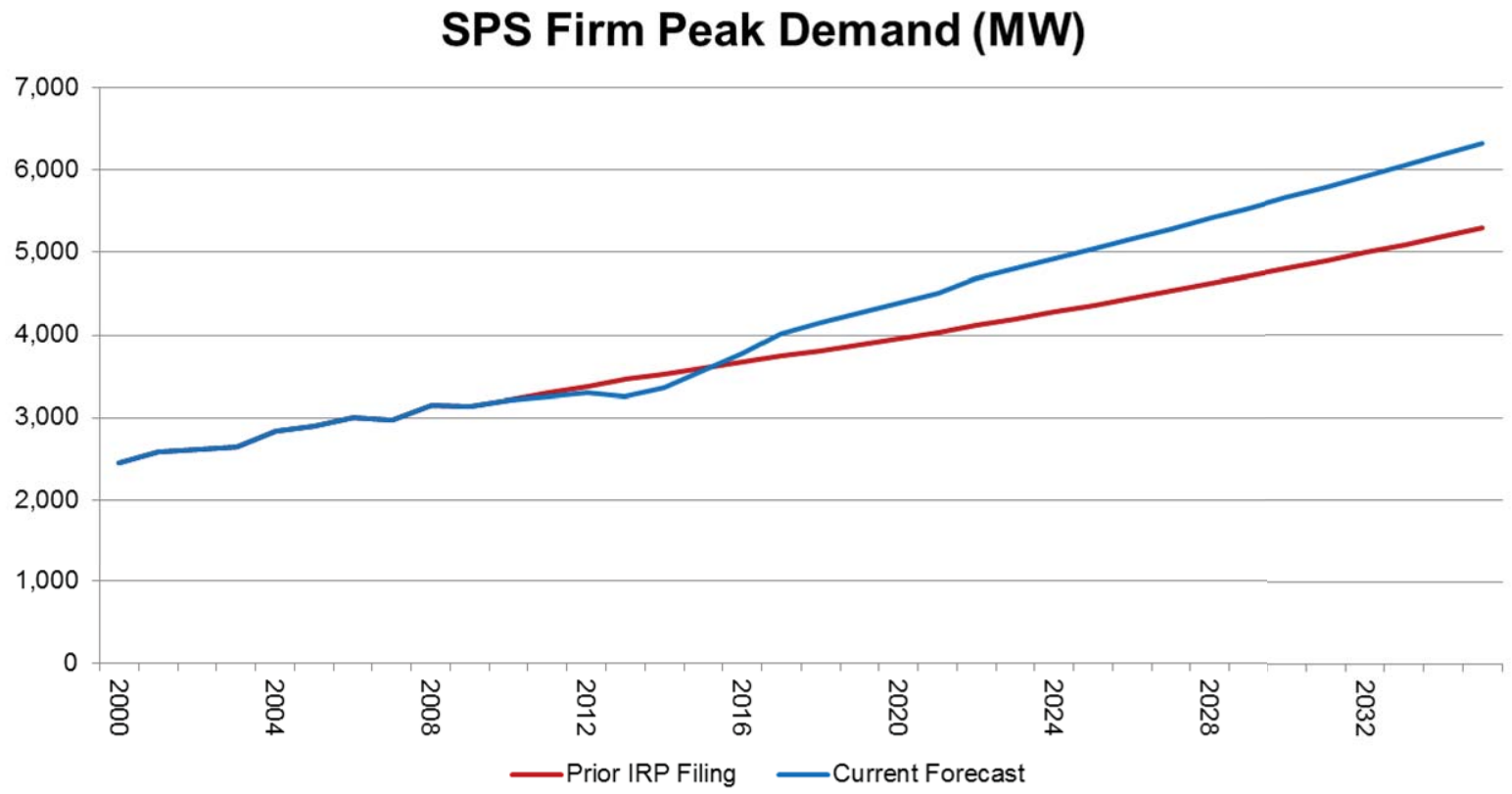
Retail Avg. Annual % Ch. 2011-2014 = 1.5% 2015–2043 = 2.7%

Peak Demand Forecast



Retail Avg. Annual % Ch. 2011-2014 = 1.1% 2015–2043 = 2.7%

Peak Forecast Comparison



Expected Load Scenarios for SE NM

Peak Load (MW)

		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Base Case	Oil/gas	33	66	99	132	165	198	231	262	295	328
	Non Oil/gas	47	127	127	127	199	199	199	199	199	199
	Total	80	193	226	259	364	397	430	461	494	527
Mid Case	Oil/gas	49	99	148	197	246	296	345	394	443	493
	Non Oil/gas	47	127	127	127	199	199	199	199	199	199
	Total	96	225	275	324	445	494	544	593	642	691
High Case	Oil/gas	66	132	198	264	330	396	462	528	594	660
	Non Oil/gas	47	127	127	127	199	199	199	199	199	199
	Total	113	259	325	391	529	595	661	727	793	859

Note: Slide from “Customer Developments and the Electric Infrastructure in Southeast NM” presentation, July 17, 2013 to the New Mexico Public Regulation Commission.

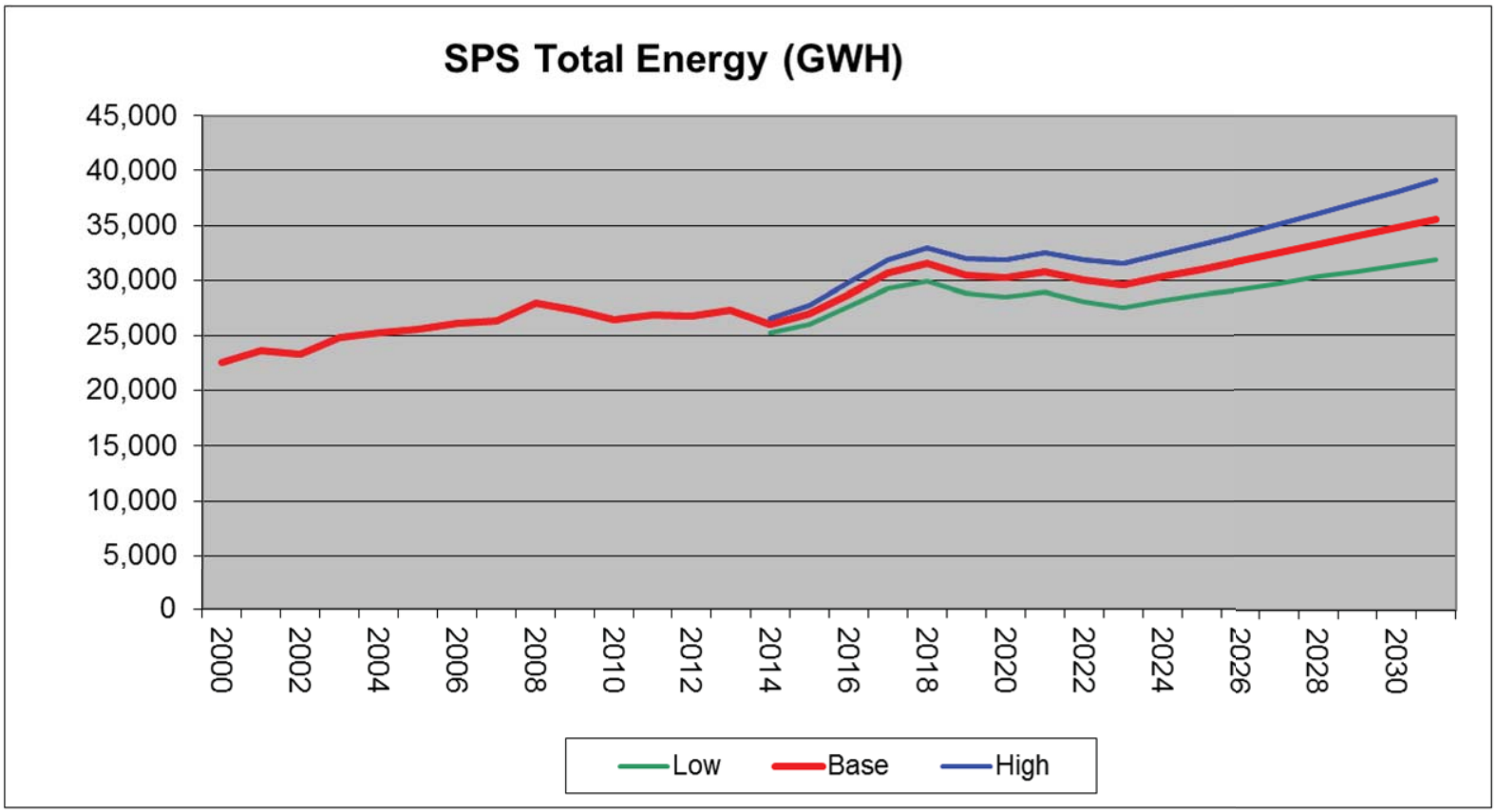
Demand-Side Management

- Sales and peak demand forecasts are adjusted to account for expected incremental DSM savings
- DSM savings are based on legislated mandates
- Residential programs: CFLs, air source heat pumps, and cooling
- C&I programs: business lighting, cooling, motor replacement, and custom projects

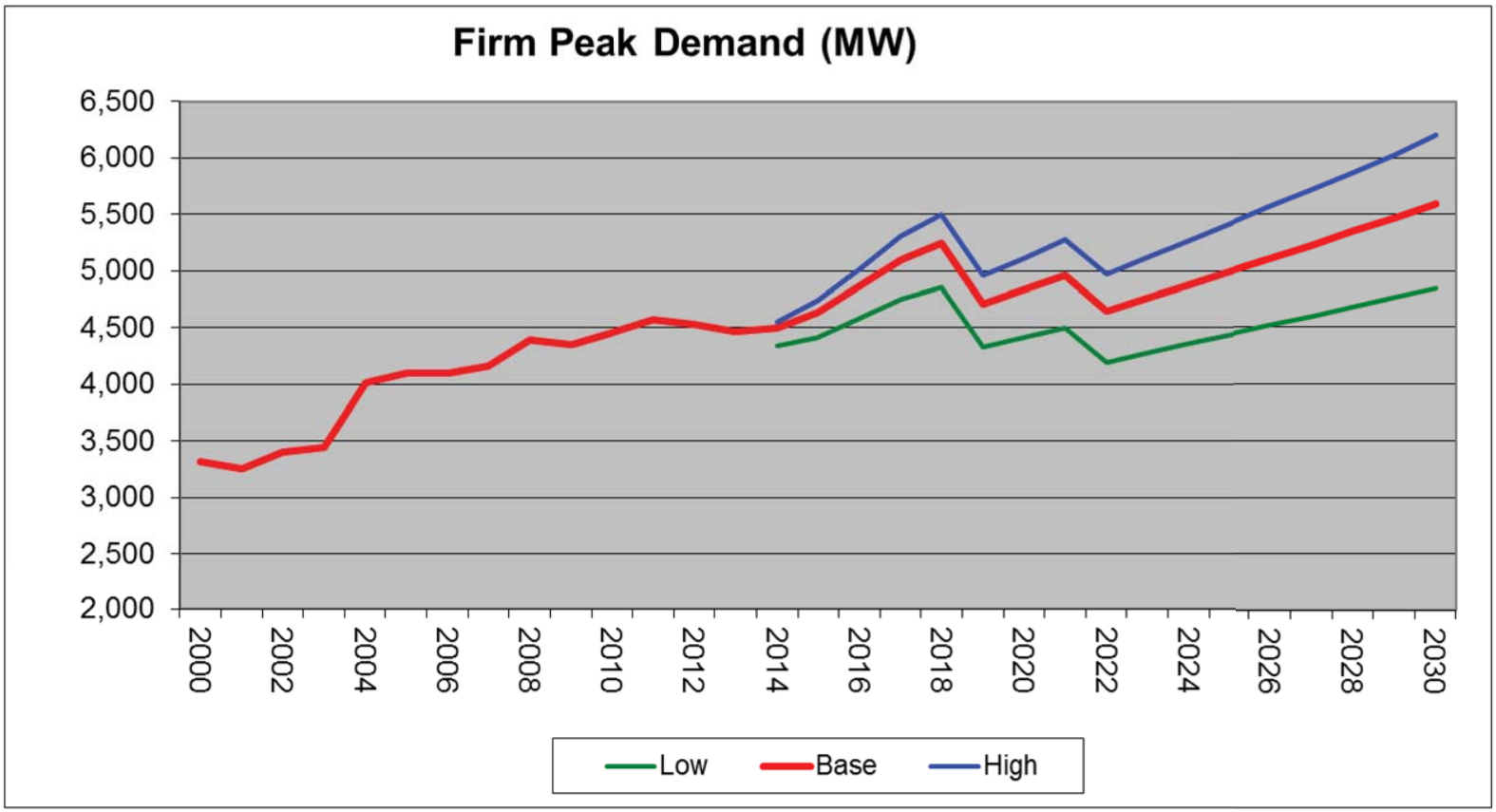
Forecast Scenarios

- Probability distributions are developed by conducting Monte Carlo simulations on the main drivers (e.g., weather and economics) of energy and peak demand forecasts
- Low-growth scenario is equivalent to the 15th percentile probability distribution
- High-growth scenario is equivalent to the 85th percentile probability distribution

Energy Forecast Scenarios



Peak Demand Forecast Scenarios




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Conclusion

IRP Information

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

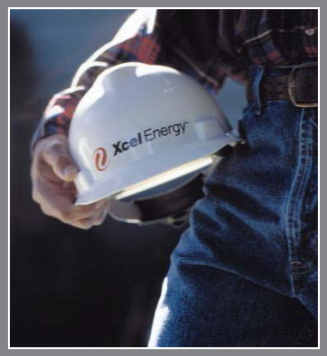
- **Brian Fleming – Xcel Energy/SPS Contact**
  - **Address - 600 S. Tyler, Suite 2900, Amarillo TX 79101**
  - **Phone - (806) 378-2460**
  - **Email – brian.fleming@xcelenergy.com**

Next Meeting

- **Date:**
  - **Thursday, March 12, 2015**
- **Time:**
  - **10:00am to 12:00pm (Mountain Time)**
- **Location:**
  - **Webinar meeting**


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SPS 2015 IRP






Bennie Weeks, Craig Berg, Brian Fleming

April 16, 2015

Agenda

- Review SPS L&R (based upon March 2015 load forecast)
- Overview of key SPS IRP issues
  - Variability of forecasted loads
  - SPP Integrated Marketplace
  - EPA Section 111(d)
    - Role of renewable energy in meeting 111(d)
  - Retirement (of aging) SPS generation fleet
  - SPS coal generation strategy (incl. acquisition of Tolk water)
- Discuss final Public IRP Meeting content & date

SPS L&R (Based on March 2015 forecast)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Existing Generation	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529
Total Purchased Power	1,333	1,333	1,333	1,333	861	861	853	853	853	633	633
Total Renewable	120	120	160	160	160	232	232	232	232	232	232
Expansion Plan:											
Total Renewable	-	10	21	25	27	46	49	57	60	64	67
Total Retirements	-	-	-	-	(112)	(202)	(202)	(314)	(426)	(522)	(789)
Contract Extension	-	-	-	-						220	220
Net Dependable Capacity	**5,982**	**5,992**	**6,043**	**6,047**	**5,465**	**5,466**	**5,461**	**5,357**	**5,248**	**5,156**	**4,892**
Full Requirements Load:											
Retail	3,547	3,722	3,861	4,048	4,169	4,287	4,411	4,538	4,657	4,779	4,897
Wholesale	1,077	1,115	1,083	1,094	465	476	486	-	-	-	-
DSM Impact	-	-	-	-	-	-	(1)	(2)	(3)	(4)	(5)
Interruptibles	(25)	(27)	(28)	(29)	(30)	(30)	(31)	(32)	(33)	(33)	(34)
Total SPS Firm Load	4,599	4,811	4,916	5,113	4,605	4,732	4,865	4,504	4,622	4,742	4,857
Firm Partial Req. Load	300	300	200	200	170	172	174	326	328	280	283
Firm Load Obligation	**4,899**	**5,111**	**5,116**	**5,313**	**4,775**	**4,904**	**5,039**	**4,831**	**4,950**	**5,022**	**5,140**
SPP Capacty Margin (%)	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**	**12.0%**
Target Capacity (MW) - 12%	668	697	698	725	651	669	687	659	675	685	701
Other Reserves = NM Coops	7	7	13	13	13	13	13	-	-	-	-
Total Required Reserves	675	704	711	738	664	682	700	659	675	685	701
Excess Capacity	1,083	882	927	733	691	562	422	526	298	134	(248)
Capacity Position: Long (Short)	**408**	**178**	**217**	**(4)**	**27**	**(120)**	**(278)**	**(133)**	**(377)**	**(551)**	**(949)**

Load Forecast Variability

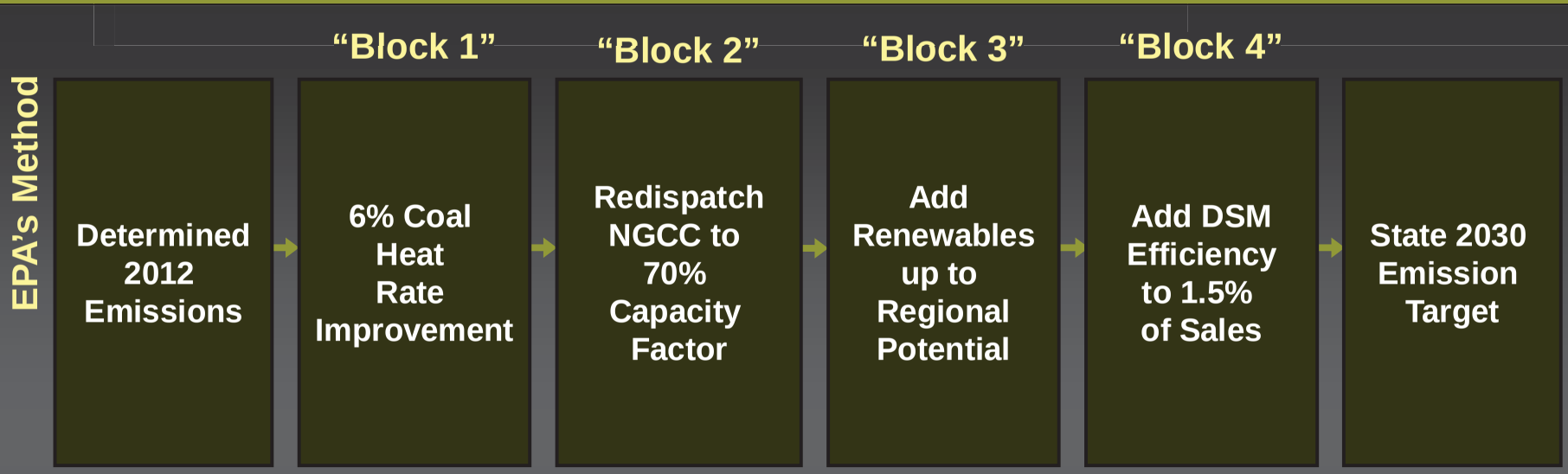
	2017	2018	2019	2020	2021	2022	2023	2024	2025
April 2010	4946	5038	4453	4547	4598	4374	4457	4494	4579
March 2011	5026	5111	4504	4588	4676	4321	4405	4440	4525
April 2012	5066	5147	4533	4617	4698	4345	4420	4445	4522
March 2013	4980	5053	4406	4485	4562	4257	4329	4353	4426
April 2014	5233	5380	4788	4915	5040	4869	4985	5054	5174
March 2015	5117	5314	4775	4904	5039	4831	4950	5022	5140
MAX	5233	5380	4788	4915	5040	4869	4985	5054	5174
MIN	4946	5038	4406	4485	4562	4257	4329	4353	4426
Forecast Uncertainty	**287**	**342**	**382**	**431**	**478**	**612**	**656**	**701**	**749**

SPP Integrated Marketplace

- Started March 2014
- Centralized unit commit & dispatch, consolidated 11 BA's into one single BA
- Day-ahead market with Transmission Congestion Rights
- Real-time Balancing Market
- Operating Reserves and Regulation are market-based

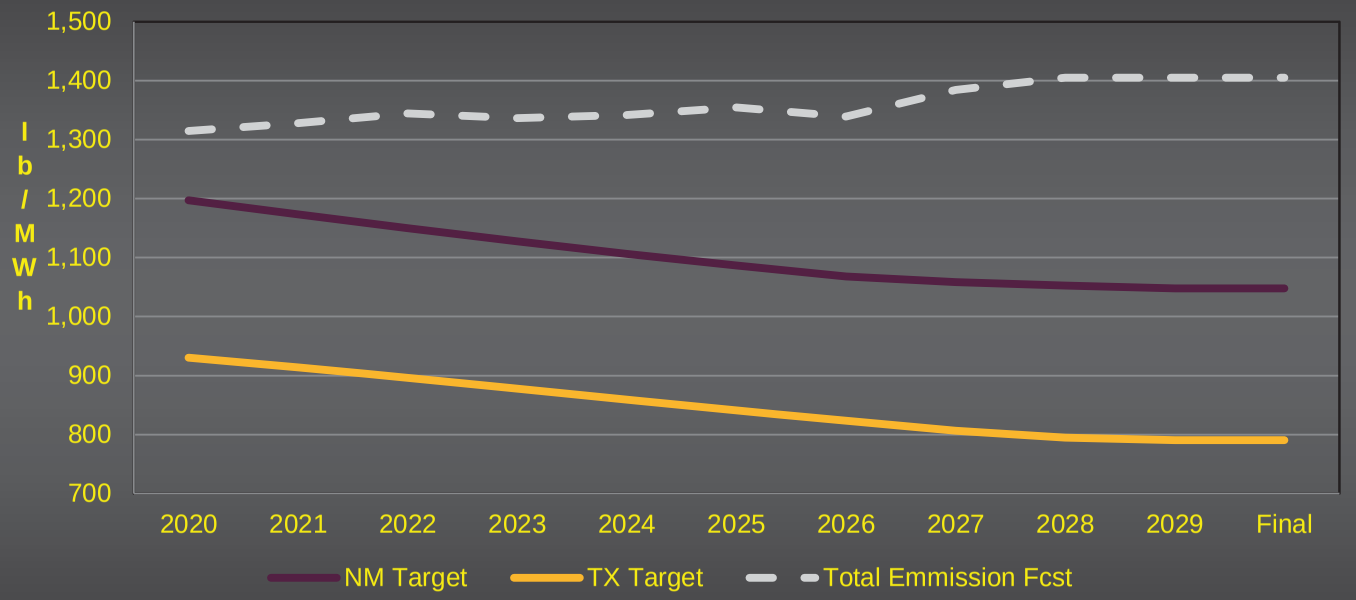
- **IM = Significant change in SPS's unit operations**

How EPA Set 111(d) State Targets



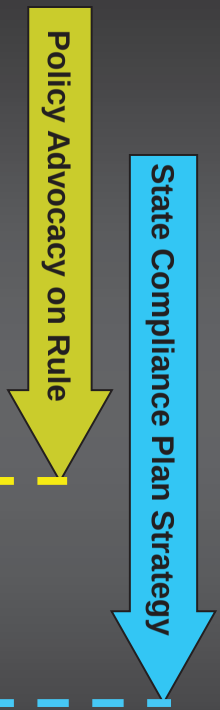
Note: SPS does not have to comply with specific blocks. Just the end target.

111d Carbon Targets vs SPS Forecast



111(d) Rule: Timeline and Process Overview

- June 2014: EPA proposes 111(d) rule
- Summer 2014: Analyze rule and develop positions
- August 2014: Present proposed changes to rule to internal executives, White House and EPA
- December 1, 2014: Comments due to EPA
- June 2015: EPA issues Final Rule
- 2014-2016: States develop compliance plans
- 2016-2017: State compliance plans due
- ~2018: EPA approves state compliance plans
- 2020: First compliance year (under proposed rule)



Role of renewable energy in meeting 111(d)

- Availability of existing PTC wind under safe-harbor provision
- Federal extension of PTC, ITC = 30%
- Incremental & existing count towards meeting EPA 111(d)
- Potentially less expensive than conventional NG resources

SPS Generation Retirements

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
PX1	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)	(41)
Cunn 1	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)	(71)
PX2		(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)	(90)
Nichols 1				(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)
Nichols 2					(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)	(112)
Plant X 3						(96)	(96)	(96)	(96)	(96)	(96)	(96)	(96)	(96)	(96)	(96)	(96)	(96)
Maddox 2							(61)	(61)	(61)	(61)	(61)	(61)	(61)	(61)	(61)	(61)	(61)	(61)
Carlsbad							(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)
Cunn 2							(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)	(195)
Plan X4									(190)	(190)	(190)	(190)	(190)	(190)	(190)	(190)	(190)	(190)
Maddox 1										(113)	(113)	(113)	(113)	(113)	(113)	(113)	(113)	(113)
Nichols 3												(247)	(247)	(247)	(247)	(247)	(247)	(247)
Jones 1													(242)	(242)	(242)	(242)	(242)	(242)
Jones 2																(243)	(243)	(243)
Quay																(16)	(16)	(16)
Harr 1																		(348)
TOTAL	(112)	(202)	(202)	(314)	(426)	(522)	(789)	(789)	(979)	(1092)	(1092)	(1339)	(1581)	(1581)	(1581)	(1840)	(1840)	(2188)

SPS Coal Generation

- Fuel savings of coal relative to natural gas
  - Are low NG prices here to stay?
- Future (potentially tighter) emission control standards
  - SCR, NSCR
  - DSI, Scrubbers
- Future water availability at Tolk Station
- Impact of meeting EPA 111(d) on existing coal generation

IRP Information

- Web Page
  - www.xcelenergy.com/Company/Rates_&_Regulations/Resource_Plans
- Brian Fleming – Xcel Energy/SPS Contact
  - Address - 600 S. Tyler, Suite 2900, Amarillo TX 79101
  - Phone - (806) 378-2460
  - Email – brian.fleming@xcelenergy.com

Next Meeting

- Date:
  - Tuesday - June 2, 2015
- Time:
  - 10:00am to 12:00pm (Central Time)
  - 9:00am to 11:00am (Mountain Time)
- Location:
  - Webinar Meeting

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2015 SPS Integrated Resource Plan ("IRP")

Public Advisory Meeting #5

Bennie Weeks, Craig Berg, & Brian Fleming

SPS Resource Planning

AGENDA

I. Welcome

II. Base Case L&R – (Loads & Resources Table)

III. Action Plan (2016-2019)

IV. IRP Executive Summary

V. Questions

Base Case L&R

Line No.		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2	Existing Generation	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529	4,529
3	Total Purchased Power	1,333	1,333	1,333	861	861	853	853	853	633	633	633	633	633	633	633	633	633	633	633	633
4	Total Renewable	120	150	150	150	226	226	226	226	226	213	202	173	144	144	144	144	144	144	144	68
6	*Expansion Plan:*																				
7	Total Renewable	2	9	15	17	33	36	40	43	47	50	67	122	201	206	212	218	224	227	229	232
8	Total Retirements	-	-	-	(112)	(202)	(202)	(314)	(426)	(522)	(728)	(789)	(979)	(1,092)	(1,092)	(1,339)	(1,581)	(1,581)	(1,581)	(1,840)	(1,840)
9	Contract Extension	-	-	-	-	-	-	-	-	220	220	220	220	220	220	220	220	220	220	-	-
10	**Net Dependable Capacity**	**5,984**	**6,021**	**6,026**	**5,444**	**5,447**	**5,442**	**5,334**	**5,225**	**5,133**	**4,917**	**4,862**	**4,698**	**4,635**	**4,640**	**4,399**	**4,163**	**4,168**	**4,172**	**3,695**	**3,622**
11	**Full Requirements Load:**																				
12	Retail	3,722	3,861	4,048	4,169	4,287	4,411	4,538	4,657	4,779	4,897	5,012	5,130	5,256	5,382	5,506	5,635	5,766	5,892	6,025	6,165
13	Wholesale	1,115	1,083	1,094	465	476	486	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	DSM Impact	-	-	-	-	-	(1)	(2)	(3)	(4)	(5)	(7)	(8)	(10)	(13)	(17)	(21)	(25)	(29)	(33)	(38)
15	Interruptibles	(27)	(28)	(29)	(30)	(30)	(31)	(32)	(33)	(33)	(34)	(34)	(33)	(32)	(31)	(31)	(26)	(26)	(25)	(24)	(23)
16	Total SPS Firm Load	4,811	4,916	5,113	4,605	4,732	4,865	4,504	4,622	4,742	4,857	4,971	5,088	5,213	5,338	5,459	5,588	5,716	5,839	5,968	6,104
17	Firm Partial Req. Load	300	200	200	170	172	174	326	328	280	283	185	187	189	192	194	196	199	201	203	206
18	**Firm Load Obligation**	**5,111**	**5,116**	**5,313**	**4,775**	**4,904**	**5,039**	**4,831**	**4,950**	**5,022**	**5,140**	**5,156**	**5,275**	**5,402**	**5,529**	**5,653**	**5,784**	**5,915**	**6,039**	**6,171**	**6,309**
19	SPP Capacity Reserve Margin	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
20	Target Capacity (MW) - 12%	697	698	725	651	669	687	659	675	685	701	703	719	737	754	771	789	807	824	842	860
21	Other Reserves = NM Coops	7	13	13	13	13	13	-	-	-	-	-	-	-	-	-	-	-	1	2	3
22	Total Required Reserves	704	711	738	664	682	700	659	675	685	701	703	719	737	754	771	789	807	825	844	863
23	Existing Excess Capacity	873	905	713	670	542	403	504	275	111	(223)	(294)	(578)	(768)	(889)	(1,254)	(1,621)	(1,746)	(1,868)	(2,476)	(2,688)
24	**Cap Position: Long (Short)**	**169**	**194**	**(25)**	**6**	**(139)**	**(297)**	**(155)**	**(400)**	**(574)**	**(924)**	**(998)**	**(1297)**	**(1504)**	**(1643)**	**(2025)**	**(2410)**	**(2553)**	**(2692)**	**(3320)**	**(3551)**

Action Plan (2016 – 2019)

- Adequate generating capacity
- Unit retirements beginning 2019
  - Continue to study feasibility and timing
- High load growth in southeast New Mexico
- Solar PPAs – 2 x 70 MW in New Mexico
- Combustion turbine need in 2020
  - Monitor potential need to move CT earlier due to uncertainties.

Executive Summary Discussion

- Changing environmental rules - EPA Proposed 111(d) Rule
- Evolving Southwest Power Pool Integrated Marketplace
- Shifting customer focus seeking renewable resource choice and input
- Advancing renewable technologies
- The aging generation fleet
- High variability in forecasted SPS loads
- SPS Plan – Business as usual until more certainty in next 12-18 months


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