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# Preliminary PVRR Analysis Financial Load Forecast including \$400/kW network upgrades

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	<b>4</b>	Financial Forecast - Base Gas - \$400/kW	ast - Base G	as - \$400/kW					
		Action	Action Period	Decisio	Decision Period		Planning Period	в Ре	riod
	Description	Delta	PVRR	Delta	PVRR		Delta		PVRR
Scenario 1	2025 Retirement	\$ 148	\$ 3,252	2 \$ 123 \$		6,819	\$ 62	\$	10,629
Scenario 2	2032 Retirement	- \$	\$ 3,104	- \$ t	\$ 6,697	16	- \$	\$	10,567
Scenario 3	2023 Retirement	\$ 85	\$ 3,189	9 \$ 49	\$ 6,7	9,746	(7)	\$	10,560
Scenario 4	Staggered Retirement	\$ 47	\$ 3,151	100	\$ 6,7	\$   161'9	\$ 46	<b>46</b> \$	10,613
Scenario 5	Staggered Retirement	\$ 45 \$	\$ 3,149	29 \$ 67	\$ 6,7	5,764 \$	(6)	\$	10,558
Scenario 6	Scenario 6 Tolk/Har 2023 Retirement	\$ 250	\$ 3,354 \$	\$ 002 \$ t		\$   166'1	\$ 798	\$	11,365

Scenario 2 (continued operations) vs Scenario 3 (2023 retirement) Comparison

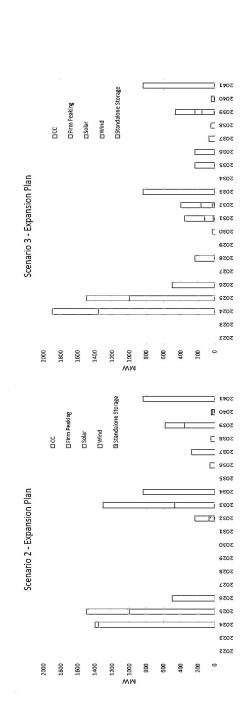
- ➤ Over the 4-year action period Scenario 3 is \$85M higher cost than Scenario 2 (PVRR)
- Between 2022 and EOY 2032, Scenario 3 is \$49M higher cost than Scenario 2 (PVRR)
- Over the 20-year planning period, Scenario 3 is \$7M lower cost than Scenario 2 (PVRR) A

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Scenario 2: Seasonal operations, 2032 retirement Scenario 3: 2023 retirement

Expansion Plan Sample Expansion Plan using Financial Load Forecast



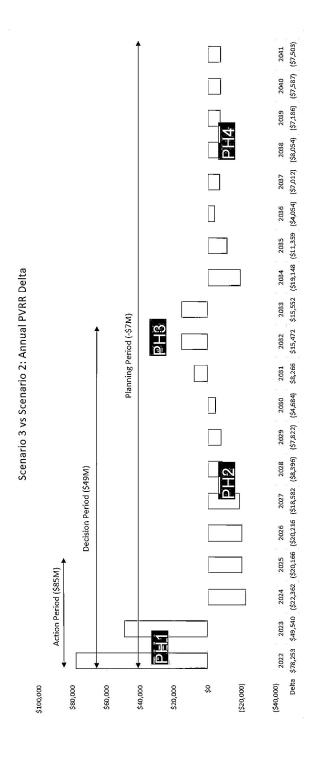
Lower load forecast provides similar results (Large-scale renewable build out, before firm generation resources are required

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Scenario 2: Seasonal operations, 2032 retirement Scenario 3: 2023 retirement

## PVRR Analysis Scenario 3 vs Scenario 2 – PVRR Annual Comparison

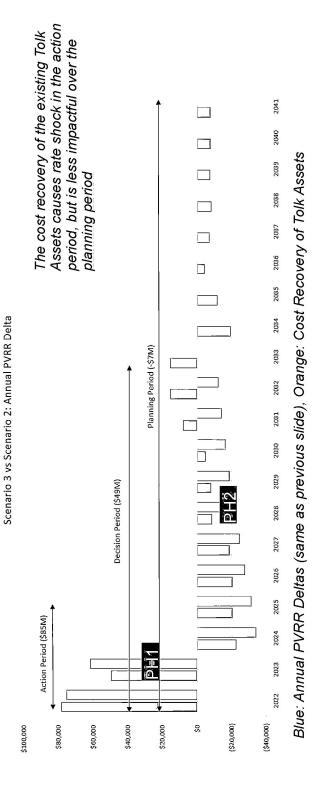


Ph1: Cost recovery of Tolk assets (Sc3), Ph2: Cost recovery of Tolk assets (Sc2) / Similar expansion plans capable of fulfilling capacity need, Ph3. Deferred generation (Sc2), Ph4: Additional generation (Sc2)

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PVRR Analysis - Cost Recovery of Tolk Asset Scenario 3 vs Scenario 2



Ph1: Cost recovery of Tolk assets (Sc3), Ph2: Continued cost recovery of Tolk assets (Sc2)

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Annual PVRR delta excluding cost recovery of existing Tolk Assets (plus ongoing capital expenditure) Scenario 3 vs Scenario 2: PVRR Operating Costs PH3 OpCosts \$2,725 (\$12,118 \$11,397 \$11,010 \$7,308 PHZ \$10,000 \$30,000 \$0 (\$30,000) \$20,000 (\$10,000) (\$20,000)

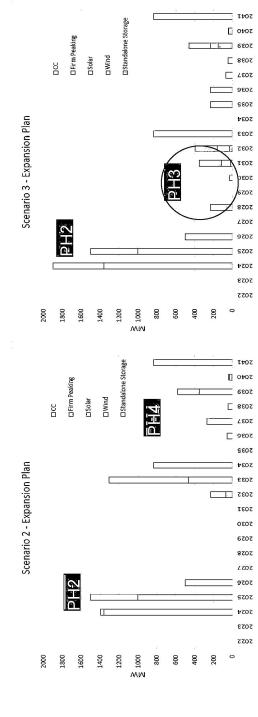
PVRR Analysis - Operating Costs

Scenario 3 vs Scenario 2

Ph2: Similar expansion plans capable of fulfilling capacity need, Ph3: Deferred generation (Sc2), Ph4: Additional generation (Sc2)

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PVRR Analysis - Operating Costs

Scenario 3 vs Scenario 2

Ph2: Similar expansion plans capable of fulfilling capacity need, Ph3: Deferred generation (Sc2), Ph4: Additional generation (Sc2)

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# The acquisition of economic energy is not dependent on the retirement of the Tolk units

Final Review

Conclusion 1

- Regardless of the operation and retirement dates of the Tolk units, the Tolk Analysis indicates there could be opportunities for SPS to acquire economic energy
- Large uncertainty with key drivers, such as the potential extension of renewable tax credits and the cost of interconnecting new generation

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### Final Review Conclusion 2

- Retirement of the Tolk Units creates an immediate resource need
- The acquisition of potentially economic renewable energy could theoretically fulfill a short-term capacity shortage
- However, load growth and/or plant retirements will require SPS to add firm resources and/or battery storage to meet load and capacity obligations
- The capacity cost of the Tolk units is relatively low cost when compared to the acquiring new generating resources (CT's, CC's or energy storage)
- The Tolk Analysis continues to support seasonal operations of the Tolk Units and a 2032 retirement
- The Tolk Analysis does not capture all benefits of the Tolk Units, as demonstrated during Winter Storm Uri

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### Scope of Work Independent Evaluator

### **Executive Summary**

Southwestern Public Service Company ("SPS") is planning to issue an all-source Request for Information ("RFI") to obtain current pricing, technical characteristics, and other relevant information for potential generating resources. The results from the RFI will be incorporated into an evaluation of the potential abandonment and replacement of SPS's Tolk Station, herein known as "the Tolk Analysis," which will include an analysis in which all coal-burning units are retired or replaced before 2030 as set forth in the recent New Mexico Public Regulation Commission final order adopting the stipulation in SPS's most recent rate case. SPS is seeking the services of an Independent Evaluator ("IE") to provide an independent review of the RFI process and Tolk Analysis to evaluate the fairness of SPS's bid solicitation and bid evaluation processes. Upon completion of the RFI solicitation and SPS's development of the Tolk Analysis, the IE will report its findings to the New Mexico Public Regulation Commission ("NMPRC") and SPS.

The primary objectives of the IE's independent review will be to:

- Assess whether that the RFI parameters are consistent with the objectives of the Tolk Analysis
- Assess whether the RFI documents including Standard Bidders Forms provide sufficient and consistent information for respondents to the RFI ("Bidders") to prepare proposals
- Identify any undue bias in the criteria used or as applied to evaluate bids
- Assess whether a consistent and fair methodology was used to screen and rank bids
- Assess whether the bids were fairly incorporated into the Tolk Analysis
- Provide an assessment of the Tolk Analysis including any deficiencies in the parameters or results of the analysis

### Background

Tolk Station consists of two coal-powered steam turbine units, located in Lamb County, Texas. Each unit has a net capacity of approximately 540 MW, for a total net capacity of approximately 1,080 MW.

Tolk Station relies exclusively on groundwater from the Ogallala Aquifer for generation cooling, and the Ogallala Aquifer is in an irreversible decline. To conserve water, and the life of Tolk Station, SPS has implemented a plan to reduce the number of hours the Tolk units operate annually.

SPS is required to analyze a range of operating parameters and retirement dates for Tolk Station. The analysis will incorporate the pricing and technical characteristics obtained in the RFI process. The results of the analysis will be included in SPS's next Integrated Resource Plan ("IRP"), to be filed in July 2021.

<sup>&</sup>lt;sup>1</sup> Uncontested Comprehensive Stipulation ("Stipulation") filed at the New Mexico Public Regulation Commission on January 13, 2020 and approved by the New Mexico Public Regulation Commission ("NMPRC") in Case No. 19-00170-UT.

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As part of the Tolk Analysis, SPS will use the information obtained from this RFI to include an evaluation of the potential retirement and replacement of all of SPS's coal burning generation.

### **Timeline**

SPS is required to complete the Tolk Analysis by June 2021, one month before the IRP. To meet the filing date, SPS anticipates issuing the RFI in the Summer of 2020. Bidders will then be given 60 days to submit their proposals. The evaluation process and Tolk Analysis is expected to take approximately six months from receipt of bids.

### **IE Responsibilities**

To achieve the primary objectives, the IE will be provided immediate and continuing access to all documents and data reviewed, used, or produced by SPS in the preparation of the Tolk Analysis and in its bid solicitation, evaluation, and selection processes. SPS will provide to the IE bid evaluation results and modeling runs so that the IE can verify these results and can investigate options that SPS did not consider.

To conduct a thorough, independent, and unbiased review of the RFI process and Tolk Analysis, the IE will perform the following activities:

### Meetings

The IE will attend an initial kickoff meeting prior to issuance of the RFI either via teleconference or in person at SPS's offices in Amarillo, Texas. The kickoff meeting will provide an opportunity to discuss the RFI parameters, specific items which may be required for the Tolk Analysis, and SPS's thoughts, goals and objectives regarding the RFI and Tolk Analysis. SPS will establish and explain confidentiality protection procedures regarding bid information and evaluation. Additional details regarding project administration and public communications will be discussed at the kickoff meeting as well.

The IE will conduct regular project status calls with SPS to discuss the project and identify and mitigate any issues that arise.

The IE will attend via teleconference at all future public technical conferences and other meetings as necessary to achieve the primary objectives.

### Review and Finalize RFI Documents and Evaluation Process

The IE will critically review the draft RFI and any associated documents and notification communications with the objective of determining whether there are any undue biases presented to any category of potential Bidders as a result of the structure of the RFI requirements and make recommendations as needed. Additionally, the IE will review and evaluate the draft proposal submittal requirements and standard bidder forms and make recommendations as needed.

The IE understands that some recommendations may not be agreeable to SPS or possible for SPS to implement. If SPS chooses not to follow the IE's recommendations, SPS will provide a brief, written response to the IE explaining the choices made. SPS may or may not decide to follow the recommendations and guidance provided by the IE and these decisions will be documented as part of the Independent Evaluator Report ("IE Report").

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### **Review Bidder Communications**

Upon issuance of the RFI, the SPS staff directly involved with the RFI will adhere to strict communication protocols with Bidders. The IE will examine any communications between SPS and Bidders during the RFI review period, which will begin with the issuance of the RFI and end with filing of SPS's 2021 integrated resource plan in July 2021. The purpose of this examination will be to determine whether Bidders were treated fairly during the submittal and evaluation periods, and whether SPS was unduly biased toward a specific bid.

### Evaluate the SPS Economic Modeling of Bids

The IE shall conduct a thorough and unbiased review of the due diligence activities performed by SPS for each prospective bid, as well as a review of the economic modeling of each bid to confirm the modeling was accurate and consistent across all bids.

In reviewing the due diligence activities, the IE will review each bid and associated Standard Bidding Forms, followed by a review of SPS's documented non-economic evaluation of all bids.

### **Evaluation of the Tolk Analysis**

The IE shall conduct a thorough, and unbiased review of the Tolk Analysis parameters and results. The review should include, but not be limited to, consideration of potentially different retirement dates of the Tolk units, the feasibility of acquiring adequate replacement resources in the timeframe necessary, and availability of economic water in each of the scenarios modeled.

The IE will conduct a thorough review of key inputs and parameters to the Tolk Analysis including, but not limited, SPS's natural gas price forecasts and system load forecasts.

### Prepare and Provide Independent Review Report

The IE will prepare an IE report of its findings and conclusions regarding the Tolk Analysis. Initial drafts of the report are anticipated to be reviewed internally by SPS and in collaboration with the IE for quality assurance. After incorporating any necessary revisions to the report that are identified as a result of the reviews, the IE will issue the final IE report redacted as necessary to ensure protection of confidential information; confidential information referenced should be made available only under appropriate protective order procedures.

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### BACKGROUND

As previously indicated, Xcel Energy maintains a list of pre-qualified bidders. SPS reached out to the parties in June to identify any potential additional bidders that could be solicited to be added to the pre-qualified list, but, did not identify any additional prospects outside of a consultant in the San Juan replacement proceeding and E3 (which had performed a study for EPE). E3 was already a pre-qualified bidder and was included in the request for proposals (RFP). SPS did not solicit the pre-qualification of the other consultant.

On July 6<sup>th</sup>, 2020, SPS issued an RFP to pre-qualified bidders for the services of an independent evaluator. SPS held a pre-meeting with the bidders on July 8<sup>th</sup>, 2020 to provide submittal instructions and answer questions from bidders. SPS received proposals from two bidders out of four pre-qualified parties, Guidehouse and Leidos, by the July 20<sup>th</sup>, 2020 deadline. The other two bidders were either unable to commit the resources necessary in the timeframe required or failed to submit a proposal.

On July 23<sup>rd</sup>, 2020, SPS held individual meetings with each bidder. Each bidder was then provided the opportunity to revise their proposals to ensure all proposals were aligned. Each bidder has extensive experience and expertise providing the services required to oversee a fair and robust analysis. Each bidder also proposed a highly experienced evaluation team, with many decades of relevant experience. After evaluating the proposals SPS was satisfied that either bidder could successfully fulfill the role of independent evaluator based on the submitted proposals. Each proposal included comparable billable rates. There is no material cost difference between each bidder.

### RECOMMENDATION

SPS recommends proceeding with Guidehouse as the independent evaluator. It is a close decision as (1) both bidders offer a wealth of experience and expertise and (2) there is not a material difference in price. As such, SPS' recommendation is based on the overall content and quality of the submission, and specifically the follow-up discussions with each bidder. While SPS is confident Leidos could successfully fulfill the role of independent evaluator, Guidehouse's submission was marginally superior.

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### Independent Evaluator Report of the Southwestern Public Service Company's Tolk Analysis and RFI

### Submitted by:

Guidehouse Inc. 1800 Tysons Boulevard, 7th Floor McLean, VA 22102-4257 (646) 227-4895 dkoujak@guidehouse.com

Reference No.: 214834 June 30, 2021

### guidehouse.com

This deliverable was prepared by Guidehouse Inc. pursuant to a client relationship exclusively with Southwestern Public Service Company ("Client"). The work presented in this deliverable represents Guidehouse's professional judgement based on the information available at the time this report was prepared. Guidehouse disclaims any contractual or other responsibility to others based on their access to or use of the deliverable.

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Independent Evaluator Report of the Southwestern Public Service Company's Tolk Analysis and RFI

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Independent Evaluator Report of the Southwestern Public Service Company's Tolk Analysis and RFI

### 1. Background

Guidehouse Inc. was selected as the independent evaluator (IE) to oversee the Southwestern Public Service Company (SPS) Tolk Analysis pursuant to the Uncontested Comprehensive Stipulation (the Stipulation) filed at the New Mexico Public Regulation Commission on January 13, 2020, and approved by the Commission in Case No. 19-00170-UT. Under the Stipulation, SPS is required to submit a robust analysis of both:

- Abandonment of its Tolk Generating Station Units 1 and 2
- Consideration of a scenario in which all SPS's coal-burning units are retired or replaced before 2030

The Tolk Station is a 1,067 MW generating station located in Lamb County, Texas. This station provides power to customers both in Texas and New Mexico. Retirement of the Tolk Station is being driven predominantly by water resource constraints and projected depletion in the vicinity of the plant. The Tolk Station currently operates to maintain reliability by provide needed generating capacity responsive to peak load conditions in the SPS service territory. Accordingly, in retiring the Tolk station, the load carrying capacity of the unit – which is the ability to dispatch up to 1,067 MW responding to customer demand, is the primary attribute that needs to be replaced through alternative resource options.

To inform SPS of the available alternative resource options that are available to replace Tolk, a request for information (RFI) process was initiated to provide SPS with information relating to availabilities, flexibilities, and preferences from the market participants in terms of providing capacity and associated energy from all available generating resource types. This information is key in determining whether there are feasible and economic opportunities to replace Tolk and all other coal-fired power plants. Contractual options to replace Tolk and other generating stations include build-own-transfers (BOTs) and power purchase agreements (PPAs), with pricing based on information obtained from the RFI process.

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Independent Evaluator Report of the Southwestern Public Service Company's Tolk Analysis and RFI

### 2. Scope of Review

Guidehouse's role as the IE was to effectively ensure the fairness, transparency, clarity, and prudence of the process undertaken to evaluate the options to replace the Tolk Generating Station. In this report, we review and discuss:

- Whether SPS conducted an evaluation of potential retirement dates.
- Whether SPS considered available replacement resources.
- Whether SPS used fair solicitation and evaluation processes.

To facilitate this review, SPS was stipulated to work cooperatively with Guidehouse as the IE and provide us access to all documents and information leveraged by the utility in the preparation of its plan and in its bid solicitation, evaluation, and selection processes. SPS also was required to provide the bid evaluation results and modeling runs so that we could verify the results and investigate options the utility did not consider.

In the following sections of this report, we outline our review of SPS's process to evaluate the options, starting with the RFI process.

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Independent Evaluator Report of the Southwestern Public Service Company's Tolk Analysis and RFI

### 3. RFI Process

SPS released the 2020 Request for Information for Generating Resources (the RFI) on September 9, 2020. Under the RFI, SPS solicited interest from existing or proposed generating facilities within or delivered to the SPS zone. The RFI was open to generating facilities providing capacity and associated energy to SPS from all generating resource types, including energy storage, whether existing or yet-to-be constructed. Proposals were allowed to provide pricing options under the following arrangements: build-own-transfers (BOTs) and power purchase agreements (PPAs).

### 3.1 Design

The design of the RFI was relatively straightforward. SPS established basic qualifications to participate in the RFI, as follows:

- Expressions of interest should be from existing or proposed generating facilities within the SPS zone or delivered to the SPS zone from existing or proposed sites within the Southwest Power Pool (SPP) territory.
- Expressions of interest should include a proposed commercial operation date (COD) if the submission is a future resource.
- Expressions of interest should include all capacity, energy, environmental attributes such as renewable energy credits, and other generation-related services.
- For purposes of this RFI, renewable energy refers to electrical power generated by solar, wind, biomass, or other commercially viable renewable energy technologies including energy storage.
- SPS is interested in the availability of capacity and associated energy resources for possible future-owned generation, BOTs, and PPAs.
- PPA durations should be 25 and 30 years.
- Interested parties should respond to the RFI within 60 days of issuance.

To participate in the RFI, bidders were requested to submit a completed Excel template containing the information necessary for SPS to model and evaluate supply options. The template requested information on the following:

- Company proposing the resource
- Bidder contact information
- General information on the project and its location
- Contract options proposed
- Pricing
- Interconnection details and cost information
- Performance and related technical specifications

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Independent Evaluator Report of the Southwestern Public Service Company's Tolk Analysis and RFI

In the RFI, SPS noted it would evaluate the following information:

- Project type, including technical characteristics.
- Project site location for delivery within (or to) the SPS system.
- Proposed COD for resource facilities responsive to this RFI; the impact a delay in the proposed COD would have on the pricing.
- Pricing and quantity in megawatts.
- Current interconnection status (if any) and anticipated extent of need for transmission system upgrades for the proposal.
- Impact of available tax credits on proposed projects.
- Proposals must demonstrate an anticipated ability to obtain all required state/local preconstruction approvals and any associated risks to meet the COD.

From our perspective, the primary objective of an RFI process is to solicit a response from market participants that responds to a specific need to the maximum extent possible. To achieve this result, an RFI should have:

- Eligibility requirements that are not unduly restrictive
- A relatively low burden to participate, limited only to information absolutely necessary for a utility to carry out its analysis

In the RFI's design, the eligibility to participate was open to both existing and future resources from all generating resource types. Forms provided to market participants were designed to elicit a response from thermal, renewable, and storage resources. Furthermore, the response forms, which encapsulate the entire information request, contain information that is required to conduct the analysis. We view the information request under the RFI to not carry a significant burden to market participants to propose a response.

### 3.2 Process

SPS posted the RFI and associated materials on its website, available at <a href="https://www.xcelenergy.com/working">https://www.xcelenergy.com/working</a> with us/tolk request for information. To introduce the RFI and answer questions from potential respondents, a bidders meeting was held by SPS on September 21, 2020. During the meeting, bidders were given an opportunity to address questions directly to SPS. Questions were also received from bidders directly via e-mail to the RFI inbox. During the pendency of the RFI up to the bid submission due date of 4:00 p.m. Mountain Daylight Time on Friday, November 6, 2020, SPS received and posted responses to questions both on its website and directly to the inquiring bidder.

Proposals were initially reviewed for completeness. SPS issued several rounds of clarifying questions to secure the information necessary to evaluate the options needed. With our concurrence and at our behest, to the extent that bidders did not include optimal COD dates or configurations that would better address SPS's needs, SPS issued additional clarifications requesting such options.

Certain projects were excluded from further analysis. They included projects that were voluntarily withdrawn by the proponents and in addition to those that proscribed a timeline for

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selection within 2022 to be valid by the necessary COD dates. Exclusion of projects that require immediate contracting, where it is not feasible under the regulatorily established timeline, is appropriate and maintains fairness to all market participants. If SPS were to accelerate the timeline to accommodate a single project or set of projects, this would not be consistent with fairness.

From our perspective, the purpose of an RFI (and not an RFP) is to fully evaluate all potential available resource options. To the extent modifications to the COD dates and the project configuration better aligns the proposal to the underlying need, it better enables SPS to conduct a full and complete analysis of replacement options and resources. Based on industry practice, RFIs are intended to serve a discovery purpose and inform the development of future RFPs which would be subject to more rigid processes and rules. RFIs are intended to be flexible in design to facilitate the acquisition of the kind of information that the issuing utility seeks to better understand. In the context of the current solicitation, our expectation would be for SPS to explore each proposal and obtain the maximum amount of information possible. As the RFI was open-ended by design, some proposals are expected to miss the mark and need certain adjustments to adapt to SPS's system needs. Requesting additional pricing options and configurations would be the appropriate course of action for SPS to fully evaluate all options available. To that end, we observed SPS requesting additional pricing options from bidders to reflect different COD dates and interconnection assumptions. In doing so, the modeling reflected additional alternatives that may or may not have conferred economic benefits. Accordingly, we observed that SPS conducted the RFI process in a fair and complete fashion that is in-line with the intent of the solicitation and overall process.

### 3.3 Results

The RFI received the following response from the market:

- 18 companies participated.
- Eight key technologies proposed:
  - Solar
  - Solar plus storage
  - o Wind
  - Gravitational energy storage
  - Combined cycle plus hydrogen storage
  - Liquid air energy storage
  - Flow energy storage
  - Compressed air battery
- Project deployment in five key states, including Texas, New Mexico, Colorado, Kansas, and Oklahoma.

**Table 1. Summary of Responses Received** 

Bidders	Technology	States
Respondent 1	Solar	Texas

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### Independent Evaluator Report of the Southwestern Public Service Company's Tolk Analysis and RFI

Bidders	Technology	States
Respondent 2	Solar, solar plus storage	New Mexico
Respondent 3	Wind	New Mexico
Respondent 4	Solar plus storage	Texas
Respondent 5	Gravitational energy storage	N/A
Respondent 6	Wind	New Mexico, Colorado, Kansas
Respondent 7	Combined cycle plus hydrogen storage	Texas
Respondent 8	Wind	Texas
Respondent 9	Liquid air energy storage	N/A
Respondent 10	Solar	Texas
Respondent 111	Wind	Texas
Respondent 1	Combined cycle	New Mexico
Respondent 12	Flow energy storage	N/A
Respondent 13	Solar, solar plus storage	Texas
Respondent 14	Wind, solar	New Mexico, Texas
Respondent 15	Solar plus storage, wind	Texas
Respondent 16	Technical Information on Resource Technology	N/A
Respondent 17	Solar	Oklahoma
Respondent 18	Compressed air battery	N/A

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### 4. Summary of the Tolk Analysis

To effectively evaluate replacement options, SPS employs the use of a detailed modeling tool which leverages information obtained during the RFI process in conjunction with system information to evaluate the optimal paths forward from an economic merit perspective. For example, if a coal-fired resource is required to retire at a certain date, the model evaluates all replacement options and determines which of the options, as a portfolio or standalone resource, makes economic sense while maintaining adequate reliability in terms of preserving the required operating reserve margin.

SPS utilized EnCompass for the Tolk and Harrington analysis. EnCompass is a power supply planning software that performs the following computations:

- Production cost modeling that determines which electric system resources should be run
  on a least-cost basis, while respecting known constraints under a set of defined
  assumptions.
- Optimization of supply resources that, through permutative production cost analyses, identifies the supply portfolio that minimizes total cost while managing to reliability constraints.

A wide variety of tools are available in the marketplace to conduct the analysis. Based on a review of EnCompass' capabilities and the methodology it follows to perform the analysis, we agree with its use as part of the overall approach to optimize the solution. However, in large part, the modeling is sensitive to the following parameters which are input manually:

- Specific scenarios and constraints, around which the model must solve for.
- Input assumptions on which the model calculates the cost of electric production.

The results from the EnCompass software were tabulated on the basis of the Present Value of Revenue Requirements ("PVRR"). Adoption of the revenue requirements comparative perspective is widely adopted in the industry, as this vantage point seeks to evaluate the relative costs passed onto ratepayers. In addition, levelization of the revenue requirements on the basis of net present value normalizes the results to start of the study period (\$2022) to facilitate the comparison of options that may have greater short-term versus long-term cost implications. Levelization of revenue requirements is also consistent with industry practices to ensure that the time value of money is considered and captured.

Part of our role as IE is to ensure SPS evaluates all feasible and practical options to address the constraints and that the assumptions taken are reasonable and aligned with industry practice.

### 4.1 Assumptions

1. Fuel price forecasts: SPS inputs a natural gas forecast and coal price forecast into the EnCompass model. The approach to arriving at a consensus fuel price forecast generally entails the weighting or averaging of multiple leading price forecasts available in the market. The coal price forecast leverages specific price information associated with the power plants, which is reasonable given the impact of transportation-related costs, as well as the use of spot coal price forecasts developed by averaging market forecasts provided by industry-leading consulting firms. For natural gas, SPS adopts the

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short-term outlook from NYMEX (plus 2 years) and adopts the longer-term outlook from an average of four publications (NYMEX, IHS Energy, S&P Global, and Wood Mackenzie). Guidehouse's market modeling experts have reviewed this approach and confirm that it benchmarks well to our internal forecasts. On similar engagements, we have observed similar approaches used by other utilities. We conclude that the methodology used for the applicable fuel price forecasts is reasonable.

- 2. Market electricity prices: SPS is a member of SPP, which gives it access to a regional market for electricity purchases and sales. To estimate applicable electric prices at which SPS can economically transact, SPS leverages a straight average of long-term on-peak and off-peak implied heat rate forecasts provided by Wood Mackenzie, S&P Global, and IHS Markit for SPP South Hub. Implied heat rates are a gauge of electrical efficiency denominated in MMBtu of natural gas consumption per kilowatt-hour of generation that are equivalent to what would be the breakeven point for power supply. Implied heat rates are multiplied by the gas price forecast to produce an equivalent market energy price. The SPP South Hub is the applicable region at which SPS can conduct electricity transactions. Guidehouse's market modeling experts have reviewed this approach and confirm that it benchmarks well to our internal forecasts. On similar engagements, we have observed similar approaches used by utilities. We conclude that the methodology used for the applicable market electricity price forecast is reasonable.
- 3. Load and demand: To meet regional reliability criteria and to project the energy needs of the SPS service territory, a proper projection of future energy sales and the coincident peak demand is needed for modeling purposes. SPS's methodology entails a forecast of retail energy sales and customers by rate class. Coincident peak demand is forecast at the aggregate SPS level. For customers receiving wholesale service, energy sales and coincident peak demand forecasts are developed according to the individual customer. In large part, SPS used actual monthly historical data to derive all forecasts. As part of the process, two forecasts were derived to conduct sensitivity: the planning forecast based on an 85% probabilistic load forecasting level and a financial forecast, which reflects actual expected load. The purpose of a planning forecast is to ensure reliability even during the worst-case scenario. Planning to this level achieves, typically, a 1 day in 10-year loss of load expectation, which is the standard set by the North American Electric Reliability Corporation that SPS must follow. In addition, the financial forecast reflects what the utility, financially, would realize in a given year based on a median expectation of load conditions. We have reviewed SPS's actual load forecasts and have benchmarked it to our available and modeled forecasts. Based on the review, we conclude that the load and demand forecasts are reasonable and in line with industry practice.
- 4. Interconnection cost: How a resource is connected to the system can have significant bearing on the all-in cost of a generation resource. In addition to the physical connection of the resources, there may be additional costs related to reinforcing the network of the broader area to assure reliable delivery of electricity. For SPS, interconnection studies are conducted by SPP, which receives interconnection requests from resources, groups studies for processing, manages the order in which projects are studied, conducts technical analyses to assure reliable connection, and assigns costs of network infrastructure upgrades required to reliably deliver electricity from the projects. A full and complete study can take a significant amount of time—approximately 18 months for the technical analysis. Constructing the interconnection and identified infrastructure upgrades can take years, putting projects with existing interconnection requests at a significant timing advantage over ones that do not. SPS developed their cost adders

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based on upgrades identified for Zones 2 and 6, the relevant regions for SPS territory. By using the SPP estimates, SPS calculated the infrastructure cost adder to connect a resource as \$400/kW in its base case. In addition, SPS ran additional sensitivities of \$200 and \$600/kW to determine the impact of higher or lower than expected interconnection costs than anticipated. This is a reasonable approach and in line with standard industry practices.

### 4.2 Scenarios

Scenario modeling was conducted to evaluate the impact of changes in COD and operating profiles on the selected portfolio, and in turn, its impact on the Utility's revenue requirements. As the primary driver for Tolk retirement was water resource constraints, options that address this concern were considered in the scenarios, including reduced, seasonal operation, a staggered retirement approach, and an early retirement. To reduce water usage, operations at Tolk would either need to be minimized or eliminated entirely.

Accordingly, SPS defined the following scenarios for consideration:

### • Scenario 1 – Annual Economic Dispatch

- Summer only economic dispatch throughout 2021
- Annual economic dispatch thereafter
- Both Tolk units retire at end of economically available water EOY 2025
- Harrington converted to gas EOY 2024

### Scenario 2 – Summer Only Economic Dispatch

- Summer only economic dispatch 2021 and beyond
- Both Tolk units retire at end of economically available water EOY 2032
- Harrington converted to gas EOY 2024

### Scenario 3 – Earliest Retirement of Tolk Units

- Summer only economic dispatch 2021
- Annual economic dispatch thereafter
- Both Tolk units retire EOY 2023
- Harrington converted to gas EOY 2024

### Scenario 4 – Staggered Retirement of Tolk Units

- Summer only economic dispatch 2021
- Annual economic dispatch thereafter
- Unit 1 retires EOY 2023
- Unit 2 retires at end of economically available water EOY 2031
- Harrington converted to gas EOY 2024

### Scenario 5 – Staggered Retirement of Tolk Units & Seasonal Operations

- Summer only economic dispatch
- Unit 1 retires EOY 2023
- Unit 2 retires EOY 2032
- Harrington converted to gas EOY 2024

### Scenario 6 – Earliest Retirement of Tolk & Harrington Units

Tolk - Summer only economic dispatch 2021

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- Tolk Annual economic dispatch thereafter
- Harrington Annual economic dispatch in all years
- All Tolk and Harrington Units Retire EOY 2023

The above scenarios capture a range of retirement dates and reduced operational profiles to address water constraints. These include:

- 1. Retire at the point where water is no longer economically available both units operating and one unit operating.
- 2. Earliest retirement feasible for all units.
- 3. Seasonal operations to potentially minimize replacement capacity costs (assuming such costs exceed ongoing operations at Tolk).

It is noted that in most scenarios, it is assumed that Harrington is converted to gas in the End of Year 2024. Further options for Harrington are separately evaluated under the Harrington Analysis.

After review and discussion with SPS, we agreed that the scenarios presented above represent the spectrum of options available that was primarily driven by the water resource constraint. The options above are shaped by separate analyses conducted to remain within water resource parameters. Replacement options for Tolk are evaluated on an economic basis based on the response from the RFI for resource additions through 2025. For projects post-2025, which would reflect projects not yet in development, SPS used generic resource cost assumptions to meet capacity shortfalls as determined through the use of EnCompass. Generic resources included all thermal resource options, including combine cycle and simple cycle units, to meet capacity needs.

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### 5. Results of the Tolk Analysis

The base case scenarios leverage the planning load forecast with the base case (median) gas price forecast. Table 2 presents the results of the base cases:

Table 2. Summary of PVRR Results, Base Case: Assumes Planning Load, \$400/kW Interconnection Cost, and Base Gas Forecast

PVRR Production Cost	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022-2032	Delta from Ref. Case (\$M)	NPV (\$M) 2022- 2041
Scenario 1	236	\$3,449	\$266	\$7,691	\$117	\$12,066
Scenario 2 (Ref. Case)	\$0	\$3,213	\$0	\$7,426	\$0	\$11,949
Scenario 3	\$235	\$3,448	\$271	\$7,696	\$118	\$12,067
Scenario 4	\$61	\$3,274	\$135	\$7,561	\$93	\$12,042
Scenario 5	\$30	\$3,243	\$87	\$7,513	\$33	\$11,982
Scenario 6	\$789	\$4,002	\$1,398	\$8,824	\$1,526	\$13,475

Guidehouse reviewed the model outputs from each of these scenarios, focusing on the key differences and their drivers among the cases to validate the analyses. We made the following observations:

Prudent utility practice would require the cases be tested under a variety of conditions to stress test the cases against changes in the assumptions. The two factors that have significant impact on modeling results are the load forecast, which sets the reliability margin/capacity need requirement, and the fuel price forecast, which may influence the relative economics of fossil units of varying efficiency against renewable resources. In addition, SPS tested varying assumptions regarding the cost of interconnection since accurate figures are not available until a full study is conducted. SPS conducted a sensitivity analysis of the six scenarios across three load forecasts, three interconnection cost assumptions and three fuel price forecasts for a total of 27 runs. The analysis of Harrington was conducted across three load forecasts (low, planning and financial) and three gas price forecasts (low, base, and high) for 9 total sensitivities for each scenario.

Table 3. Impact of Assumptions on Scenario Ranking

Run No.	Gas Forecast	Load Forecast	Interconnection Cost Assumption	Lowest PVRR Scenario	Next Lowest PVRR Scenario
1	Base	Financial	\$200/kVV	Scenario 3	Scenario 5
2	Base	Financial	\$400/kW	Scenario 2	Scenario 5
3	Base	Financial	\$600/kW	Scenario 2	Scenario 5
4	Base	High	\$200/kW	Scenario 5	Scenario 2
5	Base	High	\$400/kVV	Scenario 2	Scenario 5
6	Base	High	\$600/kVV	Scenario 5	Scenario 2
7	Base	Low	\$200/kW	Scenario 2	Scenario 5
8	Base	Low	\$400/kVV	Scenario 2	Scenario 5
9	Base	Low	\$600/kW	Scenario 2	Scenario 5

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### Guidehouse

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10	High	Financial	\$200/kW	Scenario 3	Scenario 5
11	High	Financial	\$400/kW	Scenario 5	Scenario 2
12	High	Financial	\$600/kW	Scenario 3	Scenario 5
13	High	High	\$200/kW	Scenario 5	Scenario 4
14	High	High	\$400/kW	Scenario 5	Scenario 2
15	High	High	\$600/kW	Scenario 5	Scenario 4
16	High	Low	\$200/kW	Scenario 5	Scenario 2
17	High	Low	\$400/kW	Scenario 2	Scenario 5
18	High	Low	\$600/kW	Scenario 2	Scenario 5
19	Low	Financial	\$200/kW	Scenario 2	Scenario 5
20	Low	Financial	\$400/kW	Scenario 2	Scenario 5
21	Low	Financial	\$600/kW	Scenario 2	Scenario 5
22	Low	High	\$200/kW	Scenario 5	Scenario 2
23	Low	High	\$400/kW	Scenario 2	Scenario 5
24	Low	High	\$600/kW	Scenario 2	Scenario 5
25	Low	Low	\$200/kW	Scenario 2	Scenario 5
26	Low	Low	\$400/kW	Scenario 2	Scenario 5
27	Low	Low	\$600/kW	Scenario 2	Scenario 5

The highest ranking and most resilient scenario in all cases, as evident in the table above, is Scenario 2. When a particular case maintains a relative cost advantage despite changes in assumptions, it is an indication that the selected case is resilient to such changes and represents the "least regrets" planning scenario available.

The sensitivity analysis does reveal, however, that there are situations where Scenario 5, and to a lesser extent, Scenario 3, have a cost advantage under specified assumptions. There are five (5) total cases where Scenario 2 is not in either of the top two positions. In most cases, Scenario 5 is 2<sup>nd</sup> to Scenario 2. In virtually all such cases, the NPVRR gap differentiating the cases is relatively narrow (between \$0 to \$32M over 20 years). The differences between the cases is considered within the planning margin of error, therefore, decisions on the optimal scenario should be rendered from a qualitative risk perspective.

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### 6. Conclusions

We oversaw SPS throughout both the RFI process and the Tolk analysis. With regards to the RFI, the key objective from an IE's perspective was to ensure that all proposals were fully considered and that each respondent was given an equal and fair opportunity to submit additional information as needed to provide the utility with the most advantageous offer possible to the utility and its ratepayers, facilitating a viable economical option to replace the Tolk Generating Station. Based on our observations of the discussions between SPS and respondents, this standard has been met, and specifically for the RFI process, SPS used fair solicitation and evaluation processes. In our review, we observed SPS using a consistent methodology and approach to evaluate the options proposed.

Whether SPS considered available replacement resources was a function of both the responses to the RFI, reflecting projects already in development able to meet the need dates, and generic resource options that SPS has captured in its model as a backstop should there be a shortfall in future capacity needs. The projects received via the RFI were included in the detailed modeling. The generic resource inputs are also consistent with supply options typically considered and available to utilities seeking to address a capacity need. Aside from what was considered and evaluated by SPS, there are no other reasonable and viable options to our knowledge. Therefore, the replacement resources considered is reasonable and consistent with industry practices.

A series of potential Tolk retirement dates and scenarios, given the state of water availability, were considered. A variety of approaches, including early retirement, the latest date in which the Tolk Station could operate with economic water, and a staggered unit-by-unit approach to retirement, were modelled and considered. It is not possible to model every possible date, however, in our view SPS considered a substantial number of intervening dates and approaches driven by the circumstances. Accordingly, SPS considered a range of retirement dates and the scenarios chosen by SPS in our view are reasonable.

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### 2020 Request for Information for Generating Resources

Southwestern Public Service Company
Released September 9, 2020

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Xcel Energy

Southwestern Public Service Company Request for Information

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Xcel Energy

Southwestern Public Service Company Request for Information

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### Introduction:

This announcement constitutes a Request for Information ("RFI") notice soliciting current pricing, technical characteristics, and other relevant information for potential generating resources. This is not a Request for Proposals ("RFP") or solicitation for formal proposals. This RFI does not constitute a commitment, implied or otherwise, that SPS will take action in this matter. SPS will not be responsible for any costs incurred in furnishing SPS responsive information.

SPS is interested in understanding the current availabilities, flexibilities, and preferences of market participants interested in providing capacity and associated energy to SPS from all generating resource types, including energy storage, whether existing or yet-to-be constructed. SPS is considering the availability of capacity resources for possible future owned generation, build-own-transfers ("BOTs"), and purchased power agreements ("PPAs").

### General Background:

- SPS is a New Mexico corporation and wholly-owned electric utility subsidiary of Xcel Energy.
- SPS's total company service territory encompasses a 52,000-square-mile area in
  eastern and southeastern New Mexico, the Texas Panhandle, and the Texas South
  Plains and its primary business is generating, transmitting, distributing, and selling
  electric energy.
- SPS has a long history of providing safe, reliable, value-added service to our customers
- SPS serves 394,220 electric retail customers in Texas and New Mexico.
- As prescribed in the Uncontested Comprehensive Stipulation ("Stipulation") filed at the New Mexico Public Regulation Commission on January 13, 2020 and approved by the New Mexico Public Regulation Commission ("NMPRC") in Case No. 19-00170-UT, the Stipulation requires SPS to submit a robust analysis of the possible abandonment of its Tolk Generating Station Units 1 and 2 (Tolk) and potential means of replacement of those resources (the "Tolk Analysis"). The Tolk Analysis shall include replacement resources priced based on an RFI solicitation. The Tolk Analysis will also consider a scenario in which all SPS's coal-burning units are retired or replaced before 2030.
- SPS will be evaluating multiple scenarios with various capacity replacement dates. The minimum net capacity need is approximately 500 MW beginning summer 2023. The maximum net capacity need is approximately 2,200 MW beginning summer 2025.

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### Qualifications and Assumptions:

- Expressions of interest should be from existing or proposed generating facilities within the SPS zone or delivered to the SPS zone from existing or proposed sites within the Southwest Power Pool.
- Expressions of interest should include a proposed Commercial Operation Date ("COD")
  if the submission is a future resource.
- Expressions of interest should include all capacity, energy, environmental attributes such
  as Renewable Energy Credits (RECs), and other generation-related services.
- For purposes of this RFI, "renewable energy" refers to electrical power generated by solar, wind, biomass, or other commercially viable renewable energy technologies including energy storage.
- SPS is interested in the availability of capacity and associated energy resources for possible future owned generation, BOTs, and PPAs.
- PPA durations are recommended to be 25 and/or 30 years.
- Interested parties should respond to this RFI within 60 days of issuance.

### **Specific Information of Interest:**

- Project type, including technical characteristics.
- Project site location for delivery within (or to) the SPS system.
- Proposed COD for resource facilities responsive to this RFI, including details on whether a delay in the proposed COD could impact the pricing and if so an estimate of the price of those impact(s).
- Pricing and quantity in megawatts. All pricing in respondent proposals should reflect costs (to the extent applicable) at the time of submittal and should include costs of interconnection to the transmission system if applicable.
- Statement on current interconnection status (if any), and anticipated extent of need for transmission system upgrades for the proposal.
- Proposals must demonstrate an anticipated ability to obtain all required state/local preconstruction approvals and any associated risks to meet the COD.

### Content of Submissions:

- Appendix A includes a set of forms applicable to the resource type being submitted.
  - For dispatchable resources the submitter should complete Appendix A-PPA\_DIS forms
  - For renewable generation resources the submitter should complete Appendix A-PPA RENEW forms
  - For Build-Own-Transfer or sale of an existing asset the submitter should complete Appendix A-BOT.
- Some information may be requested on more than one form. Although such requests
  may be redundant, submitters must provide the information requested on each
  applicable form.
- SPS will convene a Bidders Meeting for all interested parties to allow for clarifications and any questions that potential bidders may have. See meeting details below.

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### **Bidders Meeting:**

Date: September 21, 2020

Time: 1:00PM - 3:00 PM Mountain Daylight Time

Join Zoom Meeting:

https://xcelenergy.zoom.us/i/93175193060?pwd=cVpNeTZvTEkycURIMUhqMlZWL2

14dz09

Meeting ID: 931 7519 3060

Passcode: 270511 One tap mobile

+17209289299,,93175193060#,,,,,0#,,270511# US (Denver)

+12133388477,,93175193060#,,,,,0#,,270511# US (Los Angeles)

### Dial by your location

+1 720 928 9299 US (Denver)

+1 213 338 8477 US (Los Angeles)

+1 346 248 7799 US (Houston)

+1 206 337 9723 US (Seattle)

+1 312 626 6799 US (Chicago)

+1 646 518 9805 US (New York)

+1 651 372 8299 US (St. Paul)

+1 786 635 1003 US (Miami)

Meeting ID: 931 7519 3060

Passcode: 270511

Find your local number: https://xcelenergy.zoom.us/u/aLUXvN6pb

### **Proposal Submission Deadline:**

Proposals will be accepted until 5:00 P.M. Central Time on **Friday**, **November 6**, **2020**. All Proposals must be transmitted by to the following email address:

### SPSTolkAnalysis@xcelenergy.com

Proposals received later than the due date and time indicated will be rejected.

### Follow-up Requests

To the extent SPS has questions or seeks clarification regarding a Proposal, SPS may pose follow-up questions. Submitters are not obligated to respond to such follow-up questions, but, are advised that a failure to provide adequate information may lead to a Proposal or a portion of a Proposal being disregarded.

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### Confidentiality

SPS recognizes that certain information contained in a Proposal submitted may be deemed by the submitter to be confidential. To the extent a submitter believes portions of its Proposal (or any subsequent responses to follow-up questions) constitute confidential material, the submitter should clearly label such material as confidential ("Confidential Material"). SPS will not be responsible for identifying any Confidential Material that has not been designated as such by the submitter. If SPS receives a request from a regulatory or judicial authority to which Confidential Material is responsive, or if SPS receives a request (that SPS reasonably deems to be a valid request) from a party in a regulatory or judicial proceeding to which request SPS determines Confidential Material in the Proposal is responsive, or to the extent otherwise required by law, SPS may provide the Confidential Material pursuant to a confidentiality or protective agreement or order in such proceeding. To the extent Confidential Material is proposed to be disclosed publicly (i.e., not subject to a confidentiality or protective agreement), SPS will notify the submitter as soon as reasonably possible; it is the sole responsibility of the submitter to seek to protect the material subsequent to such notification. SPS may disclose non-Confidential Material at its discretion without prior notice.

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### **Appendix F - PVRR Tables**

### Planning Load Forecast (Base Gas - \$400/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,213	\$0	\$7,426	\$0	\$11,949
Scenario 1	\$236	\$3,449	\$266	\$7,691	\$117	\$12,066
Scenario 3	\$235	\$3,448	\$271	\$7,696	\$118	\$12,067
Scenario 4	\$61	\$3,274	\$135	\$7,561	\$93	\$12,042
Scenario 5	\$30	\$3,243	\$87	\$7,513	\$33	\$11,982
Scenario 6	\$789	\$4,002	\$1,398	\$8,824	\$1,526	\$13,475

### Financial Load Forecast (Base Gas - \$400/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022 - 2032	Delta (\$M)	NPV (\$M) 2022 - 2041
Scenario 2	\$0	\$2,993	\$0	\$6,628	\$0	\$10,388
Scenario 1	\$146	\$3,140	\$165	\$6,792	\$128	\$10,516
Scenario 3	\$147	\$3,140	\$169	\$6,797	\$48	\$10,436
Scenario 4	\$38	\$3,031	\$88	\$6,716	\$75	\$10,462
Scenario 5	\$3	\$2,996	\$28	\$6,655	\$2	\$10,390
Scenario 6	\$548	\$3,541	\$796	\$7,424	\$755	\$11,142

### Low Load Forecast (Base Gas - \$400/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022 - 2032	Delta (\$M)	NPV (\$M) 2022 - 2041
Scenario 2	\$0	\$2,809	\$0	\$5,969	\$0	\$9,013
Scenario 1	\$221	\$3,031	\$226	\$6,196	\$128	\$9,141
Scenario 3	\$150	\$2,959	\$162	\$6,131	\$62	\$9,075
Scenario 4	\$41	\$2,851	\$79	\$6,048	\$83	\$9,096
Scenario 5	\$4	\$2,813	\$16	\$5,986	\$9	\$9,022
Scenario 6	\$559	\$3,369	\$832	\$6,801	\$837	\$9,850

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#### Planning Load Forecast (Low Gas - \$400/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	Delta (\$M) NPV (\$M) I		NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,195	\$0	\$7,304	\$0	\$11,504
Scenario 1	\$143	\$3,338	\$173	\$7,477	\$134	\$11,637
Scenario 3	\$229	\$3,424	\$284	\$7,588	\$185	\$11,689
Scenario 4	\$107	\$3,302	\$198	\$7,502	\$100	\$11,604
Scenario 5	\$73	\$3,268	\$134	\$7,438	\$29	\$11,532
Scenario 6	\$691	\$3,887	\$1,248	\$8,552	\$1,472	\$12,976

#### Financial Load Forecast (Low Gas - \$400/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022 - 2032	Delta (\$M)	NPV (\$M) 2022 - 2041
Scenario 2	\$0	\$2,988	\$0	\$6,565	\$0	\$10,115
Scenario 1	\$151	\$3,139	\$178	\$6,743	\$128	\$10,243
Scenario 3	\$155	\$3,143	\$152	\$6,717	\$48	\$10,163
Scenario 4	\$39	\$3,027	\$116	\$6,681	\$97	\$10,212
Scenario 5	\$2	\$2,989	\$37	\$6,601	\$14	\$10,130
Scenario 6	\$554	\$3,541	\$863	\$7,428	\$935	\$11,050

#### Low Load Forecast (Low Gas - \$400/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
	, ,	2022-2025	, ,	2022 - 2032	, ,	2022 - 2041
Scenario 2	\$0	\$2,809	\$0	\$5,940	\$0	\$8,955
Scenario 1	\$141	\$2,950	\$191	\$6,132	\$150	\$9,105
Scenario 3	\$158	\$2,967	\$181	\$6,121	\$85	\$9,040
Scenario 4	\$42	\$2,850	\$133	\$6,074	\$124	\$9,079
Scenario 5	\$3	\$2,811	\$39	\$5,979	\$23	\$8,978
Scenario 6	\$564	\$3,373	\$919	\$6,860	\$1,033	\$9,988

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#### Planning Load Forecast (High Gas - \$400/kW network upgrades)

	Action	Period	Decisio	on Period	Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,276	\$0	\$7,597	\$0	\$12,398
Scenario 1	\$141	\$3,417	\$128	\$7,725	\$79	\$12,478
Scenario 3	\$209	\$3,485	\$241	\$7,839	\$67	\$12,466
Scenario 4	\$33	\$3,310	\$36	\$7,634	\$31	\$12,430
Scenario 5	\$4	\$3,280	\$16	\$7,613	(\$0)	\$12,398
Scenario 6	\$561	\$3,837	\$1,105	\$8,703	\$1,258	\$13,657

#### Financial Load Forecast (High Gas - \$400/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022 - 2032	Delta (\$M)	NPV (\$M) 2022 - 2041
Scenario 2	\$0	\$3,054	\$0	\$6,744	\$0	\$10,638
Scenario 1	\$146	\$3,200	\$113	\$6,857	\$71	\$10,710
Scenario 3	\$146	\$3,200	\$132	\$6,877	\$3	\$10,641
Scenario 4	\$50	\$3,104	\$80	\$6,824	\$50	\$10,688
Scenario 5	\$15	\$3,069	\$21	\$6,765	(\$3)	\$10,635
Scenario 6	\$487	\$3,541	\$678	\$7,422	\$631	\$11,269

#### Low Load Forecast (High Gas - \$400/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$2,811	\$0	\$5,939	\$0	\$9,025
Scenario 1	\$148	\$2,958	\$179	\$6,118	\$149	\$9,174
Scenario 3	\$150	\$2,960	\$181	\$6,120	\$71	\$9,096
Scenario 4	\$40	\$2,851	\$92	\$6,031	\$78	\$9,103
Scenario 5	\$6	\$2,816	\$33	\$5,972	\$27	\$9,052
Scenario 6	\$554	\$3,365	\$792	\$6,731	\$665	\$9,690

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#### Planning Load Forecast (Base Gas - \$200/kW network upgrades)

	Action	Period	Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,226	\$0	\$7,453	\$0	\$11,803
Scenario 1	\$130	\$3,356	\$56	\$7,509	\$26	\$11,830
Scenario 3	\$170	\$3,397	\$64	\$7,517	\$4	\$11,807
Scenario 4	\$36	\$3,262	\$12	\$7,465	\$26	\$11,830
Scenario 5	\$4	\$3,230	(\$26)	\$7,427	(\$23)	\$11,780
Scenario 6	\$616	\$3,842	\$826	\$8,279	\$890	\$12,694

### Financial Load Forecast (Base Gas - \$200/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022 - 2032	Delta (\$M)	NPV (\$M) 2022 - 2041
Scenario 2	\$0	\$3,012	\$0	\$6,678	\$0	\$10,258
Scenario 1	\$145	\$3,157	\$41	\$6,719	\$30	\$10,289
Scenario 3	\$102	\$3,114	\$10	\$6,688	(\$10)	\$10,248
Scenario 4	\$39	\$3,051	\$9	\$6,687	\$13	\$10,272
Scenario 5	\$10	\$3,022	(\$4)	\$6,674	(\$10)	\$10,248
Scenario 6	\$503	\$3,515	\$633	\$7,311	\$675	\$10,933

#### Low Load Forecast (Base Gas - \$200/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032	9	2022 - 2041
Scenario 2	\$0	\$2,822	\$0	\$5,950	\$0	\$8,918
Scenario 1	\$141	\$2,964	\$100	\$6,050	\$66	\$8,984
Scenario 3	\$101	\$2,923	\$69	\$6,019	\$17	\$8,935
Scenario 4	\$37	\$2,859	\$72	\$6,022	\$65	\$8,983
Scenario 5	(\$1)	\$2,821	\$11	\$5,960	\$3	\$8,921
Scenario 6	\$520	\$3,342	\$749	\$6,698	\$743	\$9,661

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#### Planning Load Forecast (Low Gas - \$200/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,208	\$0	\$7,308	\$0	\$11,398
Scenario 1	\$137	\$3,346	\$90	\$7,397	\$71	\$11,470
Scenario 3	\$167	\$3,375	\$204	\$7,511	\$130	\$11,528
Scenario 4	\$50	\$3,258	\$96	\$7,403	\$63	\$11,461
Scenario 5	\$15	\$3,224	\$25	\$7,333	(\$1)	\$11,398
Scenario 6	\$724	\$3,932	\$1,235	\$8,543	\$1,489	\$12,887

#### Financial Load Forecast (Low Gas - \$200/kW network upgrades)

	Action	Period	Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022 - 2032	Delta (\$M)	NPV (\$M) 2022 - 2041
Scenario 2	\$0	\$2,988	\$0	\$6,565	\$0	\$10,023
Scenario 1	\$155	\$3,142	\$92	\$6,657	\$72	\$10,095
Scenario 3	\$124	\$3,112	\$82	\$6,647	\$18	\$10,042
Scenario 4	\$52	\$3,040	\$94	\$6,659	\$73	\$10,096
Scenario 5	\$14	\$3,002	\$26	\$6,591	\$2	\$10,025
Scenario 6	\$527	\$3,515	\$760	\$7,325	\$843	\$10,866

#### Low Load Forecast (Low Gas - \$200/kW network upgrades)

	Action	Period Deci		on Period	Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$2,807	\$0	\$5,936	\$0	\$8,858
Scenario 1	\$152	\$2,959	\$128	\$6,064	\$110	\$8,968
Scenario 3	\$112	\$2,919	\$105	\$6,041	\$60	\$8,919
Scenario 4	\$52	\$2,859	\$112	\$6,048	\$99	\$8,958
Scenario 5	\$4	\$2,811	\$28	\$5,964	\$14	\$8,873
Scenario 6	\$539	\$3,346	\$822	\$6,758	\$947	\$9,806

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# Planning Load Forecast (High Gas - \$200/kW network upgrades)

	Action	Period	Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,247	\$0	\$7,567	\$0	\$12,100
Scenario 1	\$126	\$3,374	\$24	\$7,591	\$22	\$12,122
Scenario 3	\$156	\$3,403	\$36	\$7,604	\$7	\$12,107
Scenario 4	\$34	\$3,282	(\$3)	\$7,565	(\$7)	\$12,093
Scenario 5	\$5	\$3,252	(\$25)	\$7,543	(\$12)	\$12,088
Scenario 6	\$593	\$3,840	\$776	\$8,344	\$763	\$12,863

#### Financial Load Forecast (High Gas - \$200/kW network upgrades)

**	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,021	\$0	\$6,765	\$0	\$10,493
Scenario 1	\$132	\$3,154	(\$10)	\$6,755	(\$29)	\$10,465
Scenario 3	\$114	\$3,135	(\$24)	\$6,741	(\$102)	\$10,391
Scenario 4	\$38	\$3,060	(\$12)	\$6,753	(\$16)	\$10,477
Scenario 5	\$3	\$3,025	(\$41)	\$6,724	(\$51)	\$10,442
Scenario 6	\$513	\$3,534	\$612	\$7,376	\$510	\$11,003

#### Low Load Forecast (High Gas - \$200/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
	, ,	2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$2,824	\$0	\$5,970	\$0	\$8,909
Scenario 1	\$142	\$2,966	\$67	\$6,037	\$46	\$8,955
Scenario 3	\$104	\$2,928	\$40	\$6,009	\$0	\$8,909
Scenario 4	\$39	\$2,863	\$22	\$5,992	\$29	\$8,939
Scenario 5	\$3	\$2,827	(\$15)	\$5,955	(\$12)	\$8,897
Scenario 6	\$514	\$3,338	\$657	\$6,626	\$596	\$9,505

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#### Planning Load Forecast (Base Gas - \$600/kW network upgrades)

	Action	Period	Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,205	\$0	\$7,445	\$0	\$12,076
Scenario 1	\$241	\$3,446	\$238	\$7,684	\$78	\$12,153
Scenario 3	\$241	\$3,447	\$213	\$7,659	\$43	\$12,118
Scenario 4	\$103	\$3,309	\$149	\$7,595	\$43	\$12,119
Scenario 5	\$72	\$3,277	\$109	\$7,555	(\$15)	\$12,060
Scenario 6	\$747	\$3,952	\$1,217	\$8,663	\$1,170	\$13,245

#### Financial Load Forecast (Base Gas - \$600/kW network upgrades)

	Action	Period	Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025	2 8	2022 - 2032	N N	2022 - 2041
Scenario 2	\$0	\$2,993	\$0	\$6,628	\$0	\$10,467
Scenario 1	\$215	\$3,208	\$240	\$6,868	\$94	\$10,561
Scenario 3	\$154	\$3,148	\$161	\$6,789	\$21	\$10,489
Scenario 4	\$111	\$3,105	\$195	\$6,823	\$66	\$10,533
Scenario 5	\$75	\$3,068	\$136	\$6,764	\$7	\$10,474
Scenario 6	\$633	\$3,626	\$945	\$7,573	\$865	\$11,332

#### Low Load Forecast (Base Gas - \$600/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$2,809	\$0	\$5,941	\$0	\$9,077
Scenario 1	\$221	\$3,031	\$272	\$6,213	\$112	\$9,189
Scenario 3	\$157	\$2,967	\$185	\$6,126	\$44	\$9,121
Scenario 4	\$117	\$2,926	\$241	\$6,182	\$96	\$9,173
Scenario 5	\$78	\$2,888	\$155	\$6,096	\$15	\$9,091
Scenario 6	\$643	\$3,452	\$1,006	\$6,947	\$973	\$10,050

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#### Planning Load Forecast (Low Gas - \$600/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	Delta (\$M)   NPV (\$M)   1		Delta (\$M)   NPV (\$M)		NPV (\$M)
Section		2022-2025		2022 - 2032	Delta (\$M)	2022 - 2041
Scenario 2	\$0	\$3,195	\$0	\$7,305	\$0	\$11,575
Scenario 1	\$211	\$3,406	\$255	\$7,560	\$103	\$11,678
Scenario 3	\$245	\$3,440	\$253	\$7,558	\$123	\$11,698
Scenario 4	\$107	\$3,302	\$211	\$7,516	\$77	\$11,652
Scenario 5	\$73	\$3,268	\$137	\$7,442	\$5	\$11,580
Scenario 6	\$844	\$4,039	\$1,655	\$8,960	\$1,996	\$13,571

#### Financial Load Forecast (Low Gas - \$600/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022 - 2032	Delta (\$M)	NPV (\$M) 2022 - 2041
Scenario 2	\$0	\$2,988	\$0	\$6,592	\$0	\$10,167
Scenario 1	\$219	\$3,207	\$215	\$6,807	\$86	\$10,254
Scenario 3	\$155	\$3,143	\$128	\$6,720	\$15	\$10,182
Scenario 4	\$114	\$3,102	\$202	\$6,794	\$98	\$10,265
Scenario 5	\$75	\$3,063	\$113	\$6,706	\$3	\$10,170
Scenario 6	\$580	\$3,568	\$923	\$7,515	\$1,035	\$11,202

#### Low Load Forecast (Low Gas - \$600/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$2,809	\$0	\$5,970	\$0	\$9,001
Scenario 1	\$225	\$3,033	\$241	\$6,210	\$127	\$9,128
Scenario 3	\$158	\$2,967	\$143	\$6,113	\$63	\$9,064
Scenario 4	\$42	\$2,850	\$144	\$6,113	\$113	\$9,114
Scenario 5	\$3	\$2,811	\$41	\$6,011	\$17	\$9,018
Scenario 6	\$635	\$3,444	\$1,027	\$6,997	\$1,182	\$10,183

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#### Planning Load Forecast (High Gas - \$600/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025		2022 - 2032		2022 - 2041
Scenario 2	\$0	\$3,339	\$0	\$7,745	\$0	\$12,585
Scenario 1	\$124	\$3,463	\$48	\$7,793	\$37	\$12,622
Scenario 3	\$128	\$3,467	\$98	\$7,844	\$11	\$12,596
Scenario 4	\$29	\$3,368	(\$22)	\$7,724	(\$18)	\$12,567
Scenario 5	(\$2)	\$3,337	(\$39)	\$7,706	(\$41)	\$12,544
Scenario 6	\$612	\$3,951	\$916	\$8,662	\$827	\$13,412

#### Financial Load Forecast (High Gas - \$600/kW network upgrades)

	Action	Period	Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M) 2022-2025	Delta (\$M)	NPV (\$M) 2022 - 2032	Delta (\$M)	NPV (\$M) 2022 - 2041
Scenario 2	\$0	\$3,031	\$0	\$6,710	\$0	\$10,768
Scenario 1	\$213	\$3,244	\$210	\$6,920	\$67	\$10,835
Scenario 3	\$146	\$3,177	\$153	\$6,863	(\$17)	\$10,752
Scenario 4	\$108	\$3,139	\$171	\$6,882	\$52	\$10,821
Scenario 5	\$73	\$3,104	\$126	\$6,836	(\$4)	\$10,764
Scenario 6	\$594	\$3,625	\$880	\$7,590	\$718	\$11,486

#### Low Load Forecast (High Gas - \$600/kW network upgrades)

	Action Period		Decision Period		Planning Period	
Scenario	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)	Delta (\$M)	NPV (\$M)
		2022-2025	, ,	2022 - 2032	, ,	2022 - 2041
Scenario 2	\$0	\$2,811	\$0	\$5,939	\$0	\$9,119
Scenario 1	\$217	\$3,028	\$259	\$6,198	\$106	\$9,225
Scenario 3	\$157	\$2,968	\$187	\$6,126	\$46	\$9,164
Scenario 4	\$114	\$2,925	\$202	\$6,141	\$78	\$9,197
Scenario 5	\$78	\$2,888	\$148	\$6,086	\$10	\$9,129
Scenario 6	\$639	\$3,449	\$944	\$6,883	\$789	\$9,907

Exhibit SPS-AXM 3-16.1(V)(ShareFile)
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#### BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF SOUTHWESTERN )	
PUBLIC SERVICE COMPANY'S 2021	
INTEGRATED RESOURCE PLAN FOR )	
NEW MEXICO,	
)	CASE NO. 21-00169-UT
SOUTHWESTERN PUBLIC SERVICE )	
COMPANY,	
)	
APPLICANT.	
CERTIFICATE OF	SERVICE

I certify that true and correct copies of *Southwestern Public Service Company's 2021 Tolk Analysis* were electronically sent to each of the following on this 30th day of June 2021:

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Respectfully submitted,
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# **Appendix I - Harrington PVRR Tables**

#### Planning Load Forecast (Base Gas - \$400/kW network upgrades)

	Action	Peri	od	Decision Period			Planning Period			
Scenario	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NF	V (\$M)	
		202	22-2024		202	2022 - 2031		202	2 - 2041	
Scenario 2	\$0	\$	2,450	\$0	\$	6,861	\$0	\$	11,949	
Scenario 1	\$168	\$	2,618	\$148	\$	7,009	\$123	\$	12,072	
Scenario 3	(\$10)	\$	2,440	\$251	\$	7,112	\$439	\$	12,388	
Scenario 4	(\$10)	\$	2,440	\$436	\$	7,297	\$695	\$	12,644	
Scenario 5	\$92	\$	2,542	\$58	\$	6,919	\$62	\$	12,011	
Scenario 6	\$39	\$	2,490	\$11	\$	6,872	(\$5)	\$	11,944	

#### Financial Load Forecast (Base Gas - \$400/kW network upgrades)

	Action	Peri	od	Decision Period			Planning Period		
Scenario	Delta (\$M)	NPV (\$M) 2022-2024		Delta (\$M)		PV (\$M) 2 - 2031	Delta (\$M)	(\$M) NPV (\$1 2022 - 20	
Scenario 2	\$0	\$ 2,295		\$0	\$	6,155	\$0	\$	10,388
Scenario 1	\$165	\$	2,460	\$82	\$	6,237	\$47	\$	10,435
Scenario 3	(\$10)	\$	2,284	\$257	\$	6,412	\$443	\$	10,831
Scenario 4	(\$10)	\$	2,284	\$444	\$	6,599	\$698	\$	11,085
Scenario 5	\$92	\$	2,386	\$32	\$	6,187	\$27	\$	10,415
Scenario 6	\$40	\$	2,334	(\$10)	\$	6,145	(\$29)	\$	10,358

#### Planning Load Forecast (Low Gas - \$400/kW network upgrades)

	Action	Peri	od	Decision Period			Planning Period			
Scenario	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NF	PV (\$M)	
		202	22-2024		202	2022 - 2031		2022 - 204		
Scenario 2	\$0	\$	2,443	\$0	\$	6,747	\$0	\$	11,504	
Scenario 1	\$165	\$	2,608	\$168	\$	6,914	\$181	\$	11,685	
Scenario 3	(\$10)	\$	2,433	\$271	\$	7,018	\$485	\$	11,989	
Scenario 4	(\$10)	\$	2,433	\$459	\$	7,206	\$754	\$	12,258	
Scenario 5	\$92	\$	2,535	\$55	\$	6,802	\$71	\$	11,575	
Scenario 6	\$39	\$	2,483	(\$15)	\$	6,731	(\$31)	\$	11,473	

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# Financial Load Forecast (Low Gas - \$400/kW network upgrades)

	Action	Peri	od	Decision Period			Planning Period		
Scenario	Delta (\$M)		PV (\$M)	Delta (\$M)		V (\$M)	Delta (\$M)	NF	PV (\$M)
		202	22-2024		202	2 - 2031		202	22 - 2041
Scenario 2	\$0	\$	2,294	\$0	\$	6,088	\$0	\$	10,115
Scenario 1	\$160	\$	2,453	\$93	\$	6,181	\$92	\$	10,207
Scenario 3	(\$10)	\$	2,283	\$278	\$	6,367	\$495	\$	10,610
Scenario 4	(\$10)	\$	2,283	\$469	\$	6,557	\$765	\$	10,880
Scenario 5	\$92	\$	2,385	\$1	\$	6,089	(\$5)	\$	10,111
Scenario 6	\$40	\$	2,333	(\$26)	\$	6,062	(\$29)	\$	10,086

# Planning Load Forecast (High Gas - \$400/kW network upgrades)

	Action	Peri	od	Decision Period			Planning Period			
Scenario	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)	
		202	22-2024		202	2 - 2031		202	2 - 2041	
Scenario 2	\$0	\$	2,479	\$0	\$	7,016	\$0	\$	12,398	
Scenario 1	\$173	\$	2,653	\$115	\$	7,131	\$51	\$	12,449	
Scenario 3	(\$10)	\$	2,469	\$235	\$	7,251	\$328	\$	12,726	
Scenario 4	(\$10)	\$	2,469	\$420	\$	7,435	\$581	\$	12,979	
Scenario 5	\$92	\$	2,571	\$24	\$	7,040	\$18	\$	12,416	
Scenario 6	\$39	\$	2,519	(\$22)	\$	6,994	(\$24)	\$	12,375	

# Financial Load Forecast (High Gas - \$400/kW network upgrades)

	Action	Peri	lod	Decision Period			Planning Period			
Scenario	Delta (\$M)	NF	PV (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NF	PV (\$M)	
		202	22-2024		202	2022 - 2031		202	22 - 2041	
Scenario 2	\$0	\$	2,329	\$0	\$	6,266	\$0	\$	10,638	
Scenario 1	\$160	\$	2,489	\$47	\$	6,313	\$24	\$	10,662	
Scenario 3	(\$10)	\$	2,319	\$236	\$	6,503	\$352	\$	10,990	
Scenario 4	(\$10)	\$	2,319	\$422	\$	6,688	\$605	\$	11,243	
Scenario 5	\$92	\$	2,421	\$47	\$	6,313	\$17	\$	10,656	
Scenario 6	\$40	\$	2,369	(\$15)	\$	6,252	(\$28)	\$	10,611	

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### Planning Load Forecast (Base Gas - \$200/kW network upgrades)

	Action	Peri	od	Decision Period			Planning Period		
Scenario	Delta (\$M)	NP	PV (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NF	PV (\$M)
		202	22-2024		2022 - 2031			202	22 - 2041
Scenario 2	\$0	\$	2,452	\$0	\$	6,886	\$0	\$	11,803
Scenario 1	\$160	\$	2,612	(\$59)	\$	6,826	\$67	\$	11,870
Scenario 3	(\$10)	\$	2,442	\$225	\$	7,110	\$418	\$	12,221
Scenario 4	(\$10)	\$	2,442	\$422	\$	7,307	\$675	\$	12,478
Scenario 5	\$92	\$	2,544	(\$8)	\$	6,878	(\$5)	\$	11,798
Scenario 6	\$39	\$	2,491	(\$31)	\$	6,854	(\$26)	\$	11,777

### Financial Load Forecast (Base Gas - \$200/kW network upgrades)

	Action	Peri	od	Decision Period			Planning Period			
Scenario	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)	
		202	22-2024		202	22 - 2031		202	2 - 2041	
Scenario 2	\$0	\$	2,302	\$0	\$	6,203	\$0	\$	10,258	
Scenario 1	\$160	\$	2,462	\$3	\$	6,206	\$16	\$	10,275	
Scenario 3	(\$10)	\$	2,292	\$271	\$	6,474	\$459	\$	10,718	
Scenario 4	(\$10)	\$	2,292	\$415	\$	6,618	\$686	\$	10,944	
Scenario 5	\$92	\$	2,394	(\$33)	\$	6,169	(\$18)	\$	10,240	
Scenario 6	\$40	\$	2,342	(\$10)	\$	6,193	(\$18)	\$	10,240	

### Planning Load Forecast (Low Gas - \$200/kW network upgrades)

	Action	Peri	od	Decisio	n Per	riod	Planning Period			
Scenario	Delta (\$M)		PV (\$M) 22-2024	Delta (\$M)		V (\$M) 2 - 2031	Delta (\$M)		PV (\$M) 22 - 2041	
Scenario 2	\$0	\$	2,448	\$0	\$	6,753	\$0	\$	11,398	
Scenario 1	\$163	\$	2,610	\$74	\$	6,827	\$63	\$	11,462	
Scenario 3	(\$8)	\$	2,440	\$284	\$	7,037	\$493	\$	11,892	
Scenario 4	(\$13)	\$	2,435	\$452	\$	7,205	\$759	\$	12,157	
Scenario 5	\$95	\$	2,542	\$23	\$	6,776	\$19	\$	11,418	
Scenario 6	\$39	\$	2,487	\$3	\$	6,756	(\$19)	\$	11,379	

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# Financial Load Forecast (Low Gas - \$200/kW network upgrades)

	Action	Peri	od	Decision Period			Planning Period		
Scenario	Delta (\$M)		V (\$M)	Delta (\$M)		V (\$M)	Delta (\$M)		PV (\$M)
		202	22-2024		202	2 - 2031		202	2 - 2041
Scenario 2	\$0	\$	2,294	\$0	\$	6,088	\$0	\$	10,023
Scenario 1	\$163	\$	2,456	\$23	\$	6,111	\$26	\$	10,049
Scenario 3	(\$11)	\$	2,283	\$275	\$	6,363	\$495	\$	10,519
Scenario 4	(\$11)	\$	2,283	\$465	\$	6,554	\$764	\$	10,788
Scenario 5	\$92	\$	2,385	\$32	\$	6,120	\$27	\$	10,050
Scenario 6	\$43	\$	2,336	(\$12)	\$	6,076	(\$36)	\$	9,988

# Planning Load Forecast (High Gas - \$200/kW network upgrades)

	Action	Per	iod	Decision Period			Planning Period			
Scenario	Delta (\$M)	NF	PV (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NF	PV (\$M)	
		2022-2024			202	2 - 2031		202	22 - 2041	
Scenario 2	\$0	\$	2,462	\$0	\$	6,991	\$0	\$	12,100	
Scenario 1	\$160	\$	2,622	\$1	\$	6,992	(\$1)	\$	12,099	
Scenario 3	(\$10)	\$	2,452	\$235	\$	7,226	\$357	\$	12,457	
Scenario 4	(\$10)	\$	2,452	\$420	\$	7,411	\$614	\$	12,714	
Scenario 5	\$92	\$	2,554	(\$87)	\$	6,904	\$34	\$	12,134	
Scenario 6	\$40	\$	2,502	(\$26)	\$	6,965	(\$20)	\$	12,080	

### Financial Load Forecast (High Gas - \$200/kW network upgrades)

	Action	Action Period		Decision Period			Planning Period		
Scenario	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NF	PV (\$M)
		202	22-2024		202	2 - 2031		202	22 - 2041
Scenario 2	\$0	\$	2,302	\$0	\$	6,280	\$0	\$	10,493
Scenario 1	\$168	\$	2,471	(\$69)	\$	6,211	(\$100)	\$	10,393
Scenario 3	(\$10)	\$	2,292	\$221	\$	6,500	\$343	\$	10,837
Scenario 4	(\$10)	\$	2,292	\$391	\$	6,671	\$591	\$	11,084
Scenario 5	\$92	\$	2,394	(\$38)	\$	6,242	(\$40)	\$	10,453
Scenario 6	\$40	\$	2,342	(\$45)	\$	6,234	(\$55)	\$	10,438

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# Planning Load Forecast (Base Gas - \$600/kW network upgrades)

	Action Period		Decision Period			Planning Period			
Scenario	Delta (\$M)	NF	V (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NF	V (\$M)
		202	22-2024		202	2 - 2031		202	2 - 2041
Scenario 2	\$0	\$	2,446	\$0	\$	6,873	\$0	\$	12,076
Scenario 1	\$160	\$	2,605	\$176	\$	7,049	\$175	\$	12,251
Scenario 3	(\$10)	\$	2,435	\$224	\$	7,097	\$417	\$	12,492
Scenario 4	(\$10)	\$	2,435	\$409	\$	7,282	\$665	\$	12,741
Scenario 5	\$92	\$	2,537	\$95	\$	6,968	\$87	\$	12,163
Scenario 6	\$39	\$	2,485	(\$13)	\$	6,860	(\$31)	\$	12,044

# Financial Load Forecast (Base Gas - \$600/kW network upgrades)

	Action Period		Decision Period			Planning Period			
Scenario	Delta (\$M)		V (\$M) 22-2024	Delta (\$M)		PV (\$M) 2 - 2031	Delta (\$M)		PV (\$M) 2 - 2041
Scenario 2	\$0	\$	2,295	\$0	\$	6,155	\$0	\$	10,467
Scenario 1	\$160	\$	2,454	\$106	\$	6,261	\$106	\$	10,573
Scenario 3	(\$10)	\$	2,284	\$257	\$	6,412	\$443	\$	10,911
Scenario 4	(\$10)	\$	2,284	\$444	\$	6,599	\$698	\$	11,165
Scenario 5	\$92	\$	2,387	\$2	\$	6,157	\$20	\$	10,487
Scenario 6	\$40	\$	2,334	(\$6)	\$	6,149	(\$31)	\$	10,437

#### Planning Load Forecast (Low Gas - \$600/kW network upgrades)

	Action	Peri	od	Decisio	n Per	riod	Plannin	g Pe	riod
Scenario	Delta (\$M)		V (\$M) 22-2024	Delta (\$M)		V (\$M) 2 - 2031	Delta (\$M)		PV (\$M) 22 - 2041
Scenario 2	\$0	\$	2,443	\$0	\$	6,748	\$0	\$	11,575
Scenario 1	\$160	\$	2,603	\$232	\$	6,979	\$266	\$	11,841
Scenario 3	(\$10)	\$	2,433	\$276	\$	7,024	\$498	\$	12,073
Scenario 4	(\$10)	\$	2,433	\$461	\$	7,209	\$765	\$	12,340
Scenario 5	\$103	\$	2,546	\$105	\$	6,852	\$125	\$	11,700
Scenario 6	\$40	\$	2,483	(\$0)	\$	6,747	(\$13)	\$	11,562

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# Financial Load Forecast (Low Gas - \$600/kW network upgrades)

	Action	Per	iod	Decisio	n Pei	riod	Plannin	g Pe	riod
Scenario	Delta (\$M)	NF	PV (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NF	V (\$M)
		20:	22-2024		202	2 - 2031		202	2 - 2041
Scenario 2	\$0	\$	2,294	\$0	\$	6,107	\$0	\$	10,167
Scenario 1	\$171	\$	2,465	\$111	\$	6,218	\$141	\$	10,308
Scenario 3	(\$10)	\$	2,283	\$260	\$	6,367	\$491	\$	10,658
Scenario 4	(\$10)	\$	2,283	\$450	\$	6,557	\$761	\$	10,928
Scenario 5	\$92	\$	2,385	(\$18)	\$	6,089	\$17	\$	10,185
Scenario 6	\$39	\$	2,333	(\$23)	\$	6,084	(\$16)	\$	10,151

### Planning Load Forecast (High Gas - \$600/kW network upgrades)

	Action Period		Decision Period			Planning Period			
Scenario	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)	Delta (\$M)	NP	V (\$M)
		202	22-2024		202	2 - 2031		202	2 - 2041
Scenario 2	\$0	\$	2,520	\$0	\$	7,163	\$0	\$	12,585
Scenario 1	\$126	\$	2,646	\$40	\$	7,203	\$125	\$	12,710
Scenario 3	(\$56)	\$	2,464	\$44	\$	7,207	\$277	\$	12,862
Scenario 4	(\$44)	\$	2,476	\$279	\$	7,443	\$537	\$	13,122
Scenario 5	\$51	\$	2,570	(\$64)	\$	7,100	\$53	\$	12,638
Scenario 6	\$40	\$	2,559	(\$1)	\$	7,162	(\$14)	\$	12,571

#### Financial Load Forecast (High Gas - \$600/kW network upgrades)

Action Per		Peri	Period Decision Period		Planning Period			
Scenario	Delta (\$M)		PV (\$M) 22-2024	Delta (\$M)	V (\$M) 2 - 2031	Delta (\$M)		PV (\$M) 22 - 2041
Scenario 2	\$0	\$	2,315	\$0	\$ 6,231	\$0	\$	10,768
Scenario 1	\$160	\$	2,475	\$96	\$ 6,327	\$86	\$	10,854
Scenario 3	(\$10)	\$	2,305	\$227	\$ 6,458	\$346	\$	11,114
Scenario 4	(\$10)	\$	2,305	\$412	\$ 6,643	\$598	\$	11,366
Scenario 5	\$92	\$	2,407	\$2	\$ 6,233	\$16	\$	10,784
Scenario 6	\$40	\$	2,355	(\$6)	\$ 6,225	(\$24)	\$	10,745

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# Scenario Expansion Plan - Base Gas / No Carbon

		Most Cost-Effective Resource	Alternative Resource Portfolio	Alternative Resource Portfolio
		Portfolio (Base Gas / Financial	(Base Gas / Low Load Forecast /	(Base Gas / Planning Load
		Load Forecast / \$400/kW)	\$400/kW)	Forecast / \$400/kW)
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan
	Plant X1 - 39 MW			
	Plant X2 - 70 MW			
2022	Plant X3 - 0 MW			
	Cunningham 1 - 42 MW			
	Nichols 1 - 112 MW			
2023	Nichols 2 - 111 MW			
	BlackHawk 1 - 111.685 MW	Solar RFI S_009c - 40 MW	Solar RFI S_009c - 40 MW	Solar RFI S_009c - 40 MW
	BlackHawk 2 - 111.685 MW	Wind RFI W_004d - 509 MW	Wind RFI W_004d - 509 MW	Wind RFI W_004d - 509 MW
		Wind (Wind + Battery RFI)	Wind (Wind + Battery RFI)	Wind (Wind + Battery RFI)
2024		WB_001a - 129 MW	WB_001a - 129 MW	WB_001a - 129 MW
		Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW
		WB_0018-313 - 20 WW	WB_0018-313 - 20 WW	Wind RFI W_006a - 150 MW
	CapRock Wind - 80 MW			Willia KFI W_000a - 130 WW
	Cunningham 2 - 183 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW
	Maddox 2 - 69 MW	VVIIId 1(11 VV_002b - 1000 IVIVV	VVIIId I(I I VV_002D - 1000 IVIVV	Willia Ki 1 W_002b - 1000 WW
2025	Maddox 3 - 0 MW			
	San Juan Wind - 120 MW			
	Sali Juani Willu - 120 WW	Wind RFI W_001k - 500 MW	Wind RFI W_001k - 500 MW	Solar Generic - 40 MW
2026		Willia III 1 W_001K 300 WW	Willia IVI VV_001K 300 WW	Wind RFI W_001k - 500 MW
	Plant X 4 - 191 MW			Willia Ki i W_OOIK Soo WW
	1101107 11 132 11111			
2027	Spinning Spur Wind - 161 MW			
	Wildorado Wind - 161 MW			
2028	Maddox 1 - 112 MW			CT F Generic - 233.3 MW
2029				CT F Generic - 233.3 MW
2030	National Wind - 0.7 MW		CT F Generic - 233.3 MW	CT F Generic - 233.3 MW
2030	Nichols 3 - 246 MW			
	Jones 1 - 243 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
	SunEd 4 Solar - 10 MW			
2031	SunEd 3 Solar - 10 MW			
2031	SunEd 2 Solar - 10 MW			
	SunEd 1 Solar - 10 MW			
	SunEd 5 Solar - 10 MW			
2022	Tolk 1 - 532 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2032	Tolk 2 - 537 MW			
	Hobbs CC - 604 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2033	MesaLands Wind - 1.48 MW	Solar Generic - 410 MW	Solar Generic - 200 MW	Solar Generic - 430 MW
		Battery Generic - 110 MW		Battery Generic - 30 MW

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### Scenario Expansion Plan - Base Gas / No Carbon

		Most Cost-Effective Resource Portfolio (Base Gas / Financial Load Forecast / \$400/kW)	Alternative Resource Portfolio (Base Gas / Low Load Forecast / \$400/kW)	Alternative Resource Portfolio (Base Gas / Planning Load Forecast / \$400/kW)
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan
	Jones 2 - 243 MW	CT F Generic - 466.6 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW
2034	Quay County - 23 MW	Solar Generic - 740 MW	Solar Generic - 780 MW	Solar Generic - 930 MW
2034	Mammoth Wind - 200 MW			
	PaloDuro Wind - 250 MW			
2035	Roosevelt Wind - 250 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW
2033		Solar Generic - 210 MW	Solar Generic - 180 MW	Solar Generic - 100 MW
2036	Harrington 1 - Gas - 340 MW	Solar Generic - 60 MW	Solar Generic - 100 MW	CT F Generic - 233.3 MW
2027		CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW
2037		Solar Generic - 100 MW		
2038	Harrington 2 - Gas - 355 MW			
2020		CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2039				Solar Generic - 90 MW
	Harrington 3 - Gas - 355 MW	Solar Generic - 40 MW	Solar Generic - 60 MW	Solar Generic - 40 MW
2040	Cunningham 3 - 106 MW			
	Cunningham 4 - 101 MW			
	Rosewell Solar - 70 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2041	Chaves County Solar - 70 MW	Solar Generic - 220 MW	Solar Generic - 250 MW	Solar Generic - 250 MW
		Battery Generic - 70 MW	Battery Generic - 10 MW	Battery Generic - 30 MW

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### Scenario Expansion Plan - Low Gas / No Carbon

		Alternative Resource Portfolio (Low Gas / Financial Load Forecast / \$400/kW)	Alternative Resource Portfolio (Low Gas / Low Load Forecast / \$400/kW)	Alternative Resource Portfolio (Low Gas / Planning Load Forecast / \$400/kW)
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan
	Plant X1 - 39 MW			
	Plant X2 - 70 MW			
2022	Plant X3 - 0 MW			
	Cunningham 1 - 42 MW			
	Nichols 1 - 112 MW			
2023	Nichols 2 - 111 MW			
	BlackHawk 1 - 111.685	Solar RFI S_009c - 40 MW	Solar RFI S_009c - 40 MW	Solar RFI S_009c - 40 MW
	MW BlackHawk 2 - 111.685 MW	Wind RFI W_004d - 509 MW	Wind RFI W_004d - 509 MW	Wind RFI W_004d - 509 MW
2024		Wind (Wind + Battery RFI)	Wind (Wind + Battery RFI)	Wind (Wind + Battery RFI)
2024		WB_001a - 129 MW	WB_001a - 129 MW	WB_001a - 129 MW
		Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW
	CapRock Wind - 80 MW	WB_001a-313 - 20 WW	VVB_001a-313 - 20 IVIVV	WB_001a-313 - 20 WW
	Cunningham 2 - 183 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW
	Marildon 2 CO MAN			
2025	Maddox 2 - 69 MW			
	Maddox 3 - 0 MW			
	San Juan Wind - 120 MW			S   S   20 MM/
2026				Solar Generic - 20 MW
	Plant X 4 - 191 MW			
2027	Spinning Spur Wind - 161 MW			
	Wildorado Wind - 161 MW			
2028	Maddox 1 - 112 MW			CT F Generic - 466.6 MW
2029				
2030	National Wind - 0.7 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	CT F Generic - 466.6 MW
	Nichols 3 - 246 MW			
	Jones 1 - 243 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
	SunEd 4 Solar - 10 MW			
2031	SunEd 3 Solar - 10 MW			
	SunEd 2 Solar - 10 MW			
	SunEd 1 Solar - 10 MW			
	SunEd 5 Solar - 10 MW			
2032	Tolk 1 - 532 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2032	Tolk 2 - 537 MW			
	Hobbs CC - 604 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2033	MesaLands Wind - 1.48	Solar Generic - 370 MW	Solar Generic - 390 MW	Solar Generic - 380 MW
	MW			

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# Scenario Expansion Plan - Low Gas / No Carbon

		Alternative Resource Portfolio (Low Gas / Financial Load Forecast / \$400/kW)	Alternative Resource Portfolio (Low Gas / Low Load Forecast / \$400/kW)	Alternative Resource Portfolio (Low Gas / Planning Load Forecast / \$400/kW)
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan
	Jones 2 - 243 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
	Quay County - 23 MW	Solar Generic - 400 MW	Solar Generic - 380 MW	Solar Generic - 470 MW
2034	Mammoth Wind - 200 MW			
	PaloDuro Wind - 250 MW			
	Roosevelt Wind - 250 MW	CT F Generic - 233.3 MW	CT F Generic - 466.6 MW	CT F Generic - 233.3 MW
2035		Solar Generic - 180 MW		Solar Generic - 200 MW
2036	Harrington 1 - Gas - 340 MW	Solar Generic - 150 MW	CT F Generic - 233.3 MW	Solar Generic - 220 MW
2037		CT F Generic - 233.3 MW		CT F Generic - 233.3 MW
2037		Solar Generic - 140 MW		
2038	Harrington 2 - Gas - 355 MW			Solar Generic - 40 MW
		CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2039				Solar Generic - 60 MW
2040	Harrington 3 - Gas - 355 MW Cunningham 3 - 106 MW Cunningham 4 - 101 MW	Solar Generic - 50 MW		Solar Generic - 100 MW
	Rosewell Solar - 70 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2041	Chaves County Solar - 70 MW	Solar Generic - 140 MW	Solar Generic - 300 MW	Solar Generic - 350 MW
	Property is			Battery Generic - 10 MW

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# Scenario Expansion Plan - High Gas / No Carbon

		Alternative Resource Portfolio	Alternative Resource Portfolio	Alternative Resource Portfolio
		(High Gas / Financial Load	(High Gas / Low Load Forecast /	(High Gas / Planning Load
		Forecast / \$400/kW)	\$400/kW)	Forecast / \$400/kW)
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan
	Plant X1 - 39 MW			
	Plant X2 - 70 MW			
2022	Plant X3 - 0 MW			
	Cunningham 1 - 42 MW			
	Nichols 1 - 112 MW			
2023	Nichols 2 - 111 MW			
	BlackHawk 1 - 111.685 MW	Solar RFI S_009c - 40 MW	Solar RFI S_009c - 40 MW	Solar RFI S_009c - 40 MW
	BlackHawk 2 - 111.685 MW	_ Wind RFI W_004d - 509 MW	_ Wind RFI W_004d - 509 MW	– Wind RFI W_004d - 509 MW
		Wind (Wind + Battery RFI)	Wind (Wind + Battery RFI)	Wind (Wind + Battery RFI)
		WB_001a - 129 MW	WB_001a - 129 MW	WB_001a - 129 MW
2024		Battery (Wind + Battery RFI)	Battery (Wind + Battery RFI)	Battery (Wind + Battery RFI)
		WB_001a-SYS - 20 MW	WB_001a-SYS - 20 MW	WB_001a-SYS - 20 MW
		Wind RFI W_003d - 300 MW		Wind RFI W_003d - 300 MW
		Wind RFI W_005a - 250 MW		Wind RFI W_005a - 250 MW
	CapRock Wind - 80 MW	Wind RFI W_006a - 150 MW		Wind RFI W_006a - 150 MW
	Cunningham 2 - 183 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW
2025	Maddox 2 - 69 MW			Solar RFI S_001a - 385 MW
2025	Maddox 3 - 0 MW			
	San Juan Wind - 120 MW			
2026		Wind RFI W_001k - 500 MW	Wind RFI W_001k - 500 MW	Wind RFI W_001k - 500 MW
	Plant X 4 - 191 MW			
	Spinning Spur Wind - 161			
2027	MW			
	Wildorado Wind - 161 MW			
2028	Maddox 1 - 112 MW			
2029				CT F Generic - 233.3 MW
	National Wind - 0.7 MW	Solar Generic - 110 MW		CT F Generic - 466.6 MW
2030	Nichols 3 - 246 MW			
	Jones 1 - 243 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
	SunEd 4 Solar - 10 MW			
	SunEd 3 Solar - 10 MW			
2031	SunEd 2 Solar - 10 MW			
	SunEd 1 Solar - 10 MW			
	SunEd 5 Solar - 10 MW			
	Tolk 1 - 532 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2032		CT & Generic - 400.0 IVIW	CT F Generic - 400.0 IVIVV	CT C GEHELIC - 400.0 IVIW
	Tolk 2 - 537 MW	CT F Companie ACC C NAM	CT F Commis ACC C MAN	CT F Commission ACC CAMAL
	Hobbs CC - 604 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2033	MesaLands Wind - 1.48 MW	Solar Generic - 430 MW	Solar Generic - 360 MW	Solar Generic - 140 MW
		Battery Generic - 20 MW	Battery Generic - 110 MW	Battery Generic - 20 MW

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# Scenario Expansion Plan - High Gas / No Carbon

		Alternative Resource Portfolio (High Gas / Financial Load Forecast / \$400/kW)	Alternative Resource Portfolio (High Gas / Low Load Forecast / \$400/kW)	Alternative Resource Portfolio (High Gas / Planning Load Forecast / \$400/kW)	
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan	
	Jones 2 - 243 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	
	Quay County - 23 MW	Solar Generic - 610 MW	Solar Generic - 760 MW	Solar Generic - 800 MW	
2034	Mammoth Wind - 200 MW				
	PaloDuro Wind - 250 MW				
2025	Roosevelt Wind - 250 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	
2035		Solar Generic - 150 MW	Solar Generic - 200 MW	Solar Generic - 200 MW	
	Harrington 1 - Gas - 340 MW	Solar Generic - 120 MW	Solar Generic - 100 MW	Solar Generic - 120 MW	
2036					
		CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	
2037		Solar Generic - 80 MW		Solar Generic - 30 MW	
2038	Harrington 2 - Gas - 355 MW	Solar Generic - 190 MW	Solar Generic - 40 MW	Solar Generic - 100 MW	
		CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	
2039		Solar Generic - 100 MW		Solar Generic - 180 MW	
		Battery Generic - 10 MW			
	Harrington 3 - Gas - 355 MW	Solar Generic - 40 MW	Solar Generic - 80 MW	Solar Generic - 440 MW	
2040	Cunningham 3 - 106 MW			Battery Generic - 10 MW	
	Cunningham 4 - 101 MW			,	
	Rosewell Solar - 70 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	
2041	Chaves County Solar - 70 MW	Solar Generic - 260 MW	Solar Generic - 300 MW	Solar Generic - 480 MW	
		Battery Generic - 70 MW	Battery Generic - 70 MW	Battery Generic - 120 MW	

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# Scenario Expansion Plan - Financial Load / Carbon

		Alternative Resource Portfolio Alternative Resource Portfolio Alternative Resource Portfolio			
		(Base Gas / Financial Load Forecast / \$400/kW / \$8	• Or Address School Control Co		
		Carbon	Carbon	Carbon	
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan	
Р	Plant X1 - 39 MW				
Р	Plant X2 - 70 MW				
<b>2022</b> P	Plant X3 - 0 MW				
С	Cunningham 1 - 42 MW				
N	Nichols 1 - 112 MW				
2023 N	Nichols 2 - 111 MW				
В	BlackHawk 1 - 111.685 MW	Solar RFI S_009c - 40 MW	Solar RFI S_009c - 40 MW	Solar RFI S_009c - 40 MW	
В	BlackHawk 2 - 111.685 MW	Solar (Solar + Battery RFI)	Solar (Solar + Battery RFI)	Solar (Solar + Battery RFI)	
		S_004e - 500 MW	S_004e - 500 MW	S_004e - 500 MW	
		Battery (Solar + Battery RFI)	Battery (Solar + Battery RFI)	Battery (Solar + Battery RFI)	
		SB_003e-BTM/SYS - 200 MW	SB_003e-BTM/SYS - 200 MW	SB_003e-BTM/SYS - 200 MW	
2024		Wind RFI W_004d - 509 MW	Wind RFI W_004d - 509 MW	Wind RFI W_004d - 509 MW	
		Wind (Wind + Battery RFI)	Wind (Wind + Battery RFI)	Wind (Wind + Battery RFI)	
		WB_001a - 129 MW	WB_001a - 129 MW	WB_001a - 129 MW	
		Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	
c	CapRock Wind - 80 MW	Wind RFI W_005a - 250 MW	Wind RFI W_005a - 250 MW	Wb_001a-313 - 20 MW Wind RFI W_005a - 250 MW	
ا ا	apriodictional de min		Wind RFI W_006a - 150 MW	Wind RFI W_006a - 150 MW	
C	Cunningham 2 - 183 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW	
2025 №	Maddox 2 - 69 MW		Solar RFI S_001a - 385 MW	Solar RFI S_001a - 385 MW	
N	Vladdox 3 - 0 MW			Solar RFI S_007a - 500 MW	
S	San Juan Wind - 120 MW				
2026		Wind RFI W_001k - 500 MW	Wind RFI W_001k - 500 MW	Wind RFI W_001k - 500 MW	
Р	Plant X 4 - 191 MW				
<b>2027</b> S	Spinning Spur Wind - 161 MW				
٧	Wildorado Wind - 161 MW				
2028 №	Maddox 1 - 112 MW				
2029					
<b>2030</b> N	National Wind - 0.7 MW	Solar Generic - 10 MW	Solar Generic - 20 MW		
N	Nichols 3 - 246 MW				
7800	ones 1 - 243 MW	CT F Generic - 466.6 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	
	SunEd 4 Solar - 10 MW				
<b>2031</b> S	SunEd 3 Solar - 10 MW				
S	SunEd 2 Solar - 10 MW				
S	SunEd 1 Solar - 10 MW				
S	SunEd 5 Solar - 10 MW				
Т	w 1	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	
	Tolk 1 - 532 MW	CTT Generic - 400.0 WW			
2032	Tolk 1 - 532 MW Tolk 2 - 537 MW	CTT Generic - 400.0 WW			
<b>2032</b> T		CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	
<b>2032</b> T	Tolk 2 - 537 MW		CT F Generic - 466.6 MW Solar Generic - 60 MW	CT F Generic - 466.6 MW Battery Generic - 60 MW	

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# Scenario Expansion Plan - Financial Load / Carbon

	Alternative Resource Portfolio	Alternative Resource Portfolio	Alternative Resource Portfolio
	(Base Gas / Financial Load	(Base Gas / Financial Load	(Base Gas / Financial Load
			Forecast / \$400/kW / \$40
		Carbon	Carbon
Retirements	Expansion Plan	Expansion Plan	Expansion Plan
Jones 2 - 243 MW	Solar Generic - 760 MW	CT F Generic - 466.6 MW	Solar Generic - 140 MW
Quay County - 23 MW		Solar Generic - 250 MW	Battery Generic - 200 MW
Mammoth Wind - 200 MW			
PaloDuro Wind - 250 MW			
Roosevelt Wind - 250 MW	CT F Generic - 466.6 MW	Solar Generic - 180 MW	CT F Generic - 233.3 MW
			Solar Generic - 70 MW
Harrington 1 - Gas - 340 MW		Solar Generic - 10 MW	CT F Generic - 233.3 MW
			Solar Generic - 90 MW
	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	Solar Generic - 90 MW
		Solar Generic - 160 MW	
Harrington 2 - Gas - 355 MW	Solar Generic - 10 MW		
	CT F Generic - 233.3 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
	Solar Generic - 70 MW	Solar Generic - 60 MW	Solar Generic - 100 MW
	Battery Generic - 50 MW	Battery Generic - 10 MW	
Harrington 3 - Gas - 355 MW	Solar Generic - 50 MW	Solar Generic - 80 MW	Solar Generic - 10 MW
Cunningham 3 - 106 MW	Battery Generic - 10 MW		Battery Generic - 20 MW
Cunningham 4 - 101 MW			
Rosewell Solar - 70 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
Chaves County Solar - 70 MW	Solar Generic - 240 MW	Solar Generic - 90 MW	Solar Generic - 60 MW
	Battery Generic - 60 MW	Battery Generic - 20 MW	Battery Generic - 50 MW
	Jones 2 - 243 MW Quay County - 23 MW Mammoth Wind - 200 MW PaloDuro Wind - 250 MW Roosevelt Wind - 250 MW Harrington 1 - Gas - 340 MW  Harrington 2 - Gas - 355 MW Cunningham 3 - 106 MW Cunningham 4 - 101 MW Rosewell Solar - 70 MW	Retirements  Retirements  Solar Generic - 760 MW  Quay County - 23 MW  Mammoth Wind - 250 MW  Roosevelt Wind - 250 MW  Harrington 1 - Gas - 340 MW  Harrington 2 - Gas - 355 MW  CT F Generic - 10 MW  Solar Generic - 70 MW  CT F Generic - 233.3 MW  CT F Generic - 10 MW  Solar Generic - 10 MW  CT F Generic - 10 MW  CT F Generic - 203.3 MW  CT F Generic - 10 MW  CT F Generic - 200 MW	Forecast / \$400/kW / \$8 Carbon  Retirements Expansion Plan  Solar Generic - 760 MW  Quay County - 23 MW Mammoth Wind - 200 MW PaloDuro Wind - 250 MW  Roosevelt Wind - 250 MW  CT F Generic - 466.6 MW  Solar Generic - 180 MW  CT F Generic - 10 MW  CT F Generic - 10 MW  CT F Generic - 233.3 MW Solar Generic - 160 MW  CT F Generic - 233.3 MW Solar Generic - 160 MW  CT F Generic - 10 MW  CT F Generic - 10 MW  CT F Generic - 10 MW  Solar Generic - 10 MW  CT F Generic - 233.3 MW Solar Generic - 10 MW  Solar Generic - 10 MW  CT F Generic - 233.3 MW Solar Generic - 10 MW  CT F Generic - 2466.6 MW Solar Generic - 10 MW  CT F Generic - 2466.6 MW Solar Generic - 10 MW  CT F Generic - 240 MW  CT F Generic - 240 MW  Solar Generic - 466.6 MW Solar Generic - 466.6 MW Solar Generic - 240 MW Solar Generic - 90 MW

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### Scenario Expansion Plan - Low Load / Carbon

		Alternative Resource Portfolio (Base Gas / Low Load Forecast / \$400/kW / \$8 Carbon	Alternative Resource Portfolio (Base Gas / Low Load Forecast / \$400/kW / \$20 Carbon	Alternative Resource Portfolio (Base Gas / Low Load Forecast / \$400/kW / \$40 Carbon	
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan	
2022	Plant X1 - 39 MW Plant X2 - 70 MW Plant X3 - 0 MW Cunningham 1 - 42 MW Nichols 1 - 112 MW				
2023	Nichols 2 - 111 MW				
2024	BlackHawk 1 - 111.685 MW BlackHawk 2 - 111.685 MW CapRock Wind - 80 MW	Solar RFI S_009c - 40 MW Wind RFI W_004d - 509 MW Wind (Wind + Battery RFI) WB_001a - 129 MW Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Solar RFI S_009c - 40 MW  Solar (Solar + Battery RFI) S_004e - 500 MW  Battery (Solar + Battery RFI) SB_003e-BTM/SYS - 200 MW Wind RFI W_004d - 509 MW  Wind (Wind + Battery RFI) WB_001a - 129 MW  Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Solar RFI S_009c - 40 MW  Solar (Solar + Battery RFI) S_004e - 500 MW  Battery (Solar + Battery RFI) SB_003e-BTM/SYS - 200 MW Wind RFI W_004d - 509 MW  Wind (Wind + Battery RFI) WB_001a - 129 MW  Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	
2025	Cunningham 2 - 183 MW  Maddox 2 - 69 MW  Maddox 3 - 0 MW  San Juan Wind - 120 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW	Wind RFI W_002b - 1000 MW Solar RFI S_001a - 385 MW	
2026		Wind RFI W_001k - 500 MW	Wind RFI W_001k - 500 MW	Wind RFI W_001k - 500 MW	
2027	Plant X 4 - 191 MW Spinning Spur Wind - 161 MW Wildorado Wind - 161 MW				
2028	Maddox 1 - 112 MW				
2029					
2030	National Wind - 0.7 MW Nichols 3 - 246 MW			Solar Generic - 30 MW	
2031	Jones 1 - 243 MW SunEd 4 Solar - 10 MW SunEd 3 Solar - 10 MW SunEd 2 Solar - 10 MW SunEd 1 Solar - 10 MW SunEd 5 Solar - 10 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW Solar Generic - 110 MW	CT F Generic - 233.3 MW Battery Generic - 20 MW	

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# Scenario Expansion Plan - Low Load / Carbon

		Alternative Resource Portfolio (Base Gas / Low Load Forecast / \$400/kW / \$8 Carbon	Alternative Resource Portfolio (Base Gas / Low Load Forecast / \$400/kW / \$20 Carbon	Alternative Resource Portfolio (Base Gas / Low Load Forecast / \$400/kW / \$40 Carbon
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan
2032	Tolk 1 - 532 MW Tolk 2 - 537 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2033	Hobbs CC - 604 MW MesaLands Wind - 1.48 MW	CT F Generic - 466.6 MW Solar Generic - 360 MW Battery Generic - 110 MW	CT F Generic - 466.6 MW Battery Generic - 10 MW	CT F Generic - 466.6 MW Battery Generic - 120 MW
2034	Jones 2 - 243 MW Quay County - 23 MW Mammoth Wind - 200 MW PaloDuro Wind - 250 MW	CT F Generic - 233.3 MW Solar Generic - 760 MW	Solar Generic - 660 MW	CT F Generic - 233.3 MW Solar Generic - 280 MW
2035	Roosevelt Wind - 250 MW	CT F Generic - 233.3 MW Solar Generic - 180 MW	CT F Generic - 466.6 MW	CT F Generic - 233.3 MW Solar Generic - 160 MW
2036	Harrington 1 - Gas - 340 MW	Solar Generic - 140 MW		Solar Generic - 10 MW
2037		CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW Solar Generic - 110 MW
2038	Harrington 2 - Gas - 355 MW			
2039		CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW Solar Generic - 30 MW
2040	Harrington 3 - Gas - 355 MW Cunningham 3 - 106 MW Cunningham 4 - 101 MW	Solar Generic - 60 MW	Solar Generic - 30 MW	Solar Generic - 60 MW
2041	Rosewell Solar - 70 MW Chaves County Solar - 70 MW	CT F Generic - 466.6 MW Solar Generic - 200 MW Battery Generic - 30 MW	CT F Generic - 466.6 MW Solar Generic - 220 MW Battery Generic - 30 MW	CT F Generic - 466.6 MW Solar Generic - 80 MW Battery Generic - 30 MW

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# Scenario Expansion Plan - Planning Load / Carbon

	TOTAL TANDAMENT TOTAL	- Flaming Load / Carbo	
	Alternative Resource Portfolio (Base Gas / Planning Load Forecast / \$400/kW / \$8 Carbon	Alternative Resource Portfolio (Base Gas / Planning Load Forecast / \$400/kW / \$20 Carbon	Alternative Resource Portfolio (Base Gas / Planning Load Forecast / \$400/kW / \$40 Carbon
Retirements	Expansion Plan	Expansion Plan	Expansion Plan
Plant X1 - 39 MW Plant X2 - 70 MW Plant X3 - 0 MW			
Cunningham 1 - 42 MW Nichols 1 - 112 MW			
Nichols 2 - 111 MW			
BlackHawk 1 - 111.685 MW BlackHawk 2 - 111.685 MW	Solar RFI S_009c - 40 MW Solar (Solar + Battery RFI)	Solar RFI S_009c - 40 MW Solar (Solar + Battery RFI)	Solar RFI S_009c - 40 MW Solar (Solar + Battery RFI)
	S_004e - 500 MW  Battery (Solar + Battery RFI)  SB_003e-BTM/SYS - 200 MW  Wind RFI W_004d - 509 MW  Wind (Wind + Battery RFI)	S_004e - 500 MW  Battery (Solar + Battery RFI)  SB_003e-BTM/SYS - 200 MW  Wind RFI W_003d - 300 MW  Wind RFI W_004d - 509 MW	S_004e - 500 MW Battery (Solar + Battery RFI) SB_003e-BTM/SYS - 200 MW Solar (Solar + Battery RFI) S_002d - 250 MW Battery (Solar + Battery RFI)
	WB_001a - 129 MW Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW	Wind (Wind + Battery RFI) WB_001a - 129 MW	SB_001d-BTM/SYS - 125 MW Wind RFI W_003d - 300 MW
CapRock Wind - 80 MW	Wind RFI W_005a - 250 MW Wind RFI W_006a - 150 MW	Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW Wind RFI W_005a - 250 MW	Wind RFI W_004d - 509 MW Wind (Wind + Battery RFI) WB_001a - 129 MW
		Wind RFI W_006a - 150 MW	Battery (Wind + Battery RFI) WB_001a-SYS - 20 MW Wind RFI W_005a - 250 MW Wind RFI W_006a - 150 MW
Cunningham 2 - 183 MW	Wind RELW 002b - 1000 MW	Wind RELW 002b - 1000 MW	Wind RFI W_002b - 1000 MW
			Solar RFI S_001a - 385 MW
Maddox 3 - 0 MW	300 14173_0074 300 14144	Solar RFI S_007a - 500 MW	Solar RFI S_007a - 500 MW
Can Judii Friid 120 IVIE	Wind RFI W 001k - 500 MW	Wind RFI W 001k - 500 MW	Wind RFI W_001k - 500 MW
Plant X 4 - 191 MW			
Spinning Spur Wind - 161 MW			
Wildorado Wind - 161 MW			
Maddox 1 - 112 MW			
	CT F Generic - 233.3 MW		
National Wind - 0.7 MW Nichols 3 - 246 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW Solar Generic - 20 MW	Solar Generic - 250 MW
	Plant X1 - 39 MW Plant X2 - 70 MW Plant X3 - 0 MW Cunningham 1 - 42 MW Nichols 1 - 112 MW Nichols 2 - 111 MW BlackHawk 1 - 111.685 MW BlackHawk 2 - 111.685 MW  CapRock Wind - 80 MW  Cunningham 2 - 183 MW Maddox 2 - 69 MW Maddox 3 - 0 MW San Juan Wind - 120 MW  Plant X 4 - 191 MW Spinning Spur Wind - 161 MW Wildorado Wind - 161 MW Maddox 1 - 112 MW	Retirements Expansion Plan  Plant X1 - 39 MW Plant X2 - 70 MW Plant X3 - 0 MW Cunningham 1 - 42 MW Nichols 2 - 111 MW  BlackHawk 2 - 111.685 MW BlackHawk 2 - 111.685 MW  Wind RFI W_004d - 509 MW Wind RFI W_005a - 250 MW Wind RFI W_005a - 250 MW Wind RFI W_006a - 150 MW  Cunningham 2 - 183 MW Wind RFI W_006a - 150 MW Wind RFI W_001a - 129 MW Wind RFI W_005a - 250 MW Wind RFI W_006a - 150 MW Wind RFI W_006a - 150 MW  Wind RFI W_001a - 120 MW  Wind RFI W_001a - 500 MW Wind RFI W_001b - 500 MW  Wind RFI W_001a - 200 MW  Wind RFI W_001a - 200 MW  Wind RFI W_001a - 200 MW  CT F Generic - 233.3 MW  National Wind - 0.7 MW  CT F Generic - 233.3 MW	Alternative Resource Portfolio (Base Gas / Planning Load Forecast / \$400/kW / \$8 Carbon   (Base Gas / Planning Load Forecast / \$400/kW / \$8 Carbon   (Base Gas / Planning Load Forecast / \$400/kW / \$20 Carbon

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# Scenario Expansion Plan - Planning Load / Carbon

		•		
		Alternative Resource Portfolio (Base Gas / Planning Load Forecast / \$400/kW / \$8 Carbon	(Base Gas / Planning Load	Alternative Resource Portfolio (Base Gas / Planning Load Forecast / \$400/kW / \$40 Carbon
Year	Retirements	Expansion Plan	Expansion Plan	Expansion Plan
	Jones 1 - 243 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
	SunEd 4 Solar - 10 MW			Solar Generic - 10 MW
	SunEd 3 Solar - 10 MW			
2031	SunEd 2 Solar - 10 MW			
	SunEd 1 Solar - 10 MW			
	SunEd 5 Solar - 10 MW			
	Tolk 1 - 532 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2032	Tolk 2 - 537 MW			Solar Generic - 80 MW
	Hobbs CC - 604 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2033	MesaLands Wind - 1.48 MW		Solar Generic - 150 MW	Solar Generic - 70 MW
			Battery Generic - 150 MW	Battery Generic - 300 MW
	Jones 2 - 243 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	CT F Generic - 233.3 MW
2034	Quay County - 23 MW	Solar Generic - 540 MW	Solar Generic - 120 MW	Solar Generic - 300 MW
	Mammoth Wind - 200 MW			
	PaloDuro Wind - 250 MW			
2035	Roosevelt Wind - 250 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2033			Solar Generic - 20 MW	
2036	Harrington 1 - Gas - 340 MW	Solar Generic - 130 MW	Solar Generic - 110 MW	Solar Generic - 220 MW
2027		CT F Generic - 233.3 MW	CT F Generic - 233.3 MW	Solar Generic - 160 MW
2037		Solar Generic - 20 MW	Solar Generic - 140 MW	Battery Generic - 20 MW
	Harrington 2 - Gas - 355 MW	Solar Generic - 30 MW	Solar Generic - 140 MW	CT F Generic - 233.3 MW
2038				Solar Generic - 60 MW
				Battery Generic - 20 MW
2039		CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2039		Solar Generic - 130 MW	Solar Generic - 150 MW	Solar Generic - 100 MW
	Harrington 3 - Gas - 355 MW	Solar Generic - 90 MW	Solar Generic - 120 MW	Solar Generic - 90 MW
2040	Cunningham 3 - 106 MW			
	Cunningham 4 - 101 MW			
	Rosewell Solar - 70 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW	CT F Generic - 466.6 MW
2041	Chaves County Solar - 70 MW	Solar Generic - 150 MW	Solar Generic - 30 MW	Solar Generic - 120 MW
		Battery Generic - 120 MW	Battery Generic - 80 MW	Battery Generic - 120 MW

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#### **Existing and Anticipated Environmental Laws and Regulations**

This appendix summarizes the current status and remaining unknowns about each environmental regulation, along with the potential impacts on SPS's generation resources.

#### A. Greenhouse Gas ("GHG") Emissions from New and Existing Power Plants

The landscape for Federal carbon dioxide ("CO<sub>2</sub>") regulation is highly uncertain at this time. The major greenhouse gas regulations that were put into place under the Obama administration, including the Clean Power Plan and the emission standards for new power plants, were repealed and replaced under the Trump administration with the Affordable Clean Energy ("ACE") rule. Subsequently, the ACE rule was vacated by the U.S. Court of Appeals for the D.C. Circuit in a January 19, 2021 decision. This decision, as modified by a subsequent clarification by the court, would have the effect of invalidating the ACE rule and allowing the Environmental Protection Agency ("EPA") to proceed with a new approach to regulating Green House Gas ("GHG") emissions from the power sector. At this point, the timing or nature of any such rules is unclear. The significant uncertainty in Federal climate policy makes decades long resource planning a challenge. SPS will continue to monitor these developments, maintain its leadership on clean energy, and keep bills low for its customers.

#### B. Particulate Matter, Nitrogen Oxides, Sulfur Dioxide, and Mercury Emissions

Particulate matter ("PM") (including "fine" PM under 2.5 micrometers in diameter), nitrogen dioxide ("NO<sub>2</sub>"), and sulfur dioxide ("SO<sub>2</sub>") are three of the primary pollutants regulated by the EPA under the Clean Air Act ("CAA"). These pollutants are regulated under three main programs: National Ambient Air Quality Standards ("NAAQS"), CAA programs that address interstate transport of air pollution, and the Regional Haze program, which addresses visibility

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impairment in national parks and wilderness areas. Mercury emissions from coal-fired power

plants are regulated under the Mercury and Air Toxics Rule ("MATS"). Each of these

requirements is addressed in this section.

National Ambient Air Quality Standards

The CAA requires the EPA to set NAAQS to protect public health and the environment.

NAAQS include both: (1) primary standards to protect public health, including the health of

sensitive populations, such as asthmatics, children, and the elderly; and (2) secondary standards to

protect public welfare, including protection against damages to animals, crops, and buildings. The

EPA has established NAAQS for six criteria pollutants: PM, NO<sub>2</sub>, SO<sub>2</sub>, ozone, carbon monoxide,

and lead. The NAAQS program has been in place since the early 1970s.

Once the EPA adopts or revises a NAAQS, states have two years to monitor their air,

analyze the data, and submit to the EPA their classification of the state into Attainment Areas

(areas having monitored ambient air quality concentrations below the NAAQS), Nonattainment

Areas (areas having monitored ambient air quality concentrations above the NAAQS), and

unclassifiable areas. The EPA reviews the state's submittal and determines the final area

designations a year later.

When the EPA designates an area as Nonattainment, the state is generally given three years

to develop a new State Implementation Plan ("SIP") which identifies actions to be taken to bring

the area back into Attainment. A nonattainment SIP must include emission reduction requirements

needed to demonstrate that air quality will attain the NAAQS in the timelines required by the CAA

- usually within two to seven years after the SIP is submitted to the EPA for approval.

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The NAAQS are periodically reviewed and, if appropriate, individually revised for each pollutant. The following table shows Texas' and New Mexico's status under the current NAAQS in areas where SPS operates power plants:

**NAAQS** for New Mexico and Texas

NAAQS	Precursor Emissions Regulated*	Last Revised or Reviewed	New Mexico Status at SPS Plant Locations	Texas Status at SPS Plant Locations
Particles	NOx, SO <sub>2</sub> , PM	2012	Attainment	Attainment
Ozone	NOx	2008	Attainment	Attainment
Ozone	NOx	2015	Attainment	Attainment
Sulfur Dioxide		2010	Attainment	Attainment, except Potter County is Unclassifiable
Nitrogen Dioxide		2010	Attainment	Attainment
Carbon Monoxide		2011	Attainment	Attainment
Lead		2016	Attainment	Attainment

<sup>\*</sup> Precursor emissions contribute to formation of the NAAQS-regulated pollutants ozone and particles after being released to the atmosphere from a source.

In June 2016, the EPA issued final SO<sub>2</sub> designations which found the area near the Harrington Plant in Potter County, Texas was "unclassifiable." The area near the Harrington Plant was then monitored to gather additional data to support a further attainment/nonattainment decision. If the area near the Harrington Plant had been designated nonattainment, the Texas Commission on Environmental Quality ("TCEQ") would have developed a SIP, which would have been due by 2022, designed to achieve the SO<sub>2</sub> NAAQS by early 2026. The TCEQ could have required additional SO<sub>2</sub> controls at Harrington as part of such a plan.

The monitoring completed in 2020 showed an exceedance of the SO<sub>2</sub> NAAQS in the area of the Harrington Plant. Rather than proceed with a nonattainment designation, SPS negotiated an

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order with the TCEQ providing for the end of coal combustion and the conversion of the

Harrington plant to a natural gas fueled facility by Jan. 1, 2025. This will allow the area to meet

the SO<sub>2</sub> NAAQS. The area will remain designated as unclassifiable in the interim.

If an area attains a NAAQS, no further emission reduction plan is required. Every five

years, the EPA reviews the scientific data on health effects and decides whether any revision to

the NAAQS is needed. If areas were to be designated as nonattainment at some point in the future

under a revised NAAQS, this could require emission reductions from SPS's thermal generation

units. It is not known what adjustments to the NAAQS, if any, the EPA may make in future

reviews.

**Interstate Transport of Air Pollution** 

The CAA also requires that NAAQS SIPs include provisions that prevent sources within a

state "from emitting any air pollutant in amounts which will ... contribute significantly to

nonattainment in, or interfere with maintenance by, any other State with respect to any" NAAQS.<sup>1</sup>

The EPA has developed programs for the Eastern United States that would reduce interstate

transport of pollutants that are precursors to ozone and fine particles. Nitrous Oxide ("NOX") is a

precursor to ozone and fine particle formation, and SO<sub>2</sub> is a precursor to fine particle formation.

For the utility industry, the current program is the Cross-State Air Pollution Rule ("CSAPR").

CSAPR was adopted to address upwind states' emissions that impact downwind states' attainment

of the ozone and particulate NAAQS. As the EPA revises NAAQS in the future, it will consider

whether to make any further reductions to CSAPR emission budgets and whether to change which

states are included in the emissions trading program.

<sup>1</sup> CAA, 42 U.S.C. section 7410(a)(2)(D)(i)(I).

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CSAPR was designed as a "cap-and-trade" program that reduces overall emissions from electric generating units ("EGUs"). This means that total emissions from EGUs in a state or region are limited (the cap), and each ton of emissions allowed is represented by an emission allowance that can be transferred among EGUs (the trade). A cap-and-trade program thus reduces total emissions to the capped amount but, provides flexibility for EGUs to meet their individual emission reduction requirements through installation of control equipment, purchase of emission allowances from other EGUs, or a combination of both. Depending on the EPA's analysis of an upwind state's contribution to nonattainment in downwind states, CSAPR imposes one or both of the following emission limitations: (1) summer season NOx emissions (to address ozone), and/or (2) annual NOx and SO<sub>2</sub> emissions (to address fine particles).

In September 2017, the EPA adopted a final rule that withdrew Texas from the CSAPR particle program and determined that further emission reductions in Texas are not needed to address interstate particle transport. Texas is no longer subject to the annual SO<sub>2</sub> and NOx emission budgets (for particles) under CSAPR. Texas remains subject to the summertime NOx emission budgets under the CSAPR ozone program.

There has been considerable judicial and regulatory activity since that time, but it appears that for the existing ozone standards, Texas (and therefore SPS) is unlikely to face additional NOx restrictions. Thus, SPS currently forecasts compliance with the CSAPR emission limits, without installation of additional controls, through the purchase of NOx allowances as needed.

<u>Visibility Impairment in National Parks and Wilderness Areas (Regional Haze)</u>

Visibility impairment is caused when sunlight encounters pollution particles in the air. Some light is absorbed, and other light is scattered before it reaches an observer, reducing the clarity and color of what the observer sees. The CAA established a national goal of remedying

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existing and preventing future visibility impairment from man-made air pollution in specified

"Class I" areas – national parks and wilderness areas throughout the United States, including New

Mexico and Texas.

In 1999, the EPA adopted the current Regional Haze Rule ("RHR") to address widespread,

regionally homogeneous haze that results from emissions from a multitude of sources. The Best

Available Retrofit Technology ("BART") requirements of the EPA's RHR require emission

controls to be determined in the first planning period for industrial facilities put into operation

between 1962 and 1977 that emit air pollutants that cause or contribute to visibility impairment in

national parks and wilderness areas. Under BART, regional haze plans identify facilities that will

have to reduce SO<sub>2</sub>, NO<sub>X</sub>, and PM emissions and set emission limits for those facilities. BART

requirements can also be met through participation in interstate emission trading programs such as

the Clean Air Interstate Rule ("CAIR") and its successor, CSAPR. SIPs also must include

reasonable progress goals and periodic evaluation/revision cycles designed to make appropriate

progress toward the national goal of no man-made visibility impairment in Class I areas by 2064.

The New Mexico Regional Haze SIP for the first planning period did not affect any SPS

New Mexico facilities. That plan covers reductions for the 2008-2018 planning period.

The Texas Regional Haze SIP for the first planning period was subject to a lengthy EPA

review. Texas developed a SIP in 2009 that found the CAIR equal to BART for EGUs. As a

result, no additional controls beyond CAIR compliance would have been required. In 2014, the

EPA proposed to approve the BART portion of the SIP, with substitution of CSAPR compliance

for Texas' reliance on CAIR. In January 2016, the EPA adopted a final rule that deferred its

approval of CSAPR compliance as BART until the EPA considered further adjustments to CSAPR

emission budgets under the D.C. Circuit Court's remand of the Texas SO<sub>2</sub> emission budgets.

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The EPA then published a proposed rule in January 2017 that, if adopted as proposed,

would have required the installation of dry scrubbers to reduce SO<sub>2</sub> emissions at Harrington Units

1 and 2. Investment costs associated with dry scrubbers for Harrington Units 1 and 2 are

approximately \$400 million. In October 2017, the EPA issued a final rule adopting a Texas only

SO<sub>2</sub> trading program as a BART alternative. The program allocated SO<sub>2</sub> allowances to EGUs in

Texas, including all three Harrington units and both Tolk units, consistent with their allocation

under CSAPR, resulting in an emissions budget for Texas that is consistent with the EPA's 2012

rule that found CSAPR emission reductions approvable under the RHR as "Better than BART."

SPS expects the allowance allocations to be sufficient for SO<sub>2</sub> emissions from Harrington and Tolk

units in 2019 and future years. Similarly, EPA found that the CSAPR ozone program that regulates

summertime NO<sub>X</sub> emissions satisfies BART for NO<sub>X</sub> for EGUs.

In December 2017, the National Parks Conservation Association, Sierra Club, and

Environmental Defense Fund appealed the EPA's October 2017 final BART rule to the Fifth

Circuit and, filed a petition for administrative reconsideration of the final rule with the EPA. In

January 2018, the court granted SPS's motion to intervene in the Fifth Circuit litigation in support

of the EPA's final rule. The litigation was being held in abeyance pending EPA's decision whether

to administratively reconsider the rule.<sup>2</sup> EPA has now completed its reconsideration and, in

September 2020 issued a final rule approving a Texas SO<sub>2</sub> trading program consistent with the

2017 rule (with minor modifications). SPS expects to be able to meet the allowance allocations of

the rule.

<sup>2</sup> Several parties also challenged whether the final rule issued by the EPA should be considered to have met the requirements imposed in a Consent Decree lodged with the United States District Court for the District of Columbia that established deadlines for the EPA to take final action on state regional haze plan submissions. The litigation is being held in abevance pending EPA's decision whether to administratively reconsider the rule.

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In addition to making BART determinations, the RHR requires states to consider whether further emission reductions need to be imposed to achieve reasonable progress toward the long-term national visibility goal. The Texas SIP evaluated this issue and did not impose additional emission reduction requirements for reasonable progress in the first planning period. In January 2016, the EPA disapproved the Texas SIP on this issue and adopted a final rule establishing a federal implementation plan for the state of Texas, which imposed SO<sub>2</sub> emission limitations that require the installation of dry scrubbers on Tolk Units 1 and 2, with compliance required by February 2021. Investment costs associated with dry scrubbers could be approximately \$600 million. SPS appealed the EPA's decision and requested a stay of the final rule, which the Fifth Circuit granted.

In March 2017, the Fifth Circuit remanded the rule to the EPA for reconsideration, while leaving the stay in effect. The Fifth Circuit is now holding the case in abeyance until the EPA completes its reconsideration of the rule. In the final BART rule that affects Tolk and Harrington described above, the EPA noted that it will address the remanded rule in a future action. Such a rule will address whether further SO<sub>2</sub> emission reductions are needed at Tolk to address the reasonable progress requirements of the RHR. The EPA has not announced a schedule for acting on the remanded rule, but the issue has not formally been resolved. As indicated below, neither Tolk nor Harrington are proposed by Texas for additional controls in the next round of regional haze planning, but those plans also will be subject to review by EPA. This issue may get rolled into the next review. The next planning cycle for the regional haze program requires the states to evaluate progress in their Class I areas and design emission reduction programs to continue reasonable progress toward the national visibility goal. The SIPs, including those for New Mexico and Texas, are due in 2021 and will then be subject to EPA review. At this point, although it could

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still change with EPA review (as noted above), the states of Texas and New Mexico are not

currently proposing any additional regulation of SPS sources in this next planning cycle.

Assuming a SIP is adopted in 2021 by a state and reviewed by EPA by 2023, any control equipment

that may be required in the RHR's second planning period would need to be installed by

approximately 2028.

Mercury and Air Toxics Rule

EPA adopted the MATS in 2012 to reduce emissions of mercury, acid gases, and other

non-mercury metals from coal-fired power plants. SPS has installed the activated carbon injection

control systems needed to meet the mercury limits and complies with the acid gas and non-mercury

metals emission limits imposed by the MATS using existing controls installed at Harrington and

Tolk.

C. Regulation of Coal Combustion Residuals (Ash)

Coal Combustion Residuals ("CCR"), often referred to as coal ash, are regulated as non-

hazardous wastes under the federal Resource Conservation and Recovery Act ("RCRA") and are

also regulated under state regulatory programs. Coal ash is residue from the combustion of coal

in power plants. Generally, CCRs are captured by pollution control equipment and either recycled

for beneficial reuse or disposed of appropriately. Environmental issues involving coal ash derive

primarily from concerns regarding structural failure of large surface impoundments (e.g., the 2008

Tennessee Valley Authority Kingston ash pond failure, and more recent incidents at Duke Energy

power plants in the southeast U.S.), and the potential for releases from unlined ash impoundments

and landfills to impact groundwater.

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Currently, the CCRs that result from the combustion of coal at SPS units are 100%

beneficially used in dry form and marketed by an onsite marketing facility for use. There are no

wet operations for ash management in SPS.

SPS's operations are subject to federal and state laws that impose requirements for

handling, storage, treatment, and disposal of wastes. On December 19, 2014, the EPA signed a

final rule establishing national standards for the management and disposal of CCRs ("CCR

Rule").<sup>3</sup> The rule, as subsequently modified by litigation and rule amendment, regulates this

material as a non-hazardous waste under Subtitle D of the RCRA. The rule establishes minimum

design and operating requirements for CCR landfills and surface impoundments that are

comparable to SPS's current requirements under State enforceable, site-specific permits, and

operating plans. SPS has evaluated the rule, and, determined the rule will have minimal direct

impact on SPS's current operations or costs. As long as ash remains viable to the industry and

control technologies that may be required under other air regulations do not chemically or

physically change the ash, 100% beneficial use of ash will be maintained. In the event the

installation of controls through other regulations renders the ash unusable for market purposes,

SPS will be required to follow the CCR Rule for disposal, potentially requiring the installation,

maintenance, and monitoring of ash landfills.

D. Water Quality Regulation

Cooling Water Intake Structures

Section 316(b) of the federal Clean Water Act ("CWA") requires the EPA to develop

regulations governing the design, maintenance, and operation of cooling water intake structures to

assure that these structures reflect the best technology available for minimizing adverse impacts to

<sup>3</sup> Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities. Final Rule, December 19, 2014. See http://www2.epa.gov/coalash/coal-ash-rule.

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aquatic species. The regulations must address both impingement (the trapping of aquatic biota

against plant intake screens) and entrainment (the protection of small aquatic organisms that pass

through the intake screens into the plant cooling systems).

SPS's New Mexico and Texas facilities are not affected by this rule because no SPS

facilities withdraw surface water for cooling purposes. In addition, SPS does not operate any

cooling ponds.

Thermal Discharge

The EPA regulates the impacts of heated cooling water discharge from power plants under

CWA Section 316(a). States with authority to implement and enforce CWA programs have

state-specific water quality criteria including thermal discharge temperature parameters to protect

aquatic biota. Plants must operate in compliance with the thermal discharge temperature

parameters. SPS facilities are not subject to this rule because they do not discharge any heated

cooling water from power plants to surface waters.

Effluent Limitation Guidelines

As part of the National Pollutant Discharge Elimination System ("NPDES") process, the

EPA identifies technology-based contaminant reduction requirements called Effluent Limitation

Guidelines ("ELG"). The ELGs are used by permit writers as the maximum amount of a pollutant

that may be discharged to a water body. ELGs are periodically updated to reflect improvements

in pollution control and reduction technologies.

In 2015, the EPA issued a final ELG rule for power plants that use coal, natural gas, oil, or

nuclear materials as fuel and discharge treated effluent to surface waters as well as utility-owned

landfills that receive coal combustion residuals. In October 2020, EPA revised the ELG rule for

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certain waste streams and postponed compliance requirements for units retiring by 2028. SPS facilities are not subject to the ELG rule because they do not discharge to surface waters.

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790 S. Buchanan St. Amarillo, TX 79101

April 8, 2020

Ms. Melanie Sandoval New Mexico Public Regulation Commission 1120 Paseo De Peralta Santa Fe, NM 87501

RE: Southwestern Public Service Company ("SPS") Integrated Resource Plan ("IRP") – Public Advisory Invitation

Dear Ms. Sandoval:

In compliance with the requirements of 17.7.3 NMAC (Integrated Resource Plans for Electric Utilities), and more specifically section 17.7.3.9(H) NMAC (Public Advisory Process) of that rule, SPS invites the Commission, intervenors in its most recent general electric rate case, parties in its most recent electric energy efficiency and renewable energy cases, and its customers to participate in SPS's IRP Public Advisory Process. The purpose of the Public Advisory Process in this matter is to provide information to, and receive and consider input from, the public regarding the development of SPS's IRP. Topics for the IRP include the load forecast; evaluation of existing supply- and demand-side resources; assessment of need for additional resources; identification of resource options; modeling; and development of the most cost-effective resource portfolio for the IRP. SPS is also providing notice to its customers in their bills and publishing a similar invitation in the newspapers of general circulation in every county that SPS serves in New Mexico. The first of a series of workshops will be held May 21, 2020 from 1:30 p.m. to 4 p.m. MT in the 5th floor CYFD conference room 565 of the New Mexico Public Regulation Commission offices in the P.E.R.A. Building, 1120 Paseo de Peralta, Santa Fe, NM.

Attendance via WEBINAR is also available with the following login information: Call in number: 1-866-672-3839 Passcode: 6877906 <a href="https://avayaconference.xcelenergy.com/6877906">https://avayaconference.xcelenergy.com/6877906</a>

If an in-person meeting is not possible on May 21 due to Coronavirus concerns, SPS plans to proceed with a WEBINAR-only meeting.

SPS will provide the date and time of each subsequent workshop at the conclusion of the prior workshop. Any person interested in participating in SPS's IRP Public Advisory Process should contact us at 1-806-378-2709, 1-806-378-2115, Linda.L.Hudgins@xcelenergy.com, or Mario.A.Contreras@xcelenergy.com. A similar notice, information about future workshops, and other information can be found under "Rates & Regulations" at www.xcelenergy.com. SPS will file its IRP at the New Mexico Public Regulation Commission by July 16, 2021.

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Please do not hesitate to contact me with any questions you may have regarding this invitation or the pending meeting.

Sincerely,

### /S/ Mario Contreras

Mario Contreras Rate Case Manager Southwestern Public Service Company

cc: Certificate of Service – Combined lists of NMPRC Case No. 19-00170-UT (Rate Case), 19-00140-UT (Energy Efficiency), 19-00134-UT (Renewable Portfolio Standard) and 18-00215-UT (IRP)

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### BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF SOUTHWESTERN	)
PUBLIC SERVICE COMPANY'S	)
2021 INTEGRATED RESOURCE PLAN	)
FOR NEW MEXICO,	)
	)
SOUTHWESTERN PUBLIC SERVICE	)
COMPANY,	)
	)
APPLICANT.	)
	)

### **CERTIFICATE OF SERVICE**

I certify that a true and correct copy of *Southwestern Public Service Company's 2021 Integrated Resource Plan – Public Advisory Invitation* was electronically served, as indicated below, to each of the following on this 8th day of April, 2020:

### **VIA E-MAIL**:

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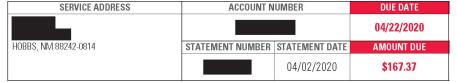
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Steven S. Michel	smichel@westernresources.org	Julia Broggi	jbroggi@hollandhart.com
John Bogtko	john.bogatko@state.nm.us	Marc Tupler	Marc.Tupler@state.nm.us
Gabriella Dasheno	gabriella.dasheno@state.nm.us	Lauren Hogrewe	lauren.hogrewe@sierraclub.org
Kellie Barahona	kellie.barahona@tklaw.com	Matthew Marchant	matthew.marchant@hollyfrontier.com
Peter Gould	pgouldlaw@gmail.com	Katelyn Hart	khart@redskylawnm.com
John Caldwell	jcaldwell@leacounty.net	Randy Bartell	rbartell@montand.com
Casey Settles	Casey.settles@xcelenergy.com	John Wolfram	johnwolf@catalystell.com

Respectfully submitted,

/S/ Casey Settles

Casey Settles
790 S. Buchanan Street
Amarillo, TX 79101
806.378.2424
Casey.settles@xcelenergy.com



### Xcel Energy®

### YOUR MONTHLY ELECTRICITY USAGE



DAILY AVERAGES	Last Year	This Year
Temperature	53° F	58° F
Electricity kWh	76.9	56.9

### **QUESTIONS ABOUT YOUR BILL?**

See our website: xcelenergy.com

Email us at: Customerservice@xcelenergy.com

Call Mon - Fri 7 a.m.-7 p.m. or Sat 9 a.m.-5 p.m.

Please Call: 1-800-895-4999
Hearing Impaired: 1-800-895-4949
Español: 1-800-687-8778
Or write us at: XCEL ENERGY

PO BOX 8

EAU CLAIRE WI 54702-0008

Like us on Facebook





### SUMMARY OF CURRENT CHARGES (detailed charges begin on page 2)

Current Charges			\$167.37
Other Recurring Charges			\$33.67
Electricity Service	03/04/20 - 04/02/20	1650 kWh	\$133.70
Electricity Carvino	02/04/20 04/02/20	1650 k/M/b	¢122.7

### ACCOUNT BALANCE (Balance de su cuenta)

	455	
Previous Balance	As of 03/04	\$527.13
Payment Received	Phone Pay 03/13	-\$527.13 <b>CR</b>
Balance Forward		\$0.00
Current Charges		\$167.37
Amount Due (Cantidad a page	gar)	\$167.37

**INFORMATION ABOUT YOUR BILL** 

Your safety and the safety of our employees will always be our top priority. We are prepared and are taking steps to ensure we'll continue to be there for you to meet your energy needs as COVID-19 affects a growing number of people in our communities. We know this is a challenging time for many families, and we are here to help. Please reach out to our customer care representatives if you have questions about your bill, and learn more at xcelenergy.com/covid-19\_response.

### RETURN BOTTOM PORTION WITH YOUR PAYMENT • PLEASE DO NOT USE STAPLES, TAPEOR PAPER CLIPS



ACCOUNT NUMBER	DUE DATE	AMOUNT DUE	AMOUNT ENCLOSED						
	04/22/2020	\$167.37							
Dlages remit to the	Please remit to the address below by the Due Date to avoid					APRIL			
	late payment fees.	e Due Date to avoid	S	M	T	W	T	F	S
	tate payment lees. check payable to XC	EL ENERGY	_			1	2	3	4

HOBBS NM 88242-0814

- հոլինովակվանիկիկինիսորությունիսկինի

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19 20

XCEL ENERGY P.O. BOX 9477

MPLS MN 55484-9477

Exhibit SPS-AXM 3-16.1(V)(ShareFile)
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Page 2 of 4



SERVICE ADDRESS	ACCOUNT NUMBER		DUE DATE
			04/22/2020
H0BBS, NM 88242-0814	STATEMENT NUMBER	STATEMENT DATE	AMOUNT DUE
		04/02/2020	\$167.37

### **INFORMATION ABOUT YOUR BILL**

We invite you to participate in our Electric Service Integrated Resource Planning (IRP) Public Advisory process. IRP examines the types of resources to be included in Xcel Energy's resource portfolio, the amounts that must be added, and the timing of those additions. An IRP provides a strategic outline for future resource decisions by Xcel Energy.

The first of a series of workshops will be held May 21, 2020, from 1:30 p.m. to 4 p.m. MT in the 5th floor Children, Youth & Families Department conference room 565 of the New Mexico Public Regulation Commission offices in the P.E.R.A. Building, 1120 Paseo de Peralta, Santa Fe, NM. Attendance via webinar is also available: For audio dial 1-866-672-3839 using passcode: 6877906. Follow the presentation online at: https://avayaconference.xcelenergy.com/6877906

Xcel Energy will provide the date and time of each subsequent workshop at the conclusion of the prior workshop.

If you are interested in participating in our IRP Public Advisory process, please contact us at 1-806-378-2709, 1-806-378-2115, Linda.L.Hudgins@xcelenergy.com, or Mario.A.Contreras@xcelenergy.com. This notice, future workshops and other information can be found under Rates & Regulations at www.xcelenergy.com. We will file our IRP at the New Mexico Public Regulation Commission by July 16, 2021.

Thank you for your payment.





### APPLY THE 10-FOOT RULE.

Power lines are just what they sound like — powerful. When you're cleaning out gutters, stay safe by keeping yourself, ladder and tools at least 10 feet from overhead power lines.

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Page 3 of 4





### DON'T GET SCAMMED.

Scammers can spoof phone numbers to look like the call is coming from us. If someone calls and threatens to turn off your power if you don't pay immediately, or asks for your account number to refund an overpayment, hang up and check your account status using My Account, our Xcel Energy mobile app, or call us at 800.895.4999.

SERVICE ADDRESS	ACCOUNT NUMBER		DUE DATE
			04/22/2020
	STATEMENT NUMBER	STATEMENT DATE	AMOUNT DUE
		04/02/2020	\$167.37

SERVICE ADDRESS: NEXT READ DATE:

05/04/20

### **ELECTRICITY SERVICE DETAILS**

PREMISES NUMBER: INVOICE NUMBER:



METER READING INFORMATION			
METER		Read Dates: 03/04/20 - 04/02/	/20 (29 Days)
DESCRIPTION	CURRENT READING	PREVIOUS READING	USAGE
Total Energy	89884 Actual	88234 Actual	1650 kWh

<b>ELECTRICITY CHARGES</b>	RATE: RHS Res Htg Svc				
DESCRIPTION	USAGE	UNITS	RATE	CHARGE	
Svc Availability				\$8.75	
Res Htg Svc	1650	kWh	\$0.048258	\$79.63	
Fuel Cost Factor	1536.21	kWh	\$0.017037	\$26.17	
Fuel Cost Factor	113.79	kWh	\$0.015594	\$1.77	
Energy Efficiency Rdr				\$4.00	
RPS Cost Rider	1650	kWh	\$0.003888	\$6.42	
Subtotal				\$126.74	
Sales Tax				\$6.96	
Total				\$133.70	

OTHER RECURRING CHARGES DETAILS

INVOICE NUMBER: ADDRESS:				
	HOBBS, NM 88242-0814			
		UNIT		
DESCRIPTION	USAGE UNITS	CHARGE	QTY	CHARGE
Install Number				
03/04/20 to 04/01/20				
1000 WATT HPS - RAL				
Area Light	328 kWh	\$24.04	1	\$24.04
Fuel Cost Factor				\$5.58
RPS Cost Rider				\$1.28
Energy Efficiency Rdr				\$1.02
Subtotal				\$31.92
Sales Tax				\$1.75
Total				\$33.67

### **INFORMATION ABOUT YOUR BILL**

This month, an additional kWh used would have cost 7.57 ¢/kWh.

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### 6B I WEDNESDAY, APRIL 8, 2020 I CARLSBAD CURRENT-ARGUS





Southwestern Public Service Company ("SPS") invites the public to participate in its electric service Integrated Resource Planning ("IRP") Public Advisory Process. An IRP examines the types of resources to be included in the utility's resource portfolio, the amounts that must be added, and the timing for those additions. In effect, an IRP provides a strategic plan for future resource decisions by the utility.

The purpose of SPS's Public Advisory Process is to provide information to, and receive and consider input from the public regarding the development of the IRP. Topics for the IRP include the load forecast; evaluation of existing supply- and demand-side resources; assessment of need for additional resources; identification of resource options; modeling; and development of the most cost-effective resource portfolio for the IRP. The first of a series of workshops will be held May 21, 2020 from 1:30 p.m. to 4 p.m. MT in the 5th floor CYFD conference room 565 of the New Mexico Public Regulation Commission offices in the P.E.R.A. Building, 1120 Paseo de Peralta, Santa Fe, NM.

Attendance via WEBINAR is also available with the following login information:

Call in number: 1-866-672-3839 Passcode: 6877906 https://avayaconference.xcelenergy.com/6877906

If an in-person meeting is not possible on May 21 due to Coronavirus concerns, SPS plans to proceed with a WEBINAR-only meeting.

SPS will provide the date and time of each subsequent workshop at the conclusion of the prior workshop.

Any person interested in participating in SPS's Electric IRP Public Advisory Process should contact SPS at 1-806-378-2709, 1-806-378-2115, Linda,L,Hudgins@xcelenergy.com, or Mario,A,Contreras@xcelenergy.com. This notice, information about future workshops, and other information can be found under "Rates & Regulations" at www.xcelenergy.com. SPS will file its IRP at the New Mexico Public Regulation Commission by July 16, 2021.

April 8, 2020

### AFFIDAVIT OF LEGAL PUBLICATION

Legal 8618

STATE OF NEW MEXICO COUNTIES OF CURRY AND ROOSEVELT: The undersigned, being dully sworn, says: That she is a Legal Clerk of The Eastern New Mexico News Newspaper of general circulation, Published in English at Clovis and Portales, said counties and state, and that the hereto attached

2021 New Mexico IRP Legal 8618

was published in The Eastern New Mexico News a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for 1 Days/weeks on the same days as follows:

First Publication

April 8, 2020

Second Publication Third Publication Fourth Publication

Subscribed and sworn to before me,

April 8, 2020

Notary Public

My commission expires on April 3, 2022

Legal 8618 April 8, 2020

SOUTHWESTERN PUBLIC SERVICE Company ("SPS") invites the public to participate in its electric service integrated Resource Planning ("IRP") Public Advisory Process. An IRP examines the types of resources to be included in the utility's resource portfolio. the amounts that must be added, and the timing for those additions. In effect, an provides a strategic plan for future resource decisions by the utility.

212 63

The purpose of SPS's Public Advisory Process is to provide information to, and receive and consider input from the public regarding the development of the IRP. Topics for the IRP include the load forecast

evaluation of existing supply...and demand-side resources; assessment of need for additional resources; identification of resource options; modeling; and development of the most cost-effective resource portfolio for the IRP. The first of a series of workshops will be held May 21, 2020 from 1:30 p.m. to 4 p.m. MT in the 5th floor CYFD conference room 565 of the New Mexico Public Regulation Commission offices in the P.E.R.A. Building, 1120 Paseo de Peralta, Santa Fe

Attendance via WEBINAR is also available with the following login information: Call in number: 1-866-672-3839 Passcode: 6877906 https://avayaconference.xoel energy.com/6877906

If an in-person meeting is not possible on May 21 due to Coronavirus concerns, SPS plans to proceed with a WEBINAR-only meeting.

SPS will provide the date and time of each subsequent workshop at the condusion of the prior work-

Any person interested in participating in SPS's Electric IRP Public Advisory Process should contact SPS at 1-806-378-2709, 1-806-378-2115, Linda.L. Hudgins@xcelener-

gy.com, or Mario.A.Contreras@xcelenergy.com. This notice, infor-mation about future workshops, and other information can be found under "Rates & Regulations' at www.xoe-

lenergy.com. SPS will file its IRP at the New Mexico Public Commission by July 16,



### AFFIDAVIT OF LEGAL PUBLICATION

Copy of Publication

Legal 8619

STATE OF NEW MEXICO COUNTIES OF QUAY:

The undersigned, being dully sworn, says: That she is a Legal Clerk of The QUAY COUNTY SUN, a weekly Newspaper of general circulation, Published in English at Tucumcari, said county and state, and that the hereto attached

2021 New Mexico IRP Legal 8619

was published in The QUAY COUNTY SUN a weekly newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for 1 Days on the same days as follows:

First Publication:

April 8, 2020

Second Publication: Third Publication Fourth Publication:

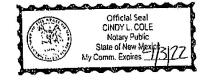
Łegal Clerk

Subscribed and sworn to before me,

April 8, 2020

Notary Public

My Commission Expires: April 3, 2022



Legal 8619 April 8, 2020

SOUTHWESTERN **PUBLIC** SERVICE Company ("SPS") invites the public to participate in its electric service Integrated Branch Resource Planning ("IRP") Public Advisory Process. An IRP examines the types of resources to included in the utility's resource portfolio, the amounts that must be added, and the timing for those additions. effect, an IRP provides a strategic plan for future resource decisions by the utility.

The purpose of SPS's Public Advisory Process is to provide information to, and receive and consider input from the public regarding the development of the IRP. Topics for the IRP include the load forecast; evaluation of supply- and demand-side resources; assess-ment of need for addi-tional resources; identification of resource options; modeling; and development of the most cost-effective resource portfolio for the IRP. The first of a series of work-shops will be held May 21, 2020 from 1:30 p.m. to 4 p.m. MT in the 5th floor CYFD conference room 565 of the New Mexico Regulation Commission offices in the P.E.R.A. Building, 1120 Paseo de Peralla, Santa Fe, NM.

Attendance via WEBI-NAR is also available with the following login information: Call in number: 1-866-672-3839 Passcode: 6877906 https://avayaconference.ccel energy.com/6877906

If an in-person meeting is not possible on May 21 due to Coronavirus concerns, SPS plans to proceed with a WEBI-NAR-only meeting.

SPS will provide the date and time of each subsequent workshop at the conclusion of the prior workshop. Any person interested in participating in SPS's Electric IRP Public Advisory Process should contact SPS at 1-806-378-2709, 1-806-378-2115, Linda L. Hudgins@xcelenergy.com, or Mario A. Contreras@xcelenergy.com. This notice, information about future workshops, and other information can be found under "Rates & Regulations" at www.xcelenergy.com.

the New Mexico Public Regulation Commission by July 16, 2021.

Exhibit SPS-AXM 3-16.1(V)(ShareFile) Page 780 of 984 Docket No. 54634 Appendix L Page 11 of 12 Case No. 21-00169-UT

### Affidavit of Publication

STATE OF NEW MEXICO COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

> Beginning with the issue dated April 08, 2020 and ending with the issue dated April 08, 2020.

Sworn and subscribed to before me this 8th day of April 2020.

**Business Manager** 

January 29. OFFICIAL SEAL GUSSIE BLACK Notary Public State of New Mexico My Commission Expires

My Commission Expires

The Hewspaper is duly qualified to publish the story of the sto

meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said



LEGAL NOTICE APRIL 8, 2020

Southwestern Public Service Company ("SPS") invites the public to participate in its electric service integrated Resource Planning ("IRP"). Public Advisory Process: An IRP examines the types of resources to be included in the utility's resource portfolio, the amounts that must be added, and the timing for those additions. In effect, an IRP provides extrategic plan for future resource decisions by the utility: utility.

The purpose of SPS's Public Advisory Process is to provice information to and receive and consider input from the public regarding the development of the IRP. Topics for the IRP include the load forecast, evaluation of existing supply- and demandative resources; assessment of need for additional resources; identification of resource options; modeling; and development of the most cost effective resource portiols for the IRP. The first of a series of workshops will be held May 21, 2020 from 1:30-p.m. to 4 p.m. M. In the 5th floor CYFD conference room 565 of the New Mexico Public Regulation Commission offices in the P.E.R.A. Building, 1420 Passeo de Peralta, Santa Fe, NM.

Attendance via WEBINAR is also available with the following login information. Call in number: 1-886-672-3839 Passcode: 8877906 https://avayaconterence.xcelenergy.com/6877906

If an in-person meeting is not possible on May 21 due to Coronavirus concerns, SPS plans to proceed with a WEBINAR-only meeting.

SPS will provide the date and time of each subsequent workshop at the conclusion of the prior

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00241003

Attn: CINDY BAEZA XCEL ENERGY/AMARILLO 790 S BUCHANAN ST AMARILLO, TX 79101-2522

Appendix L Page 12 of 12 Case No. 21-00169-UT

AFFIDAVIT OF PUBLICATION STATE OF NEW MEXICO

I, Noely Martinez Legals Clerk

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico do solemnly swear that the clipping hereto attached was published in the regular and entire issue of said paper and not in a supplement there of for a period of:

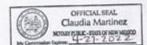
One time with the issue dated April 8th, 2020

Legals Clerk

Sworn and subscribed to before me

this 12th day of July, 2021

Notary Public



### SPS Legal Notice...

### Publish April 8, 2020

Southwestern Public Service Company ("SPS") in-vites the public to participate in its electric service In-regrated Resource Planning ("IRP") Public Advisory Process. An IRP examines the types of resources to be included in the utility's resource portfolio, the amounts that must be added, and the timing for those additions. In effect, an IRP provides a strategic plan for future resource decisions by the utility.

The purpose of SPS's Public Advisory Process is to provide information to, and receive and consider input from the public regarding the development of the JRP Topics for the JRP Include the load forecast, evaluation of existing supply and demand-side resources assessment of need for additional resources, identification of resource options, modeling, and development of the most cost-effective resource portfolio for the JRP. The first of a series of workshops will be held May 21, 2020 from 130 p.m. to 4 p.m. MT in the 5th Sort CYFD conference room 565 of the New Maxico Public Regulation Commission offices in the P.E.R.A. Building, 1120 Passeo de Peratis, Santa Fe, NM.

Attendance via WEBINAR is also evaliable with the following login information: Cell in number: 1-866-872-9839 Passoode: 6877906 https://exwysconference.xoelenergy.com/9877905

If an in-person meeting is not possible on May 21 due to Coronavirus concerns, SPS plans to proceed with a WEBINAR-only meeting.

Any person interested in participating in SPS's Elec-tric IRP Public Advisory Process should centert SPS at 1:506-378-2709, 1:506-378-2115, Linda. L. Hudgins &x.csisnergy.com, or Maño A. Contress Sixceienergy.com, This notice, in-formation about fluore workshops, and other informa-tion can be found under "flates & Regulations" at wax.xceienergy.com. SPS will felt its SPS at the New Maxico Public Regulation Commission by July 16, 2021.

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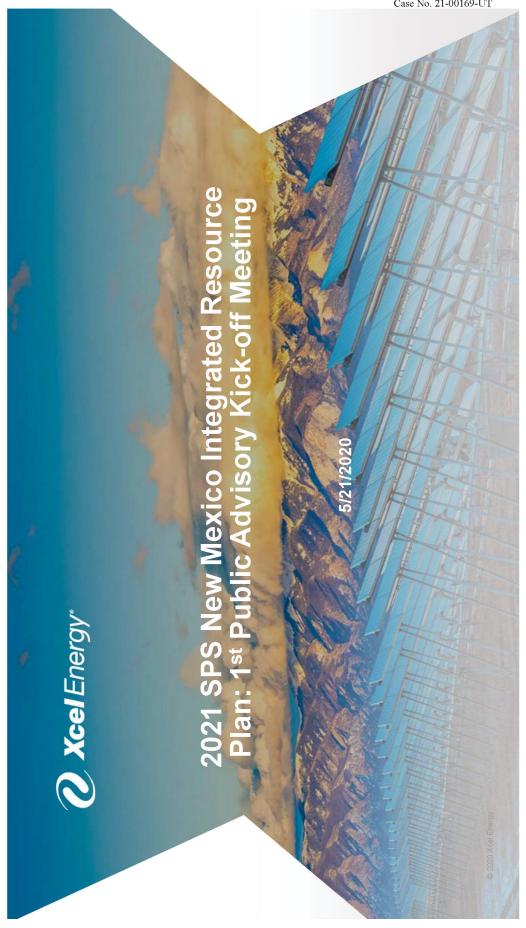


Exhibit SPS-AXM 3-16.1(V)(ShareFile)
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Docket No. 54634

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## Topics for Discussion

- Xcel Energy and SPS Overview
- Resource Planning Overview
- Factors that have impacted Resource Planning since the 2018 New Mexico IRP
- Factors that will likely influence Resource Planning in the action plan period
- SPS's new renewable wind facilities
- Future meeting topics
- Next meeting

Exhibit SPS-AXM 3-16.1(V)(ShareFile)
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## SPS OVERVIEW

Ben Elsey | Resource Planning Analyst

5/21/2020

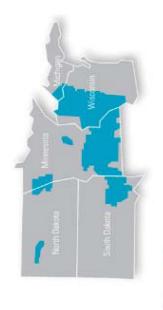
© 2020 Xcel Energy

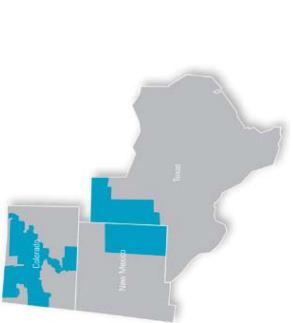


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Public Service Southwestern Company Electric Electric & Gas Public Service Company of Colorado **Corporate Structure** Xcel Energy Utility Holding Company Northern States Electric & Gas Power Wisconsin Northern States Electric & Gas Power Minnesota

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3.6 million electricity customers

Serving eight states

**About Xcel Energy** 

2 million natural gas customers

- Carbon emissions reductions
- Innovative technology

## Nationally recognized leader

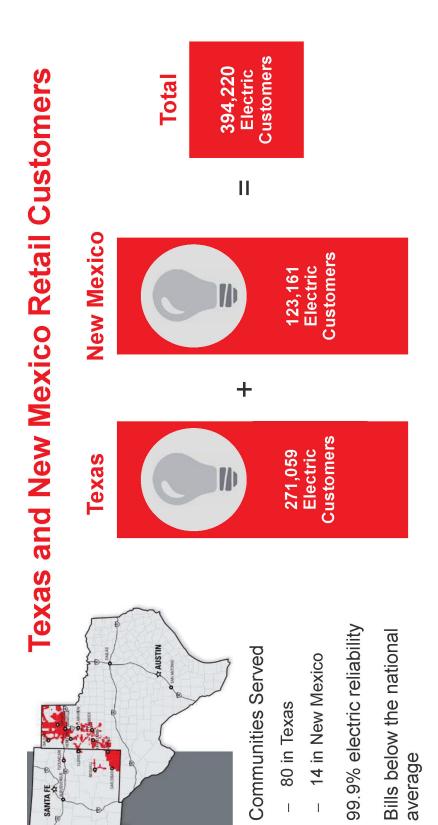
- Wind energy
- Energy efficiency

### c

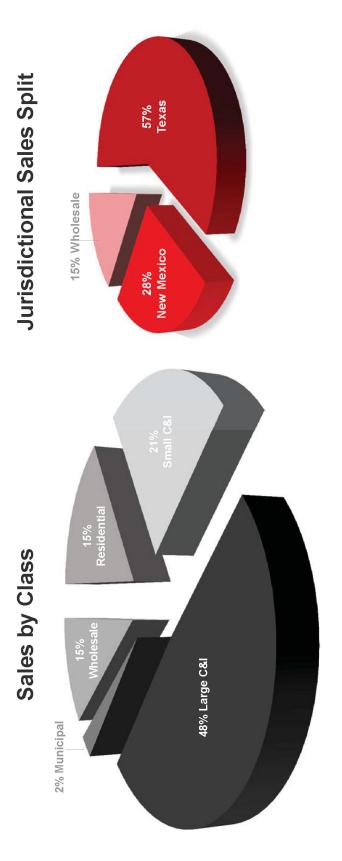
### SPS Overview

- Southwestern Public Service Company ("SPS") is a New Mexico corporation and wholly-owned electric utility subsidiary of Xcel Energy.
- eastern and southeastern New Mexico, the Texas Panhandle, and the Texas South SPS's total company service territory encompasses a 52,000-square-mile area in Plains
- SPS's primary business is generating, transmitting, distributing, and selling electric energy
- SPS has a long history of providing safe, reliable, value-added service to our customers

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**SPS Customers** 

\* SPS operates its production and transmission system as an integrated whole

Note: Data as represented is between February 1, 2019 through January 31, 2020

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## Resource Planning

- Determines the appropriate sources of electric supply to meet customer demand and energy requirements in a cost-effective and reliable fashion
- Compare existing firm generating resources, including owned generating capacity and firm purchased power, to its projected annual peak firm load obligation over the planning period
- Maintains capacity required to meet projected peak load and planning reserve obligations
- SPS is a member of the Southwest Power Pool ("SPP"), which requires each member to have a planning reserve margin of 12% of its peak demand forecast
- SPS's firm load obligation is approximately 4,000 MW, and with the planning reserve margin the capacity need is approximately 4,500 MW

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## Generation Resource Map Palabun Salaun NEW NEW NEW NEW Salaun Salaun

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# **Current SPS Loads and Resources Table**

SPS Load and Resources	2020	2021	2022	2023	2024	2025
EXISTING RESOURCES						
TOTAL ACCREDITED CAPACITY (MW)	5,605	5,605	2,600	5,295	5,184	5,171
LOAD						
FIRM LOAD OBLIGATION	4,014	4,057	4,112	4,177	4,214	4,265
RESERVES						
TOTAL PLANNING RESERVE MARGIN	482	487	493	501	206	512
CAPACITY NEED	4,496	4,544	4,606	4,679	4,720	4,777
CAPACITY POSITION	1,109	1,061	994	616	889	618
TOTAL SALES / (PURCHASES) (MW)	531	0	0	0	0	0
POSITION						
RESOURCE POSITION (MW): LONG/(SHORT)	578	1,061	994	616	889	618

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### 190 MW Solar 2,090 MW Coal 3,037 MW Gas 2,452 MW Wind

Capacity Mix

\* The above chart represents the maximum output of each facility