

# SOUTHWESTERN PUBLIC SERVICE COMPANY 2023 NEW MEXICO INTEGRATED RESOURCE PLAN

1<sup>st</sup> Facilitated Stakeholder Meeting May 16, 2023

## WELCOME

Zoë Lees| Regional VP, Regulatory Policy



## **Xcel Energy**



#### Serving eight states

**3.7** million electricity customers

**2.1** million natural gas customers

#### Nationally recognized leader:

- Wind energy
- Energy efficiency
- Carbon emissions reductions
- Innovative technology
- Storm restoration

Data based on 2021 Sustainability Report. To view full report: xcelenergy.com/sustainability.

### **Xcel Energy's Mission Is Built for Sustainability**

Providing customers with safe, clean, reliable energy services at a competitive price is core to our sustainability. We're committed to delivering the essentials while driving positive change that supports the environment and the people and places we serve.



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### **SPS New Mexico service territory**

SPS serves approx. 125,000 customers in the following 16 towns in New Mexico:

| Artesia     | Carlsbad  |
|-------------|-----------|
| Clovis      | Dexter    |
| Eunice      | Hagerman  |
| Hobbs       | Jal       |
| Lake Arthur | Loving    |
| Malaga      | Otis      |
| Portales    | Roswell   |
| Texico      | Tucumcari |
|             |           |



### **Powering the New Mexico Economy**



2021 Data

# We Do It All

1.Electric generation

2.Bulk Transmission

**3.Local Distribution** 

4. Customer Care



# **SPS Customers**



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

Note: Data Represents Calendar 2022. © 2023 Xcel Energy

### **New Mexico Customers**



Note: Data Represents Calendar 2022. © 2023 Xcel Energy

# **NM IOU Comparison**

| 2021 Information           | SPS      | EPE      | PNM      |
|----------------------------|----------|----------|----------|
| Customer Sales Mix (2021)* |          |          |          |
| Residential                | 15%      | 45%      | 36%      |
| Commercial                 | 27%      | 50%      | 41%      |
| Industrial                 | 59%      | 4%       | 23%      |
| Production Peak (2021)**   | 4,018 MW | 2,051 MW | 1,968 MW |

\*Source – NMPRC Website \*\*Source - FERC Form 1

# **SPS IRP Overview**







#### **SPS IRP Timeline**

| TASK   | START              | END                | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|--|--------------------|--------------------|------|------|------|------|------|------|
| Facilitated Stakeholder Process  |                    |                    |      |      |      |      |      |      |
| SPS Conducts Six-Month Facilitated Stakeholder Process                       | April 15, 2023     | October 15, 2023   |      |      |      |      |      |      |
| Integrated Resource Plan Filing & Subsequent Processes                       |                    |                    |      |      |      |      |      |      |
| SPS Pursues Agreement Among Stakeholders Regarding Modeling<br>Inputs        | April 15, 2023     | September 13, 2023 |      |      |      |      |      |      |
| SPS Files IRP  | October 15, 2023   | October 15, 2023   |      |      |      |      |      |      |
| Deadline for Written Public Comments on IRP                                  | October 15, 2023   | November 14, 2023  |      |      |      |      |      |      |
| Deadline for SPS's Response to Written Comments                              | November 15, 2023  | December 14, 2023  |      |      |      |      |      |      |
| Deadline for NMPRC Utility Division Staff's Statement                        | October 15, 2023   | January 13, 2024   |      |      |      |      |      |      |
| Deadline for Commission to Act on Filed IRP                                  | October 15, 2023   | February 12, 2024  |      |      |      |      |      |      |
| Independent Monitor  |                    |                    |      |      |      |      |      |      |
| Commission Appoints Independent Monitor                                      | February 12, 2024  | February 15, 2024  |      |      |      |      |      |      |
| SPS Provides Parties with RFP Documents and Timelines                        | February 15, 2024  | February 16, 2024  |      |      |      |      |      |      |
| Parties Submit Comments on RFP Documents and Timeline                        | February 16, 2024  | March 8, 2024      |      |      |      |      |      |      |
| Independent Monitor Files Design Report                                      | February 16, 2024  | March 15, 2024     |      |      |      |      |      |      |
| Comments Received on Independent Monitor's Design Report                     | March 15, 2024     | March 29, 2024     |      |      |      |      |      |      |
| RFP Issuance   |                    |                    |      |      |      |      |      |      |
| SPS Issues RFP   | July 1, 2024       | July 1, 2024       |      |      |      |      |      |      |
| RFP Bid Deadline   | July 1, 2024       | September 29, 2024 |      |      |      |      |      |      |
| Provide Independent Monitor with Evaluation of Bids                          | September 29, 2024 | January 27, 2025   |      |      |      |      |      |      |
| Independent Monitor Files Final Report                                       | January 27, 2025   | February 26, 2025  |      |      |      |      |      |      |
| SPS Conveys Results to Bidders and Awards Proposals                          | February 26, 2025  | February 27, 2025  |      |      |      |      |      |      |
| Generation CCN and PPA Pre-Approval Applications                             |                    |                    |      |      |      |      |      |      |
| SPS Files CCN(s) and/or PPA Pre-Approval Applications                        | February 27, 2025  | June 7, 2025       |      |      |      |      |      |      |
| SPS Receives Commission Decision on CCN and PPA Pre-Approval<br>Applications | June 7, 2025       | June 7, 2026       |      |      |      |      |      |      |
| SPS and Developers Procure Equipment and Materials                           | June 7, 2026       | June 7, 2027       |      |      |      |      |      |      |
| New Generation Resources Online  | June 7, 2027       | June 6, 2028       |      |      |      |      |      |      |

## **RELIABILITY FIRST**

Ben Elsey | Director, Resource Planning & Bidding Chris Whiteside | Resource Planning Analyst



# **General Terms**

- Megawatt ("MW") A unit of instantaneous power equal to one million watts, or one thousand kilowatts. Used as a measure of power station output.
- Megawatt-hour ("MWh") A megawatt hour equals 1,000 kilowatts of electricity generated per hour and is used to measure electric output (energy).
- Capacity The maximum level of electric power output that a power plant can supply at a defined point of delivery.
- Capacity Accreditation The amount of capacity a generation resource is allowed to apply to resource adequacy.
- Resource Adequacy The ability of a utility's accredited capacity resources (supply) to meet energy and system loads (demands) at all hours.
- Regional transmission organization ("RTO") An electric power transmission system operator (TSO) that coordinates, controls, and monitors a multi-state electric grid.

# **NORTH AMERICAN POWER GRIDS**



**Xcel** Energy®

#### **Southwest Power Pool Membership**



SPS is a member of the Southwest Power Pool ("SPP").

SPP is a regional transmission organization ("RTO") approved by FERC that oversees the bulk electric grid and wholesale power market in the central United States, providing a portfolio of services, including reliability coordination, tariff administration, regional scheduling, and market operations.

SPP also performs coordinated and transparent regional planning for more than 60,000 miles of high-voltage transmission facilities in the SPP footprint, is the balancing authority for the consolidated 14-state balancing area and operates the SPP Integrated Marketplace.

# **Reliability Overview**

- Ensure sufficient resources to meet demand (load)
- Historical emphasis on planning for resources to meet peak demand (i.e., the single hour in a year when demand is highest)
- As the resource mix transitions towards more intermittent renewable resources a greater focus is needed on meeting demand in all hours (e.g., when the wind is not blowing, or the sun is not shining)
- Contingency resources above peak demand are required and set by the Southwest Power Pool
- A comparison of resources and load is often summarized in a 'Loads and Resources Table'

### **Current Summer SPS Loads and Resources Table**

| LINE NO. | DESCRIPTION                                 | 2024  | 2025  | 2026  | 2027  | 2028    | 2029    | 2030    |
|----------|---|-------|-------|-------|-------|---------|---------|---------|
| 1        | TOTAL ACCREDITED CAPACITY (MW)              | 5,418 | 5,411 | 5,158 | 4,918 | 4,472   | 3,178   | 3,170   |
| 2        | FIRM LOAD OBLIGATION                        | 4,332 | 4,580 | 4,680 | 4,735 | 4,881   | 4,898   | 5,032   |
| 3        | TOTAL PLANNING RESERVE MARGIN               | 650   | 687   | 702   | 710   | 732     | 735     | 755     |
| 4        | CAPACITY NEED                               | 4,982 | 5,267 | 5,383 | 5,446 | 5,613   | 5,633   | 5,787   |
| 5        | <b>RESOURCE POSITION (MW): LONG/(SHORT)</b> | 436   | 144   | (224) | (527) | (1,141) | (2,455) | (2,618) |

- Resource position (line 5) is decreasing due to a combination of decreasing total accredited capacity (line 1) and increasing load (line 2)
- Total planning reserve margin (line 3) is currently set at 15% but is increasingly volatile

### **Load Duration Curve**



# **Existing Generation**

#### Capacity Overview by Resource Type

| Resource<br>Type | Nameplate<br>Capacity<br>(MW) | Accredited<br>Capacity<br>(MW) |
|------------------|-------------------------------|--------------------------------|
| Coal             | 1,069                         | 1,069                          |
| Coal to Gas      | 1,050                         | 1,050                          |
| Gas – Steam      | 1,578                         | 1,578                          |
| Gas – CT         | 828                           | 828                            |
| Gas – CC         | 558                           | 558                            |
| Wind             | 2,451                         | 415                            |
| Solar            | 106                           | 86                             |
| Total            | 7,650                         | 5,584                          |



#### **Decreasing Accredited Capacity**

- Aging and retiring gas steam fleet
- Retirement of Tolk coal plant
- Expiring wind and gas PPAs
- 'Firm and dispatchable' resources will be required to replace retiring gas and coal resources
- Multi-year process to procure and construct new generating resources includes obtaining a Generator Interconnection Agreement from the SPP



## **SPS's Changing Capacity Position**



SPP Planning Reserve Margin Increases **Increased Load** 

Generation Unit Retirements

# **Increasing Resource Adequacy Requirements**

- The transition from traditional thermal resources to more intermittent resources requires additional consideration and evaluation (e.g., ensuring grid stability)
- Recent winter weather events (e.g., Winter Storm Uri) have identified other areas requiring consideration
- Increased Resource Adequacy Requirements to ensure system reliability are required

# Increasing Load

- SPS service territory includes the rapidly expanding Permian Basin
- Push towards electrification of other industries and transportation to reduce carbon emissions
- Low rates attracting high energy 'emerging' customers (e.g., data centers, clean fuel producers, and cryptocurrency miners)
- Creates economic opportunities for New Mexico and/or reduces carbon emissions from other industries

# **COMMUNITY & WORKFORCE TRANSITION**

Zoë Lees| Regional VP, Regulatory Policy



### **Our Commitment**

Leading the Clean Energy Transition

> 80% reduction in carbon emissions by 2030

100% reduction of carbon emission by 2050 A "just transition" of our workforce and communities

Do not anticipate layoffs

We anticipate new jobs and opportunities

We will build upon our long and successful history of transition

### A RELIABLE & AFFORDABLE FLEET TRANSITION

Brooke Trammell | Regional VP, Regulatory and Pricing



### **Foundation for the Future**



Fleet transition components in current SPS rate case



Ratemaking considerations for new generation technologies like battery storage



Cost recovery of new generation resources

