Welcome to the PNM Stakeholder Meeting
Welcome

Ron Darnell – Introduction
Senior Vice President, Public Policy
Ron is responsible for regulatory administration and government affairs, corporate communications and marketing, and community relations and stakeholder engagement. Ron has been with the company since 2008.
Welcome
Logistics & Introduce Moderator

Raymond G. Sandoval
Director of Communications
Ray is responsible for communications and marketing.
Ray has been with the company since 2014.
Logistics

- Bathrooms
- Emergency exit
- Press questions
- Cell phones
- Break after presentation
- Questions/ Comments
Moderator

Hon. Alan C. Torgerson (Ret.)

Judge Torgerson was appointed to the federal bench in March 2003 and retired in March 2014. He conducted approximately 750 Rule 16 Settlement Conferences while on the federal bench and continues to do private mediations in retirement. Judge Torgerson has been a frequent speaker at continuing legal education seminars in New Mexico, a presenter at judicial educational programs sponsored by the Federal Judicial Center, an instructor at the Department of Justice National Advocacy Center and a frequent member of judge panels at conferences sponsored by the American Conference Institute.
AGENDA

1. The Four Scenarios
   Four Scenarios for Replacement & Abandonment, information on employee benefits, RFP process & battery technology

2. Introductions & Overview
   Overview of the Meeting – Format and Participants

3. Review
   Question and Answer Period – Your Chance to Ask About the Four Scenarios

4. Next Steps For New Mexico
   Discuss & Outline Next Steps To Move Forward, Together
TOPICS FOR DISCUSSION
Anything reasonably related to the Combined Abandonment and Replacement Filing

TOPICS TO BE REDIRECTED
Any discussion, questions, concerns or input related to the Integrated Resource Plan should be deferred to the IRP scheduled meetings and through the IRP channels of communications.
The Regulatory Process

Mark Fenton
Executive Director, Regulatory Policy and Case Management
Mark is responsible for regulatory policy and case management. This includes administration of PNM regulatory filings including the discovery process, service of pleadings, and other matters. Mark has been with the company since 1985.
Consolidated Application

PNM filed a consolidated San Juan Abandonment, Replacement & Financing Application

- Close the remaining units at San Juan Generating Station (Units 1 and 4).
- Securitization of approximately $361 million including undepreciated investment of $283 million and economic development for affected communities in San Juan County.
- Provides four replacement scenarios for replacement resources. The recommended scenario attempt to balance several considerations including environment, reliability and customer costs.
The Regulatory Process

- Filed consolidated application on July 1
- NMPRC bifurcated case – two dockets (19-00018-UT and 19-00195-UT)
- Abandonment and financing in 19-0018-UT; replacement resources – 19-00195-UT
- NMPRC timeline – abandonment and financing – up to 9 months; replacement resources up to 15 months; did include language for “commission to render a decision within the timeframes sought by PNM appropriate, but definitely within the applicable statutory timeframes…”
- Prehearing conference – July 23, 2019
- Discovery process commenced – PNM anticipates using Collaboration data management site
The PNM position is that the Energy Transition Act applies to the bifurcated cases.
Our Starting Point...

Tom Fallgren
Vice President, Generation

Tom Fallgren is Vice President of Generation. He joined the company in 2013 and has more than 35 years of experience in the electric power industry. Tom is responsible for the strategic direction and operation of the generating resources at PNM and oversees generation operations, maintenance, engineering, construction, fuel and power procurement, wholesale power marketing, and PNM integrated resource planning.
San Juan Plant Data

• Commercial Operation Dates
  Unit 1 – 1976
  Unit 2 – 1973
  Unit 3 – 1979
  Unit 4 – 1982

• 200 PNM employees
• Subcritical boilers
• Coal from mine mouth
• $3.2M property taxes

• Mine owned by Westmoreland
• 240 mine employees
• 3 million tons per year
### SJGS 2017 Changes

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<thead>
<tr>
<th>Unit 1</th>
<th>Prior MWs</th>
<th>Post MWs</th>
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<tbody>
<tr>
<td>PNM</td>
<td>170</td>
<td>170</td>
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<tr>
<td>Tucson Electric Power</td>
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<table>
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<tr>
<th>Unit 2</th>
<th>Prior MWs</th>
<th>Post MWs</th>
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<td>PNM</td>
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<tr>
<td>Tucson</td>
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<table>
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<th>Prior MWs</th>
<th>Post MWs</th>
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<tr>
<td>PNM</td>
<td>248.5</td>
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<td>Southern CA Public Power Authority</td>
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<td>Tri-State</td>
<td>40.8</td>
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<table>
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<th>Unit 4</th>
<th>Prior MWs</th>
<th>Post MWs</th>
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<tr>
<td>PNM</td>
<td>195</td>
<td>327</td>
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<tr>
<td>MSR Public Power Agency</td>
<td>146</td>
<td>0</td>
</tr>
<tr>
<td>City of Anaheim</td>
<td>50.9</td>
<td>0</td>
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<td>City of Farmington</td>
<td>43</td>
<td>43</td>
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<tr>
<td>Los Alamos County</td>
<td>36.5</td>
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<td>Utah Associated Municipal Power Systems</td>
<td>35.6</td>
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<tr>
<td>PNM - Merchant Plant</td>
<td>0</td>
<td>65</td>
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</table>

### San Juan Generating Station

- **2017**: 1,683 MW
- **2018**: 847 MW

### PNM Customer Share

- **2017**: 783 MW
- **2018**: 497 MW

- **49.7% Less Coal**
- **36.5% Less Coal**
Transition Away from Coal

Coal: once used to provide electricity to New Mexico and other parts of the world.
New energy vision for New Mexico facilitating transition to a cleaner energy mix.

Employees
Offers severance, education and retraining funding for San Juan employees

Sets Framework for 100% Carbon Free Energy by 2040

Customer Savings
Up to $7.11 in monthly bills for PNM customers compared to continuing operations at SJGS

Together for New Mexico.
SAN JUAN EMPLOYEE IMPACT

PNM & PNMR AFFECTED EMPLOYEES

**SEVERANCE**
- $10.0 million estimated total severance
- 203 current S&G employees
- >160 employees as of June 30, 2022
- >10 employees as of July 1 total employees
- Average 9 months severance

**JOB TRAINING**
- $1.2 million estimated total training
- $10,000 per employee per year / avg 58,000 education assistance refer to policy
- PNM sponsored certification classes or other job training

**SAN JUAN COAL COMPANY EMPLOYEES**

**SEVERANCE**
- $7.4 million plus S&G severance
- 242 mine employees
- >50 employees (2022–2035)
- 6 months severance
- Severance of $74 million paid for by PNM customers due to public policy decided by legislature
- Severance services provided through third party funded April 30, 2020 and PNM approval

**JOB TRAINING**
- $1.5 million estimated total training
- $8,000 per employee
- Scholarship fund through New Mexico workforce solutions

**COMMUNITY**
- $1.8 million Indian Affairs fund = 0.55%
- $6.0 million Economic Development fund = 1.65%
- $1.2 million Displaced worker fund = 3.38%
- Pre-fund at 25% of amount Jan 1, 2021
- Funding per ETA section 2(J)(b) and Section 16

**CALENDAR**
- Stakeholder meetings
  - July 9: San Juan employees
  - July 16: Public meeting in ADO
  - July 30: Public meeting in Farmington
  - August: Navajo Nation
  - August: Pueblo stakeholders

Smaller Handout

Energy Transition Act
- Section 2.H = ~$20 M
- Severance and Job Retraining
- Section 16 = ~$20 M
- Economic Development
- REVISED DATES FOR TRIBAL OUTREACH

Together for New Mexico.
Application Components

Option 1
• Carbon Reduction: 62%
• Balances Cost, Environment Reliability and ETA Requirements
• Total Resources Cost: $4,678 M
• Customer Savings vs San Juan Continued Operations

Option 2
• Carbon Reduction: 59%
• Maximizes Tax Base in San Juan after closure of SJGS
• Total Resources Cost: $4,732 M
• Customer savings less than Hybrid plan

Option 3
• Technological and operational risks around reliability
• Carbon Reduction: 65%
• Total Resource Cost: $4,834 M
• Customer savings slightly more than Hybrid plan

Option 4
• Does Not Meet Federal reliability requirements
• Carbon Reduction: 67%
• Total Resource Cost: $5,452 M
• Customer savings less than Hybrid plan
PNM IS CLOSING THE SAN JUAN COAL PLANT. SO WHAT’S NEXT?

The Utility Rebalancing Act PNMR is transitioning away from coal and moving to a more sustainable energy future. As we prepare to close the coal-fired San Juan Generating Station, we must determine how to replace the power from this plant. We have looked at four scenarios to help shape New Mexico’s energy future. Each of these scenarios has benefits and challenges and we are recommending a plan that uses customer money has one of the highest utility integration of battery storage in the U.S., with one of the largest solar facilities in the U.S., and minimizes new technology risks. Learn about all of the scenarios at PNM.com/PoweringTheFuture.

1: RECOMMENDED SCENARIO HYBRID

- Close San Juan Coal Plant
- 280 MW in San Juan Area School District
- 280 MW in San Juan Area School District
- 476 MW in San Juan Area School District
- 476 MW in San Juan Area School District

2: SCENARIO SAN JUAN LOCATION

- 0 MW in San Juan Coal Plant
- 0 MW in San Juan Coal Plant
- 0 MW in San Juan Coal Plant
- 0 MW in San Juan Coal Plant

3: SCENARIO 20 NEW FOSSIL FUEL

- 0 MW in San Juan Coal Plant
- 0 MW in San Juan Coal Plant
- 0 MW in San Juan Coal Plant
- 0 MW in San Juan Coal Plant

4: SCENARIO ALL RENEWABLES

- 114 MW in San Juan Coal Plant
- 114 MW in San Juan Coal Plant
- 114 MW in San Juan Coal Plant
- 114 MW in San Juan Coal Plant

Reliability within standards (from no black outs)

- 280 MW in San Juan Area School District
- 476 MW in San Juan Area School District
- 476 MW in San Juan Area School District
- 476 MW in San Juan Area School District

Technology change viability (Possible black outs)

- 280 MW in San Juan Area School District
- 476 MW in San Juan Area School District
- 476 MW in San Juan Area School District
- 476 MW in San Juan Area School District

Redundancy MOST within standards (Black outs probable)

- 280 MW in San Juan Area School District
- 476 MW in San Juan Area School District
- 476 MW in San Juan Area School District
- 476 MW in San Juan Area School District

Cost of RECOMMENDED PLAN

- $4,678M
- $4,732M
- $4,834M
- $5,452M

Total Plan Cost

- $4,678M
- $4,732M
- $4,834M
- $5,452M

Cost of RECOMMENDED PLAN

- $4,678M
- $4,732M
- $4,834M
- $5,452M

PNM.com/PoweringTheFuture

Together for New Mexico.
Scenario One: Hybrid

- Accelerates deployment of renewable resources
- Accelerates deployment of battery storage
- Simultaneously saves customers money
- Natural gas located in San Juan County will provide economic support to the affected school district
Investing in Reliable Power for New Mexico
Scenario 1

*$700M
Investment in New Mexico

1,000
New Construction Jobs Across New Mexico

$7.11
Savings for Customers on Monthly Bill in 2032*

34%
Resources in PNM portfolio that meet RPS

* Compared to continued operations at SJGS
Combined Application

PNM filed a combined San Juan Abandonment, Replacement & Financing Application

- Abandonment of remaining capacity in San Juan Generating Station (Units 1 and 4)
- Securitization of approximately $361 million includes estimated undepreciated investment of $283 million
- Recommended scenario for replacement power balances costs, the environment and reliability:

All scenarios incorporated:

- Abandonment of San Juan generating capacity (-497 MW)
- Low-cost renewable resource (previously included in June 3, 2019 PNM RPS filing) (+140 MW)

Recommended replacement power plan:

- San Juan location provides regional property tax benefit; ensures reliability while minimizing new battery technology risks (+280 MW)
- Competitively-bid solar contracts include one of the largest solar facilities in the nation (+350 MW)
- One of the highest utility integrations of battery storage in the nation (+130 MW)

(1) Abandonment also includes 65MW unregulated capacity in Unit 4 for a total of 562 MW
## Scenario One Replacement Details

- Competitive RFP processes resulted in a cost-effective mix of resources owned by PNM and third-party providers.
- To manage the risks of integrating new battery storage technology, total storage capacity does not exceed 5% of peak load and the capacity at each location is limited to 40 MW.

<table>
<thead>
<tr>
<th>PNM Owned Resources</th>
<th>Third Party Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>280 MW Gas Peaking Units at San Juan in-service June 2022</td>
<td>300 MW Solar PPA + 40 MW Storage ESA begins June 2022</td>
</tr>
<tr>
<td>40 MW Storage</td>
<td>50 MW Solar PPA + 20 MW Storage ESA begins Jan 2022</td>
</tr>
<tr>
<td>30 MW Storage</td>
<td></td>
</tr>
<tr>
<td>in-service June 2022</td>
<td></td>
</tr>
<tr>
<td><strong>Total 350 MW</strong></td>
<td><strong>Total 550 MW</strong></td>
</tr>
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(1) All potential replacement power plans incorporated 140 MW wind energy PPA included in June 3, 2019 RPS Filing
(2) The NMPRC decision on abandonment and securitization needed by April 2020; decision on replacement power needed by April 2020.
PNM CUSTOMER 1st YEAR SAVINGS

Hybrid
Scenario 1 Savings
$7.11*
*Savings for first year only, reference 20-Year Net Present Value for true apple to apples comparison, future years savings are difficult to calculate due to fuel costs in the future. Compared to continued operations at SJGS

San Juan Location
Scenario 2 Savings
$6.53*
*Savings for first year only, reference 20-Year Net Present Value for true apple to apples comparison, future years savings are difficult to calculate due to fuel costs in the future

No New Fossil Fuel
Scenario 3 Savings
$7.57*
*Savings for first year only, reference 20-Year Net Present Value for true apple to apples comparison, future years savings are difficult to calculate due to fuel costs in the future

All Renewable
Scenario 4 Savings
$1.65*
*Savings for first year only, reference 20-Year Net Present Value for true apple to apples comparison, future years savings are difficult to calculate due to fuel costs in the future

*Savings for first year only, reference 20-Year Net Present Value for true apple to apples comparison, future years savings are difficult to calculate due to fuel costs in the future.
To better understand the actual savings for customers, it is necessary to compare the total resource cost of each scenario.

The total resource cost shows us the cost to customers of each scenario and offers a true comparison of all the scenarios over a 20-year period.

When calculating the average residential monthly savings, only the first year (2023) is reflected. The reason that only the first year is reflected is because the price of Purchase Power Agreements (PPA) are levelized over the 20-year period, utility owned resources fluctuate over the period. Add in the complication of fuel costs or savings and results for any individual year do not tell the true cost or savings.

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
<th>Scenario 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid</td>
<td>San Juan Location</td>
<td>No Fossil Fuel</td>
<td>All Renewable</td>
</tr>
<tr>
<td>Incremental cost (NPV)</td>
<td>$4,678M (+$54M)</td>
<td>$4,732M (+$156M)</td>
<td>$5,452M (+$774M)</td>
</tr>
</tbody>
</table>
• Potential curtailment hours not included
• 2019 values reflect calculation per ETA – previous methodology would show higher percentage
• This includes data centers and voluntary solar resources
The Three Other Scenarios
Scenario Two: San Juan Location

- Offers the most localized benefits to San Juan County
- Increases flexible gas fired resources located in San Juan County
- Maximizes tax revenues by replacing property tax base in San Juan County
- Increases customer funding of economic development in San Juan County
Scenario Three: No Fossil Fuel

- Replaces the San Juan coal plant with renewables and battery storage distributed throughout the state
- Excludes new natural gas generation
- Poses challenges related to the technological and operational risks associated with deploying energy storage to a degree not yet tested by any utility in the United States
- Saves customers the most costs during the first year of the plan
Scenario Four: All Renewable

- Replaces San Juan Generating Station entirely with wind and solar generation
- Excludes new flexible natural gas and new battery storage
- Violates established federal reliability standards
- Most expensive plan
### Scenarios

<table>
<thead>
<tr>
<th>Proposed Scenario</th>
<th>Alternative Scenarios</th>
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<tr>
<td><strong>Hybrid</strong></td>
<td><strong>San Juan Location</strong></td>
</tr>
<tr>
<td>PNM Owned Resources</td>
<td>• 280 MW gas(^{(1)}) \n• 70 MW battery</td>
</tr>
<tr>
<td>Third Party Resources</td>
<td>• 350 MW solar \n• 60 MW battery</td>
</tr>
<tr>
<td><strong>Balancing Cost / Environment / Reliability:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Incremental cost</strong></td>
<td>$4,678M</td>
</tr>
<tr>
<td><strong>CO(_2) emission reduction(^{(2)})</strong></td>
<td>62%</td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td>Managed risk, storage capacity ≤5% of energy usage, each battery location limited to 40 MW</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Partial San Juan property tax base</td>
</tr>
</tbody>
</table>

\(^{(1)}\) Designates resources located in the San Juan area school district
\(^{(2)}\) From 2005 levels

*Note: A PPA for 140 MW of wind energy was requested separately in a June 3, 2019 RPS Filing and was incorporated into all contemplated plans.*
Lithium-ion batteries

Lithium-ion batteries are small cells or packs used in electric vehicles and cell phone chargers. For utilities, they are arranged in large quantities and charging is managed by complex software. Lithium ions flow between a lithium metal oxide cathode and a carbon-based anode. This is the leading technology today for utility battery projects, and the widespread use in electric vehicles has helped to reduce costs. It has good energy and power density. However, they are not typically used for durations beyond 4 hours, and there are some cycle life constraints (wear out quickly) and safety concerns of thermal runaway as seen in Samsung phones, laptops, hoverboards, and airplanes.

What’s in Store with Battery Storage?

Batteries Too Important To Rush The Process

• Why 40 MW batteries?
• Why a total of 130 MW batteries?
Resource Selection Process

RFP Process
- HDR Engineering as Independent Owners Engineer
- All resource RFP
- Supplemental RFP
- Best in Class selection

Modeling
- Resource selection across technologies
- Ensure reliability metric maintained
- Three independent modelers
Modeling & Outreach

Nicholas Phillips  
Director, Integrated Resource Planning  
Mr. Phillips manages the PNM Resource Planning department and is responsible for developing the PNM resource plans and the regulatory filings to support those resource plans. Prior to joining PNM, Mr. Phillips was involved with numerous regulated and competitive electric service issues including resource planning, transmission planning, production cost analysis, electric price forecasting, load forecasting, cost of service and rate design.
Modeling Energy Replacement Scenarios

Here is our suggestion for modeler meeting(s):

**Late-July / Early August:**
- In person or via webcast.
- PNM, Astrape, Ascend available for these modelers to talk directly to any and all other modelers.
- Inform on inputs and outputs and trends identified.

**Early to Mid-August:**
- Second meeting of modelers.
- Attempt to narrow the list of additional scenarios and consolidate requests together to accommodate model runs.

**End of August:**
- Third modeler meeting
- Review output from identified model runs above (those which are able to be run by this date)
- Follow-up from this TBD
This is just the beginning of our public outreach

2019

July 30
Stakeholder Meeting
Tuesday, July 30, 1:00-5:00 pm, San Juan College School of Energy, Zia Room
Inform on inputs and outputs and trends identified.

2019

August
Meeting with the Navajo Nation and Chapter Meetings

2019

Ongoing
Receive Updates, Submit Comments, Questions and Input online
www.pnmforwardtogether.com
Guidelines

01 One Person Speaks at a Time

When asking a question, please speak clearly and slowly as all questions will be logged and labeled with the person and organization responsible for asking the question.

02

Only items related to the San Juan Generating Station Abandonment and Replacement Combined Application will be considered for input and questions. Any questions or comments related to other regulatory proceedings should be directed towards the specific filing.

03
REMINDER: Integrated Resource Planning vs. Abandonment/Replacement

TOPICS FOR DISCUSSION
Anything reasonably related to the Combined Abandonment and Replacement Filing

TOPICS TO BE REDIRECTED
Any discussion, questions, concerns or input related to the Integrated Resource Plan should be deferred to the IRP scheduled meetings and through the IRP channels of communications.
Open Dialogue and Questions

When asking a question, please introduce yourself (your name, your organization), and speak clearly and slowly.

Media/Press questions will be handled after the meeting by the communications department.
THANK YOU!

Find more information at:
www.PNM.com/PoweringTheFuture

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