Welcome to the PNM Stakeholder Meeting

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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.

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Welcome

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Logistics & Introduce Moderator

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

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Logistics

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

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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.

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AGENDA

1

The Four Scenarios

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

3

Next Steps For New Mexico

Discuss & Outline Next Steps To Move Forward, Together

Introductions & Overview

Overview of the Meeting – Format and Participants

2

Review

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

4

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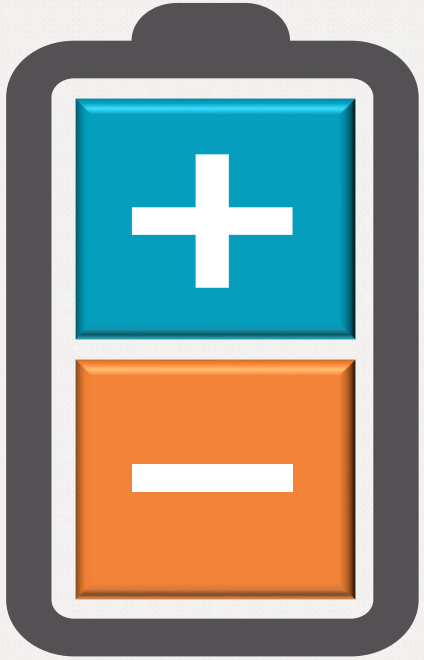
Integrated Resource Planning vs. Abandonment/Replacement

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 Resourse Plan should deferred to the IRP scheduled meetings and through the IRP channels of communications.

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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.

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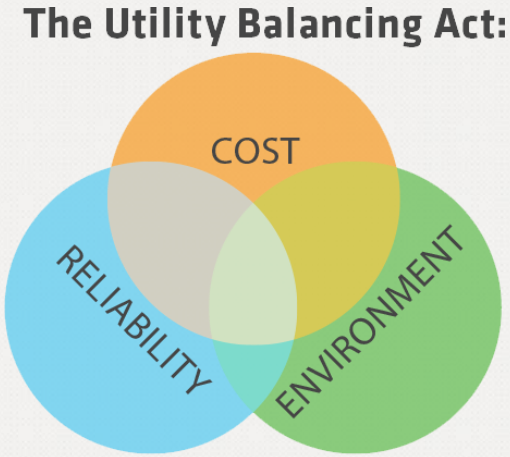
Consolidated Application

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.



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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

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Energy Transition Act

The PNM position is that the Energy Transition Act applies to the bifurcated cases.

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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.

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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

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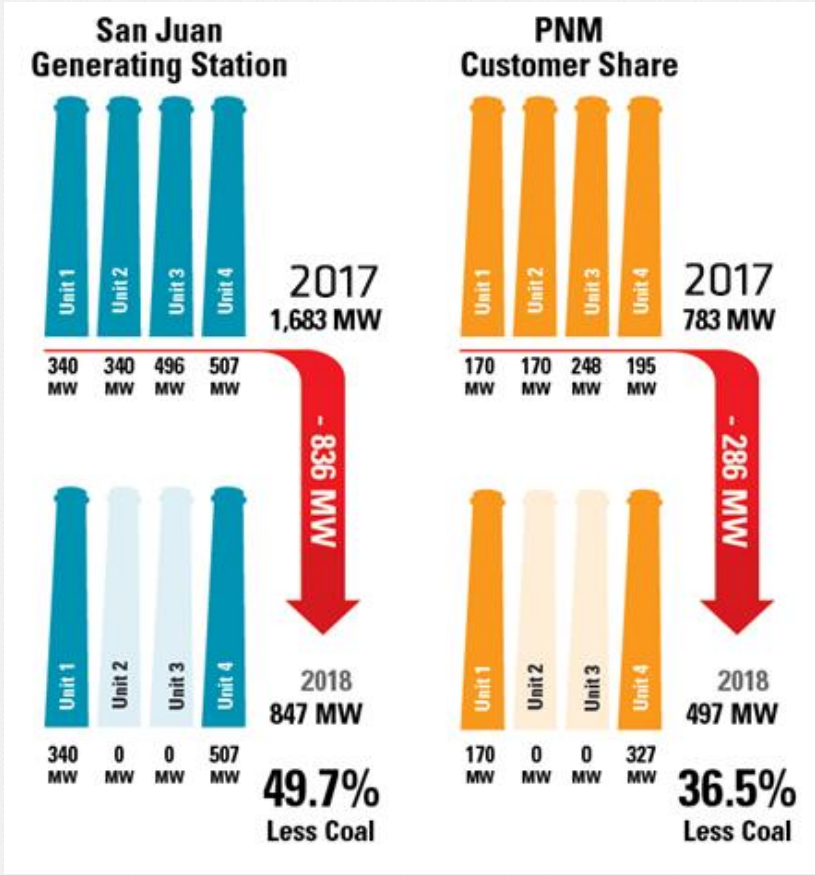
SJGS 2017 Changes

Unit 1	Prior MWs	Post MWs
PNM	170	170
Tucson Electric Power	170	170
Unit 2		
PNM	170	0
Tucson	170	0
Unit 3		
PNM	248.5	0
Southern CA Public Power Authority	207.7	0
Tri-State	40.8	0
Unit 4		
PNM	195	327
MSR Public Power Agency	146	0
City of Anaheim	50.9	0
City of Farmington	43	43
Los Alamos County	36.5	36.5
Utah Associated Municipal Power Systems	35.6	35.6
PNM - Merchant Plant	0	65



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Transition Away from Coal

Coal: once used to provide electricity to New Mexico and other parts of the world.

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New energy vision for New Mexico facilitating transition to a cleaner energy mix.

Energy Transition Act

Sets Framework for 100% Carbon Free Energy by 2040

Employees

Offers severance, education and retraining funding for San Juan employees

Customer Savings

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

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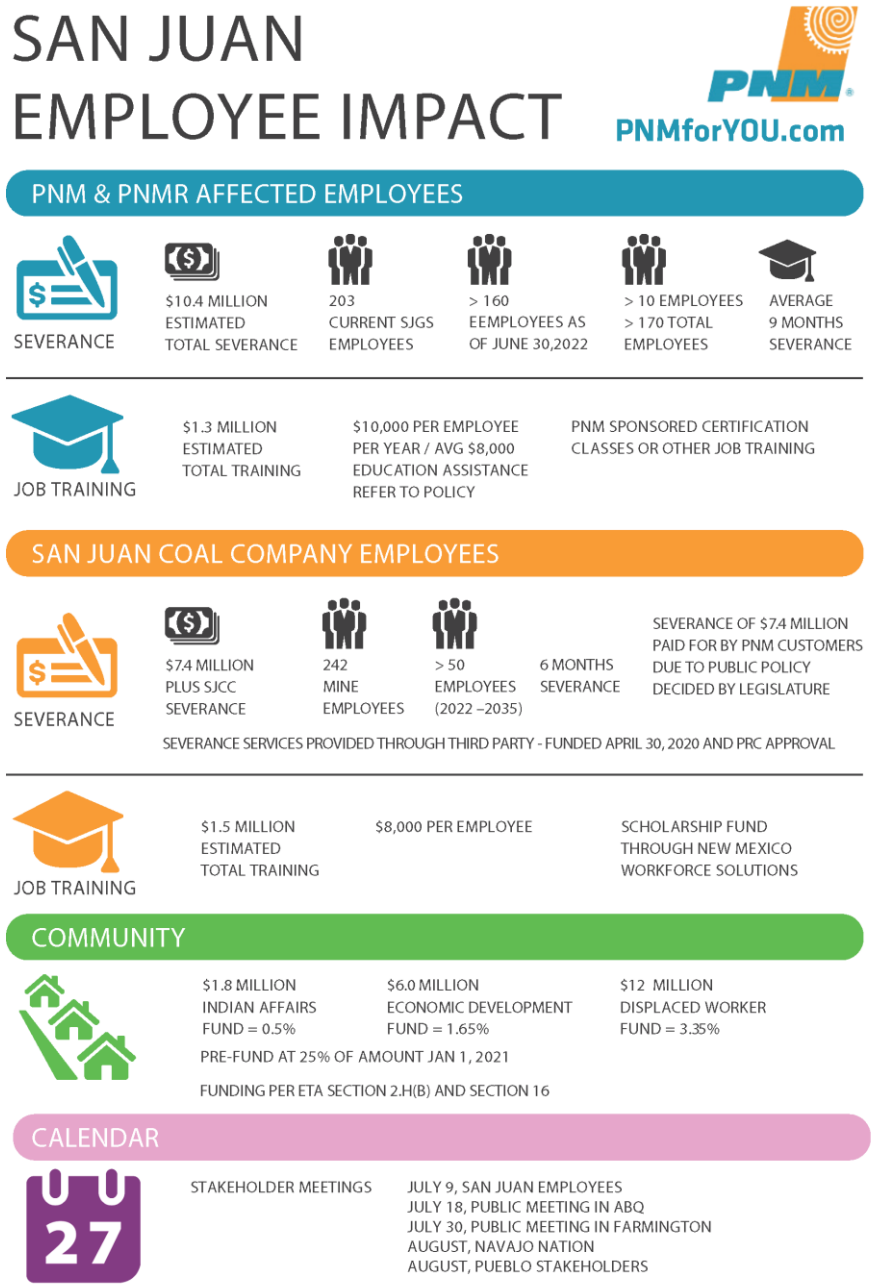

Smaller Handout

Energy Transition Act

- Section 2.H = ~$20 M
- Severance and Job Retraining

- Section 16 = ~$20 M
- Economic Development

- REVISED DATES FOR TRIBAL OUTREACH

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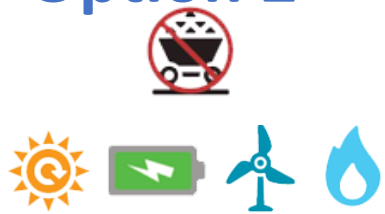
Application Components

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

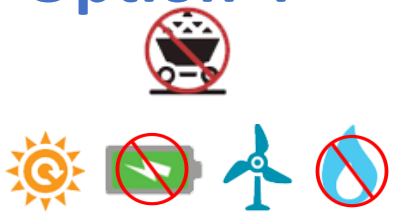


- Carbon Reduction: 59%
- Maximizes Tax Base in San Juan after closure of SJGS
- Total Resources Cost: $4,732 M
- Customer savings less than Hybrid plan

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

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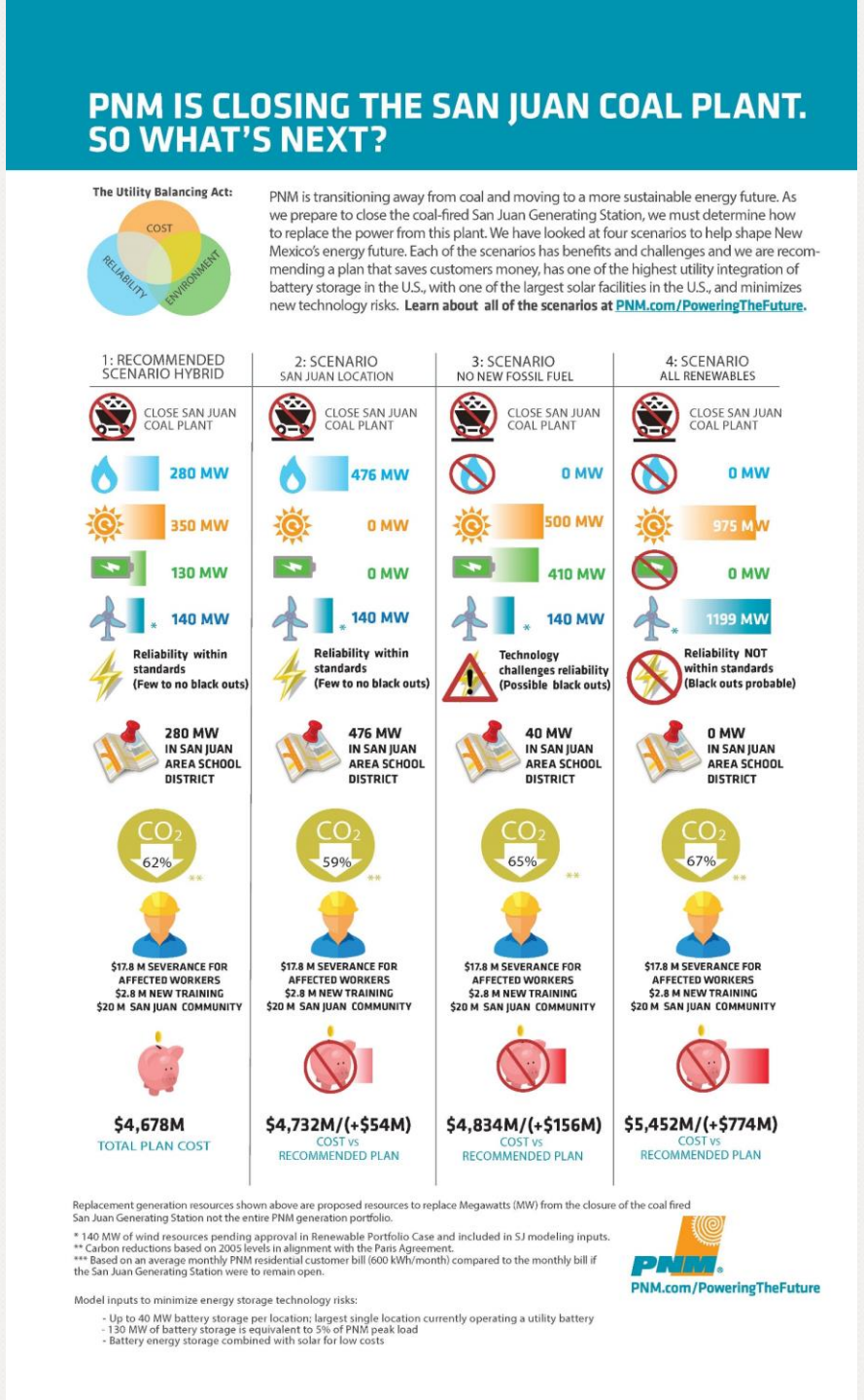
HANDOUT scenarios



PNM IS CLOSING THE SAN JUAN COAL PLANT. SO WHAT'S NEXT?

The Utility Balancing Act:

COST · RELIABILITY · ENVIRONMENT

PNM 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 the scenarios has benefits and challenges and we are recommending a plan that saves customers 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	2: SCENARIO SAN JUAN LOCATION	3: SCENARIO NO NEW FOSSIL FUEL	4: SCENARIO ALL RENEWABLES
CLOSE SAN JUAN COAL PLANT	CLOSE SAN JUAN COAL PLANT	CLOSE SAN JUAN COAL PLANT	CLOSE SAN JUAN COAL PLANT
280 MW	476 MW	0 MW	0 MW
350 MW	0 MW	500 MW	975 MW
130 MW	0 MW	410 MW	0 MW
140 MW *	140 MW *	140 MW *	1199 MW *
Reliability within standards (Few to no black outs)	Reliability within standards (Few to no black outs)	Technology challenges reliability (Possible black outs)	Reliability NOT within standards (Black outs probable)
280 MW IN SAN JUAN AREA SCHOOL DISTRICT	476 MW IN SAN JUAN AREA SCHOOL DISTRICT	40 MW IN SAN JUAN AREA SCHOOL DISTRICT	0 MW IN SAN JUAN AREA SCHOOL DISTRICT
CO_2 62% **	CO_2 59% **	CO_2 65% **	CO_2 67% **
$17.8 M SEVERANCE FOR AFFECTED WORKERS $2.8 M NEW TRAINING $20 M SAN JUAN COMMUNITY	$17.8 M SEVERANCE FOR AFFECTED WORKERS $2.8 M NEW TRAINING $20 M SAN JUAN COMMUNITY	$17.8 M SEVERANCE FOR AFFECTED WORKERS $2.8 M NEW TRAINING $20 M SAN JUAN COMMUNITY	$17.8 M SEVERANCE FOR AFFECTED WORKERS $2.8 M NEW TRAINING $20 M SAN JUAN COMMUNITY
$4,678M TOTAL PLAN COST	**$4,732M/(+$54M)** COST vs RECOMMENDED PLAN	**$4,834M/(+$156M)** COST vs RECOMMENDED PLAN	**$5,452M/(+$774M)** COST vs RECOMMENDED PLAN

Replacement generation resources shown above are proposed resources to replace Megawatts (MW) from the closure of the coal fired San Juan Generating Station not the entire PNM generation portfolio.

* 140 MW of wind resources pending approval in Renewable Portfolio Case and included in SJ modeling inputs.
** Carbon reductions based on 2005 levels in alignment with the Paris Agreement.
*** Based on an average monthly PNM residential customer bill (600 kWh/month) compared to the monthly bill if the San Juan Generating Station were to remain open.

PNM PNM.com/PoweringTheFuture

Model inputs to minimize energy storage technology risks:

- Up to 40 MW battery storage per location; largest single location currently operating a utility battery
- 130 MW of battery storage is equivalent to 5% of PNM peak load
- Battery energy storage combined with solar for low costs

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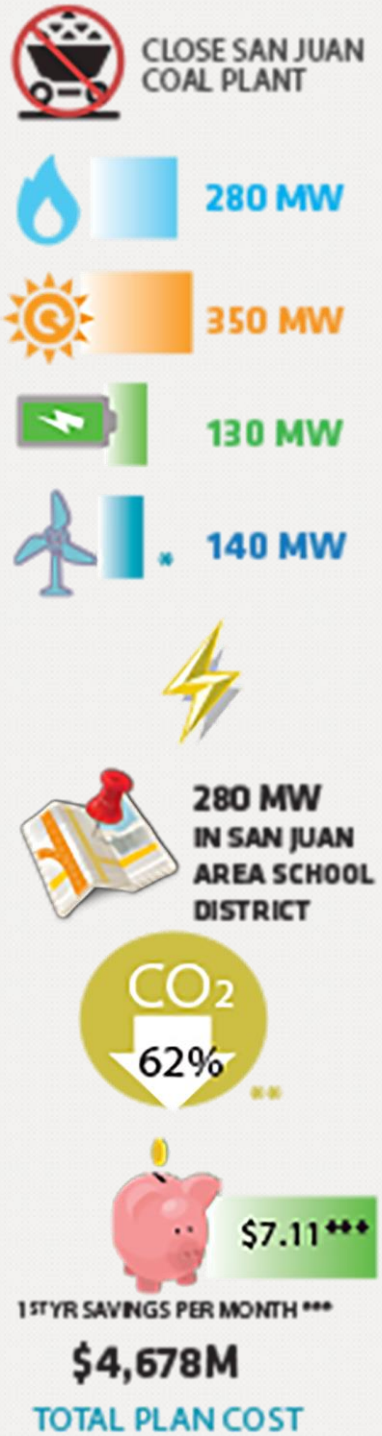

Scenario One: Hybrid

- 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

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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

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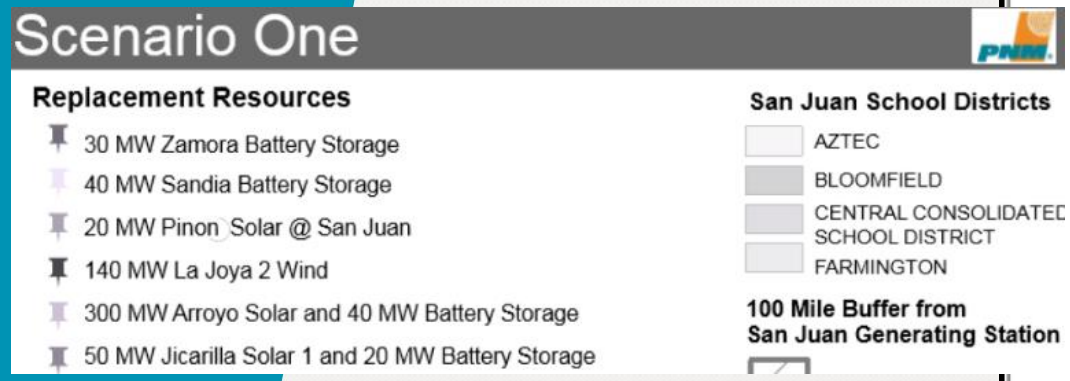
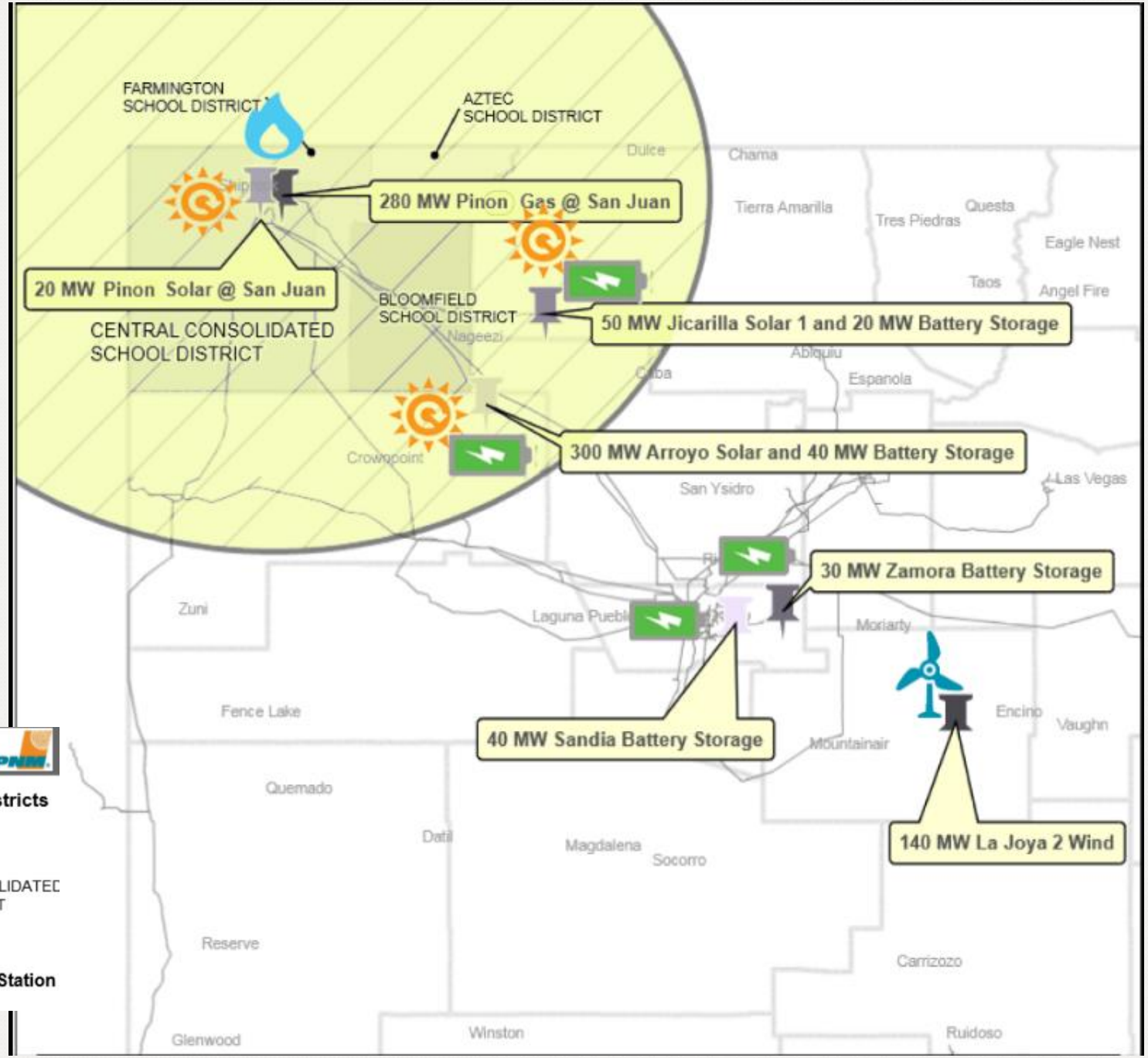
Scenario Resource Locations



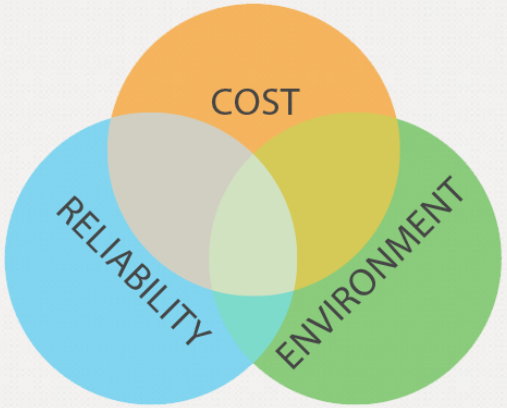


Combined Application

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:

The Utility Balancing Act:



All scenarios incorporated:

-497 MW(1)	Abandonment of San Juan generating capacity
+140 MW	Low-cost renewable resource (previously included in June 3, 2019 PNM RPS filing)

Recommended replacement power plan:

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

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(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

PNM Owned Resources

280 MW Gas Peaking Units at San Juan
in-service June 2022

40 MW Storage
in-service June 2022

30 MW Storage
in-service June 2022

Total 350 MW

Third Party Resources

300 MW Solar PPA + 40 MW Storage ESA
begins June 2022

50 MW Solar PPA + 20 MW Storage ESA
begins Jan 2022

Total 550 MW

Timing
NMPRC decision requested by the end of 2019[2]

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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

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Apples to Apples Cost Comparison

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
	Hybrid	San Juan Location	No Fossil Fuel	All Renewable
Incremental cost (NPV)	$4,678M	$4,732M (+$54M)	$4,834M (+$156M)	$5,452M (+$774M)

- 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 offer 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.

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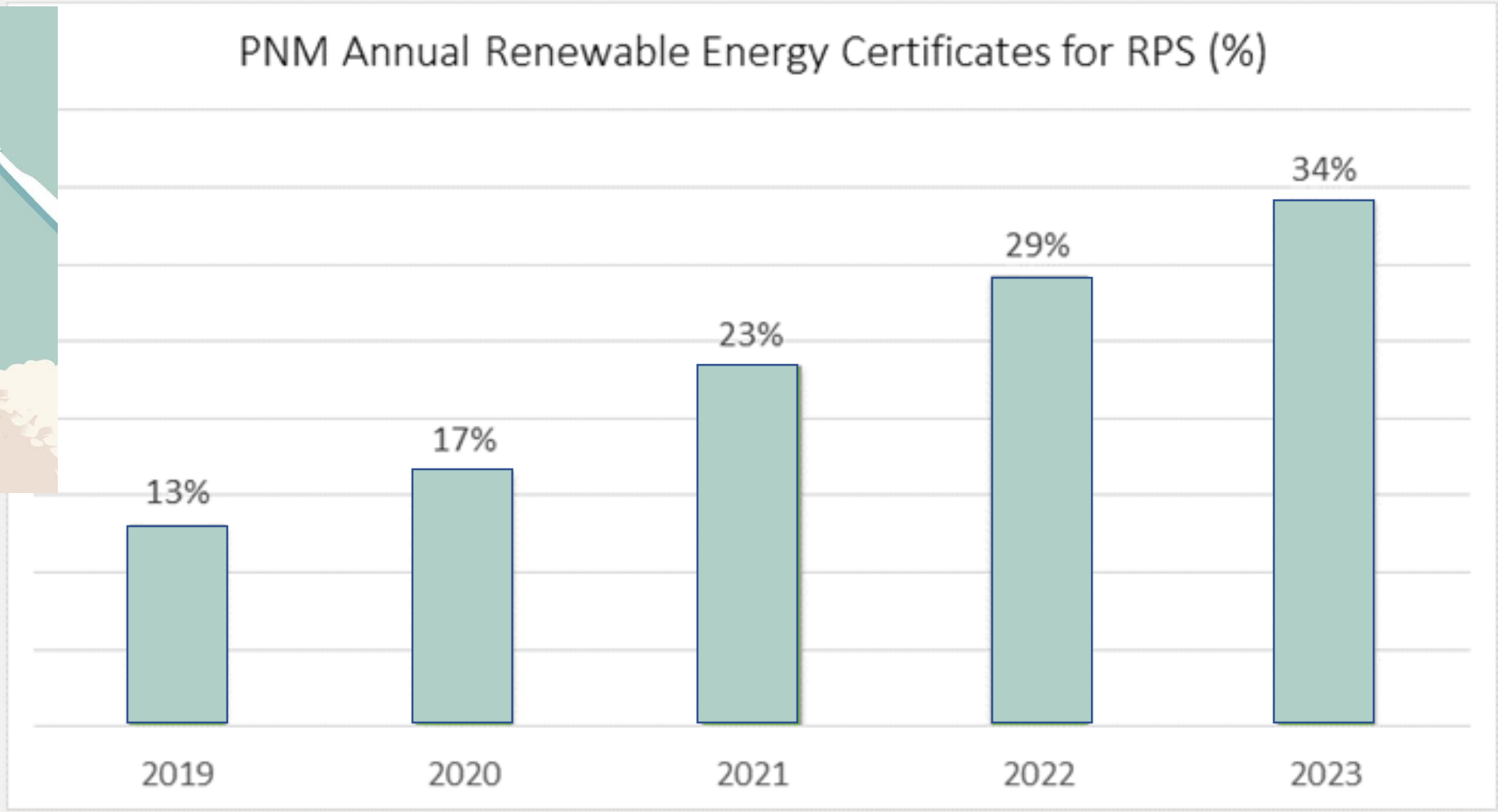

- Potential curtailment hours not included
- 2019 values reflect calculation per ETA – previous methodology would show higher percentage

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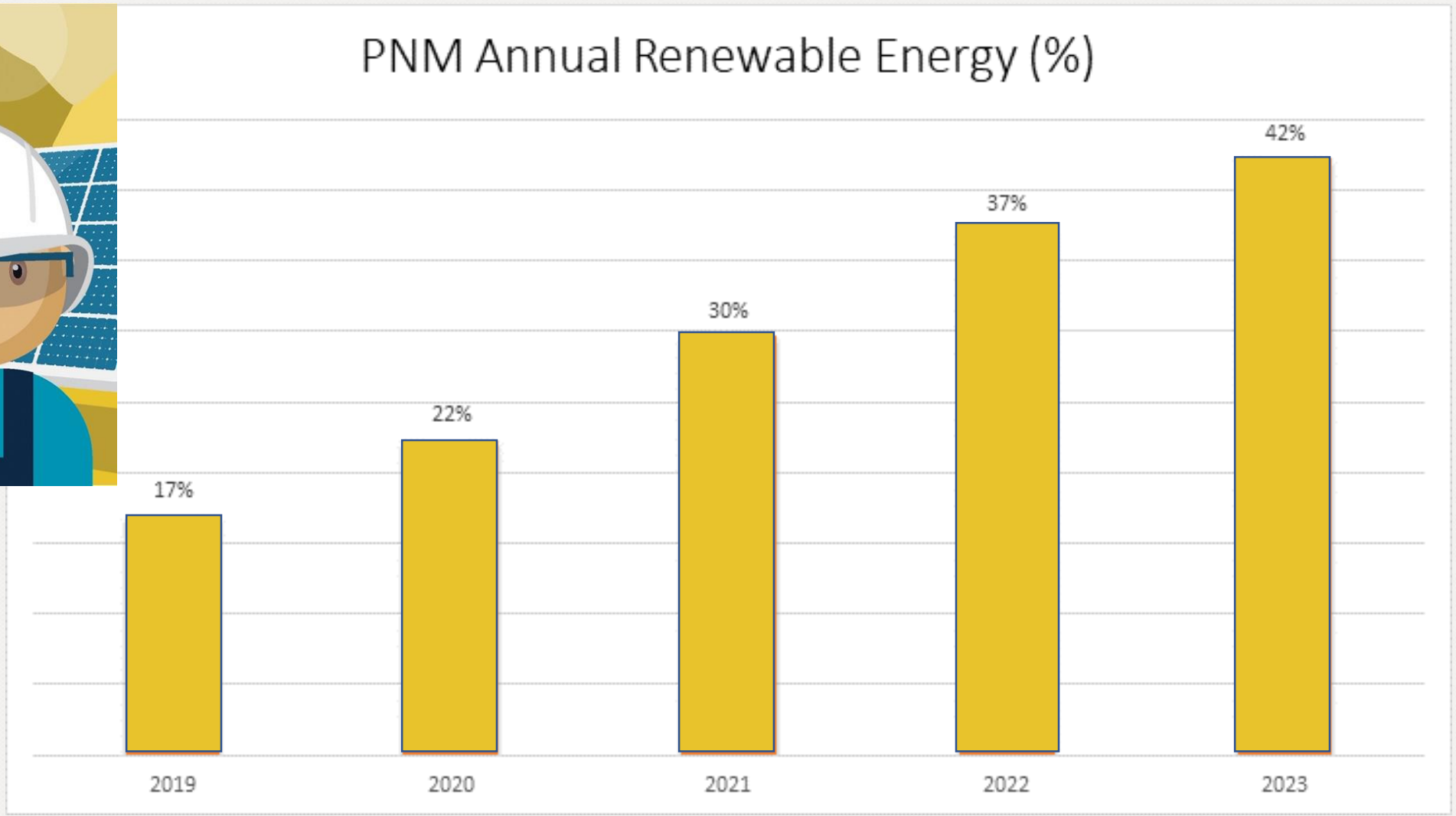

- This includes data centers and voluntary solar resources

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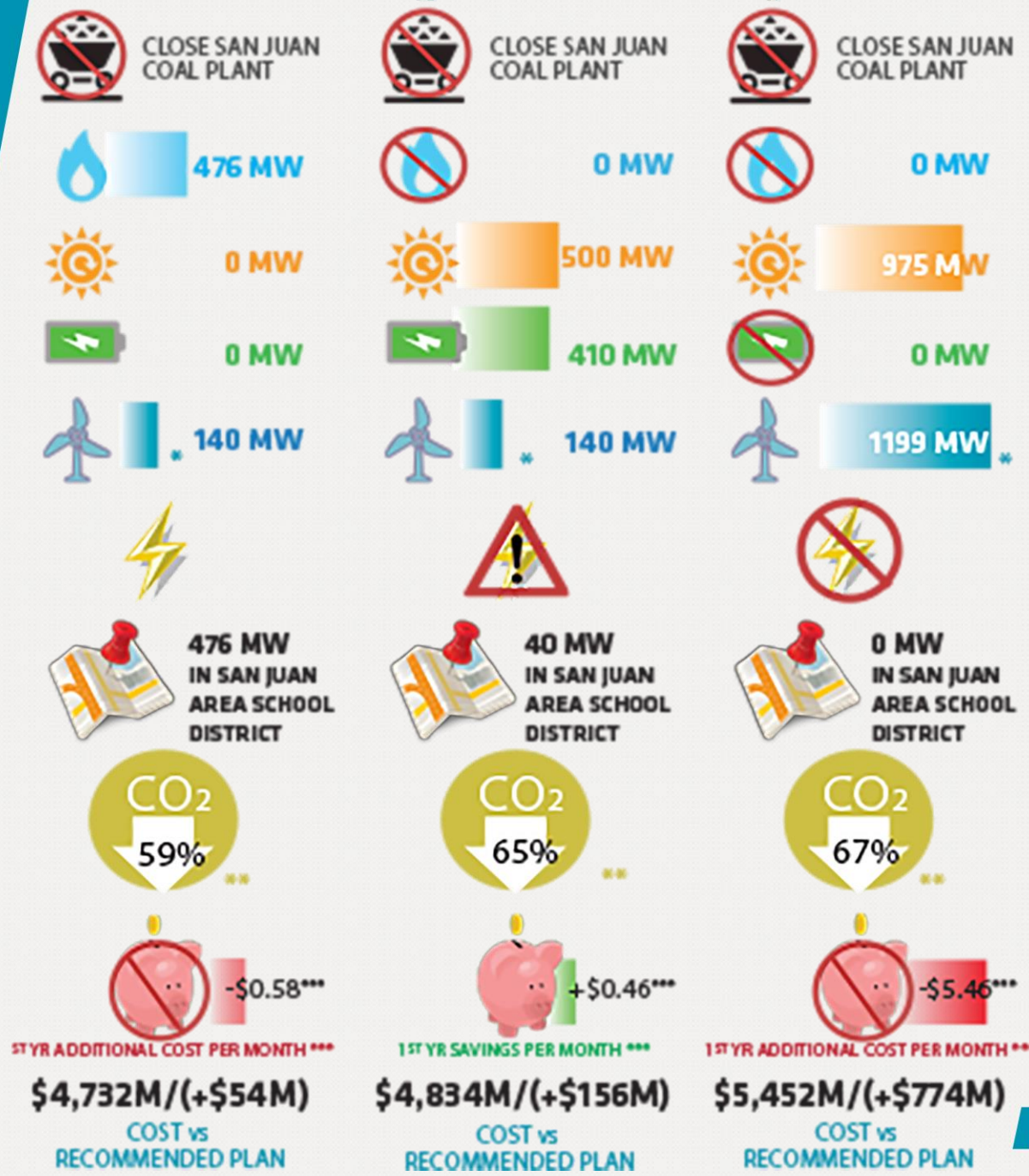

The Three Other Scenarios

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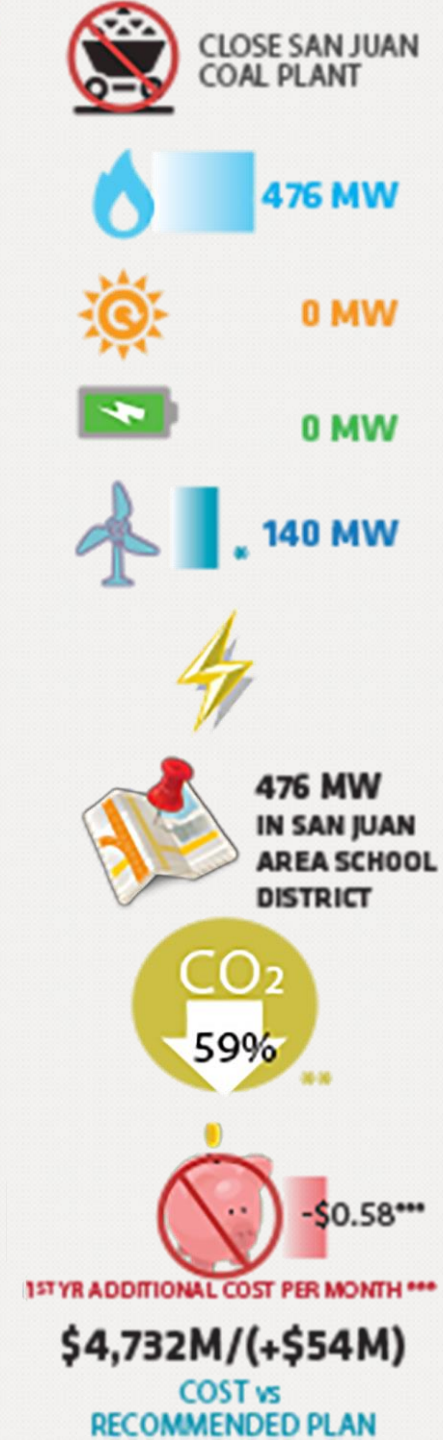

Scenario Two: San Juan Location

- 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

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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

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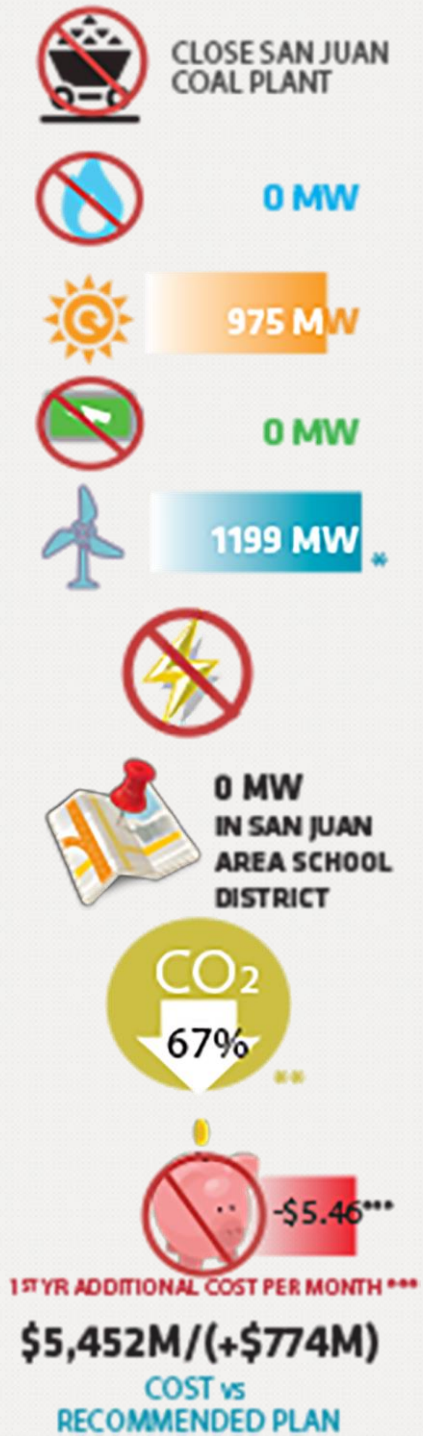

Scenario Four: All Renewable

- 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

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Scenarios

	Proposed Scenario	Alternative Scenarios		
	Hybrid	San Juan Location	No Fossil Fuels	All Renewables
PNM Owned Resources	• 280 MW gas(1) • 70 MW battery	• 476 MW gas(1)	• 40 MW battery(1) • 110 MW battery	-
Third Party Resources	• 350 MW solar • 60 MW battery		• 500 MW solar • 260 MW battery	• 1,059 MW wind • 975 MW solar
Balancing Cost / Environment / Reliability:				
Incremental cost	$4,678M	$4,732M (+$54M)	$4,834M (+$156M)	$5,452M (+$774M)
CO_2 emission reduction(2)	62%	59%	65%	67%
Reliability	Managed risk, storage capacity ≤5% of energy usage, each battery location limited to 40 MW	Managed risk, storage capacity ≤5% of energy usage, each battery location limited to 40 MW	Increased risk as higher % of system based on unproven battery technology	Heightened reliability risks - does not meet federal reliability standards
Other	Partial San Juan property tax base	Maximizes San Juan property tax base	Limited San Juan property tax base	No San Juan property tax base

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(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

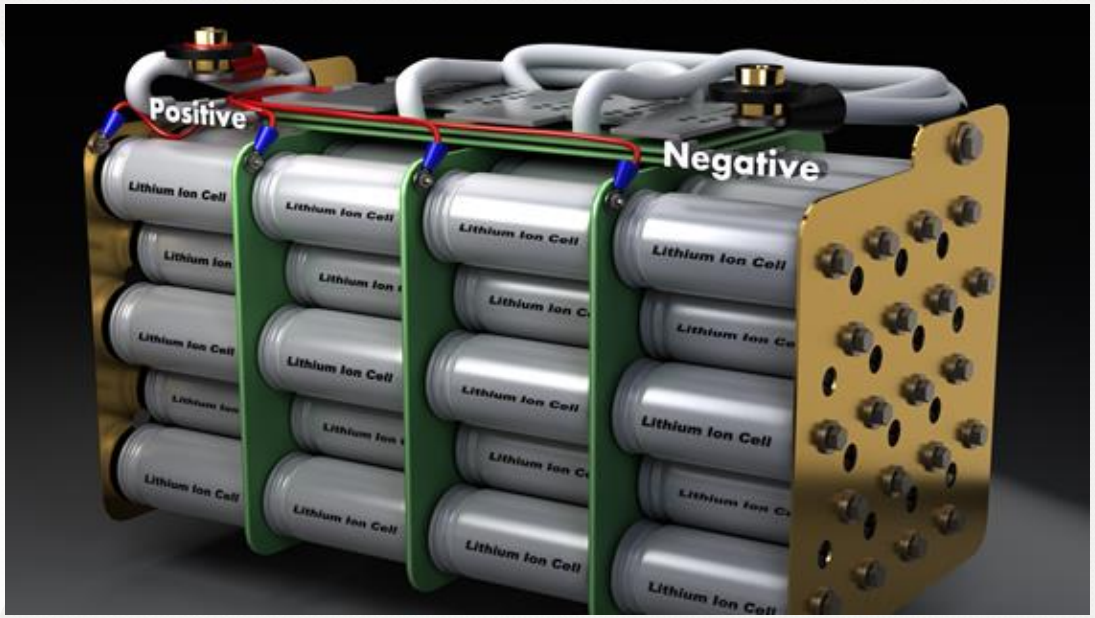
What's in Store with Battery Storage?

Batteries Too Important To Rush The Process

- Why 40 MW batteries?
- Why a total of 130 MW batteries?

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.



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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

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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.

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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

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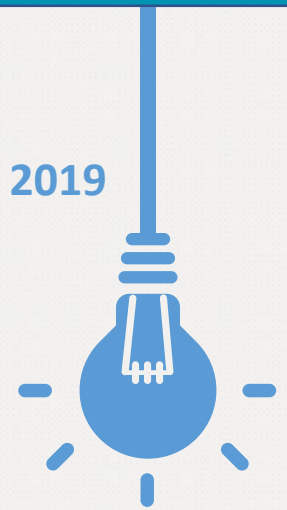
This is just the beginning of our public outreach



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.

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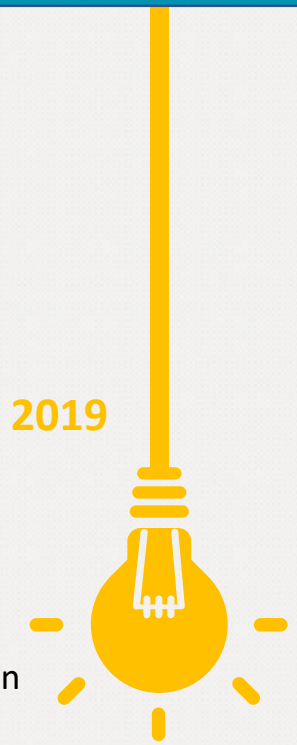
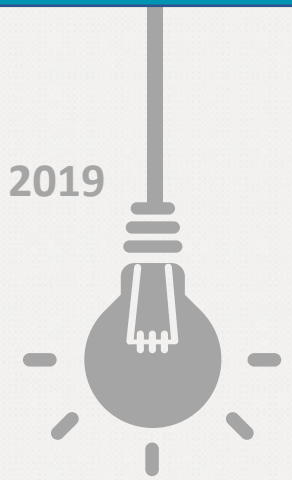


August

Meeting with the Navajo Nation and Chapter Meetings



Ongoing

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

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Guidelines

01 

One Person Speaks at a Time

02 

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.

03 

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.

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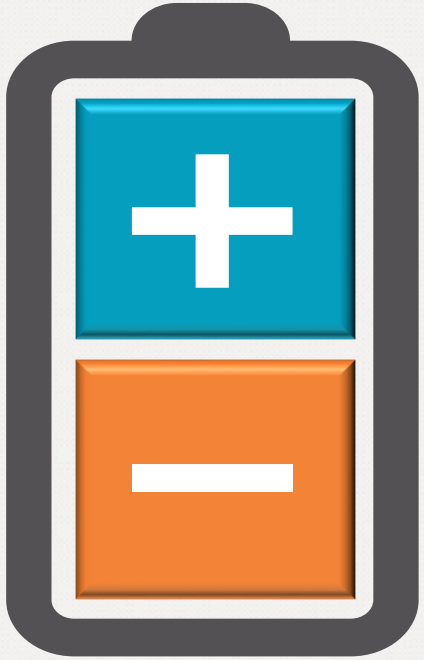
REMINDER: Integrated Resource Planning vs. Abandonment/Replacement

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 Resourse Plan should deferred to the IRP scheduled meetings and through the IRP channels of communications.

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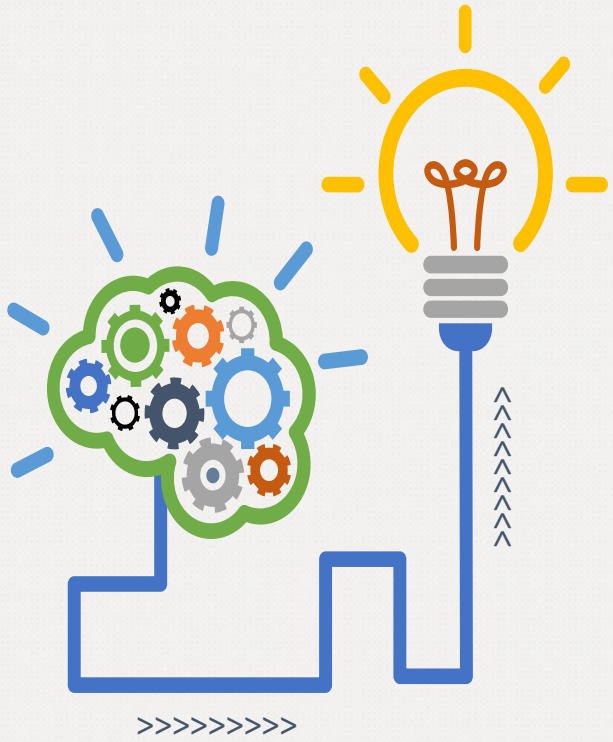
Open Dialogue and Questions

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 .



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THANK YOU!

Find more information at:
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