

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF THE APPLICATION)
OF PUBLIC SERVICE COMPANY OF NEW)
MEXICO FOR REVISION OF ITS RETAIL)
ELECTRIC RATES PURSUANT TO ADVICE)
NOTICE NO. 513)

Case No. 15-00261-UT

PUBLIC SERVICE COMPANY OF NEW)
MEXICO,)

Applicant)

DIRECT TESTIMONY AND EXHIBITS

OF

CHRIS M. OLSON

August 27, 2015

NMPRC CASE NO. 15-00261-UT
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WITNESS FOR
PUBLIC SERVICE COMPANY OF NEW MEXICO

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AFFIDAVIT

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Chris M. Olson. I am Vice President, Generation, for Public Service Company of New Mexico (“PNM”). My business address is 2401 Aztec Road, NE, Albuquerque, New Mexico 87107.

Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS VICE PRESIDENT, GENERATION.

A. As Vice President, Generation, I am responsible for the strategic direction and operation of PNM’s generating resources to ensure that they continue to provide safe, reliable and cost-effective electricity generation to customers within PNM’s service territory. The functions I oversee include generation operations, maintenance, engineering, construction, fuel and power procurement, wholesale power marketing and other services related to PNM’s generation fleet for PNM’s customers. I also have executive oversight responsibility for the operation of the San Juan Generating Station (“San Juan” or “SJGS”) on behalf of its various owners (“Participants”), in conformity with the San Juan Project Participation Agreement.

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1 **Q. HAVE YOU PREPARED A STATEMENT OF YOUR EXPERIENCE AND**
2 **QUALIFICATIONS?**

3 **A.** Yes. My educational background and professional experience are outlined in
4 PNM Exhibit CMO-1.

5

6 **Q. HAVE YOU PREVIOUSLY TESTIFIED IN ADMINISTRATIVE**
7 **PROCEEDINGS?**

8 **A.** I testified as a witness for PNM at the September 5, 2013, proceeding before the
9 New Mexico Environmental Improvement Board (“NMEIB”) where the revision
10 to the New Mexico Regional Haze State Implementation Plan (“Revised SIP”)
11 was adopted for purposes of New Mexico’s compliance with the U.S.
12 Environmental Protection Agency’s (“EPA”) Regional Haze Rule. The Revised
13 SIP includes a new determination of Best Available Retrofit Technology
14 (“BART”) for San Juan which requires the retirement of Units 2 and 3 and the
15 retrofit of selective non-catalytic reduction (“SNCR”) on San Juan Units 1 and 4.
16 I testified as a witness for PNM in NMPRC Case No. 13-00390-UT where I
17 submitted a series of pre-filed testimony relating to PNM’s proposed retirement of San
18 Juan Units 2 and 3, the cost of necessary emissions controls equipment for San Juan to
19 comply with the EPA’s Regional Haze Rule and other air quality requirements, and the
20 suitability of additional capacity in San Juan Unit 4 and Unit 3 of the Palo Verde
21 Nuclear Generating Station (“Palo Verde”) as replacement generation. I submitted pre-
22 filed testimony in Case No. 14-00332-UT, which was the predecessor to this rate case. I
23 also recently submitted pre-filed direct testimony in Case No 15-00205-UT in which

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1 PNM is seeking a certificate of public convenience and necessity for a gas peaking plant
2 to be built at the San Juan site.

3
4 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

5 **A.** I detail and support certain generation-related cost elements of PNM's revenue
6 requirements in this case. First, I discuss PNM's capital investments in
7 generation facilities for the period from the end of the Base Period (the twelve
8 months ending March 31, 2015) through the end of the Test Period (the twelve
9 months ending September 30, 2016)¹ and the construction work in progress
10 ("CWIP") five-month period following the Test Period, October 2016 through
11 February 2017². Second, I address the necessary non-fuel operations and
12 maintenance ("O&M") expenditures relating to PNM's generation fleet utilized in
13 developing the Base Period expenses. Third, I address the necessary costs related
14 to coal cost assumptions and fuel transportation for PNM's natural gas generation
15 facilities. Specifically, in the sections of my testimony that follow, I discuss:

- 16 • PNM's generation resources and their role in PNM's generation portfolio;
17 • PNM's generation capital budgeting processes, including how priorities are
18 established and how capital budgets are monitored and controlled;

¹ The "Capital Investment Period" includes linkage data from April 1, 2015, through September 30, 2015, and continues through the Test Period ending September 30, 2016.

² The period from April 1, 2015 through February 28, 2017, encompassing the Capital Investment Period and Construction Work in Progress ("CWIP") period (October 1, 2016 through February 28, 2017) is referred to as the "Capital Clearing Period".

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- 1 • Major capital investments required for the safe, reliable and efficient
- 2 operation of PNM's electric generating facilities while complying with all
- 3 federal and state regulations;
- 4 • The SNCR capital project at San Juan, including the necessity for the
- 5 conversion to "balanced draft" for San Juan Units 1 and 4;
- 6 • The necessity of the purchase and extension of the Palo Verde leases;
- 7 • How generation O&M expenditures are budgeted and monitored;
- 8 • The generation O&M expenditures included in the Base Period;
- 9 • The appropriate Base Period adjustments for generation O&M expenditures;
- 10 • Costs associated with power plant turbine major maintenance;
- 11 • Coal pricing assumptions at San Juan and Four Corners; and
- 12 • Costs associated with gas transportation for PNM's gas generation facilities.

II. SUMMARY OF KEY CONCLUSIONS

15 **Q. WHAT ARE THE KEY CONCLUSIONS OF YOUR TESTIMONY?**

16 **A.** I have reached a number of conclusions, including:

- 17 • PNM uses a thorough capital budgeting process to prioritize generation capital
- 18 projects and carefully monitors and controls capital expenditures. The
- 19 generation capital investments during the Capital Investment Period are the
- 20 result of this process and are reasonable and necessary for PNM to continue
- 21 meeting its customers' energy needs in a safe, reliable and cost-effective
- 22 manner.

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- 1 • PNM's generation O&M costs are the product of prudent planning and
2 reasonable cost controls. The Base Period O&M expenses represent costs
3 actually and necessarily incurred by PNM to safely and reliably operate
4 PNM's generation facilities.
- 5 • PNM's scheduled plant maintenance is necessary for cost-effective operation.
6 No single year's O&M expenses accurately represent the level of scheduled
7 maintenance costs that will be incurred during the period that PNM's
8 proposed new rates will be in effect. Therefore, it is necessary to use a
9 normalized approach to determine the appropriate amount of scheduled
10 maintenance cost to include in the Test Period.
- 11 • It is appropriate to make certain adjustments in forecasting future O&M
12 expenses as a result of planned additions and retirements in PNM's generation
13 resource portfolio.
- 14 • PNM will incur additional fuel-related expenses associated with the
15 transportation of natural gas needed to fuel PNM's gas generation facilities in
16 the Test Period.
- 17 • It is necessary and reasonable to install SNCR and balanced draft on San Juan
18 Units 1 and 4.

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III. OVERVIEW OF PNM'S GENERATION RESOURCES

Q. PLEASE DESCRIBE PNM'S PORTFOLIO OF GENERATION RESOURCES CURRENTLY IN SERVICE AND ANTICIPATED TO BE IN SERVICE THROUGH THE END OF THE TEST YEAR.

A. PNM's diverse mix of generation resources includes coal, nuclear, natural gas and renewable resources. While PNM owns most of its generation capacity, either outright or in participation with other owners, some of PNM's generation resources are leased or are available through power purchase agreements ("PPAs") where PNM has a contractual entitlement to the full output of the facility. PNM's New Mexico jurisdictional generation resources that are anticipated to be in service by September 30, 2016, are listed on Table CMO-1.

**Table CMO-1
PNM's Generation Resources**

<u>Generating Plant</u>	<u>Fuel Type</u>	<u>PNM Share</u>	<u>PNM Share of Capacity (MW)</u>	<u>In-Service Date</u>	<u>Operating Agent</u>
San Juan	Coal	47 %	783	1973-1982	PNM
Palo Verde 1 & 2	Nuclear	10.2 % (owned or leased)	268	1985-1986	APS
Afton	Natural Gas	100 %	230	2007	PNM
Four Corners 4 & 5	Coal	13.0 %	200	1969-1970	APS
New Mexico Wind Energy Center (PPA)	Wind	N/A	200	2003	FPL

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Luna Energy Facility	Natural Gas	33.3 %	185	2006	PNM
Reeves	Natural Gas	100 %	154	1958-1962	PNM
Valencia (PPA)	Natural Gas	N/A	145	2008	SWG Valencia Power LLC
Rio Bravo (formerly Delta)	Natural Gas	100%	138	2001	PNM in 2014
Lordsburg	Natural Gas	100%	80	2002	PNM
44 MW Utility Scale Solar Project	Solar	100%	44	2011-2013	PNM
Dale Burgett Geothermal (PPA)	Geothermal	N/A	8	2014	Cyrq Energy
Red Mesa Wind Energy Center (PPA)	Wind	N/A	102	2015	NextEra Energy
23 MW Utility Scale Solar Project	Solar	100%	23	2014	PNM
40 MW Utility Scale Solar Project	Solar	100%	40	2015	PNM
La Luz Energy Center	Natural Gas	100%	40	2015	PNM
TOTAL MW			2495		

1 **Q. WHICH OF THE RESOURCES LISTED IN TABLE CMO-1 ARE**
2 **PRESENTLY SERVING PNM CUSTOMERS?**

3 **A.** All of the facilities listed in Table CMO-1 currently serve PNM's customers with
4 the exception of the La Luz Energy Center ("La Luz") and the 40 MW Utility

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1 Scale Solar Project (“40 MW Solar Project”), both of which will begin serving
2 customers later in 2015.

3
4 **Q. EXCLUDING FOR THE MOMENT THE FACILITIES THAT HAVE NOT**
5 **YET BEEN PLACED IN SERVICE, ARE ALL OF THE GENERATION**
6 **RESOURCES LISTED ON TABLE CMO-1 NECESSARY TO PROVIDE**
7 **RELIABLE SERVICE TO PNM’S CUSTOMERS?**

8 **A.** Yes. Of course, the utilization rates of these facilities vary through the year
9 depending on the type of resource. Most of the energy supplied to PNM’s
10 customers is generated at the base load facilities. San Juan, the Four Corners
11 Power Plant (“Four Corners”) and the Palo Verde are base load facilities and
12 typically operate at close to full capacity all year. The Dale Burgett Geothermal
13 resource compares favorably with the base load facilities due to its high capacity
14 factor and low variability. San Juan is used for load following and is also used to
15 supplement renewable generation resources when gas resources are not operating
16 or adequate. Although Palo Verde Unit 3 is currently a New Mexico non-
17 jurisdictional resource, PNM’s customers have still benefited from its low cost
18 operation because it is used for “hazard sharing” to assure adequate supplies to
19 New Mexico retail customers when either Palo Verde Units 1 or 2 is off-line for
20 maintenance. The New Mexico Wind Energy Center (“NMWEC”), the Red Mesa
21 Wind Energy Center (“Red Mesa”), and the existing 44 MW of utility scale solar
22 generation are intermittent generation resources. The electricity from these
23 facilities must be used as it is generated.

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1 The gas-fired resources, consisting of the Afton Generating Station (“Afton”), the
2 Luna Energy Facility (“Luna”), the Reeves Generating Station (“Reeves”), the
3 Lordsburg Generating Station (“Lordsburg”), the Rio Bravo Generating Station³
4 (“Rio Bravo”) and the Valencia Energy Facility (“Valencia”), are operated on an
5 as-needed basis when load and market conditions dictate, or when transmission
6 constraints require load-side generation. These resources may be used for load
7 following and to balance generation to load when load and intermittent resource
8 generation fluctuate. During on peak hours, the combined cycle gas plants (Afton
9 and Luna) are also the primary resources used to regulate intermittent generation
10 from the NMWEC and Red Mesa. During off peak hours, PNM uses base load
11 plants to regulate its wind resources.

12
13 **Q. HOW IS ENERGY DELIVERED TO PNM’S CUSTOMERS FROM**
14 **THESE FACILITIES?**

15 **A.** All of PNM’s generation resources utilize the bulk transmission system for
16 delivery to PNM’s load centers as described by PNM Witness Johnson.

17
18 **Q. ARE THERE ANY PROPOSED CHANGES TO PNM’S EXISTING**
19 **GENERATION FLEET IN THE NEAR FUTURE?**

20 **A.** Yes. As noted earlier in my testimony, PNM is seeking to retire San Juan Units 2
21 and 3 effective December 31, 2017, in order to comply with the Revised SIP.

³ Rio Bravo was formerly known as the Delta-Person Station. The Delta-Person Station previously provided energy to PNM’s customers pursuant to a PPA. PNM has acquired the Delta-Person Station and it has been renamed.

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1 This retirement represents a significant amount of base load generation for PNM
2 and replacement resources will be required. To that end, PNM is seeking
3 certificates of public convenience and necessity ("CCNs") from the New Mexico
4 Public Regulation Commission ("NMPRC" or Commission") for an additional
5 132 MW in San Juan Unit 4 as well as 134 MW in Palo Verde Unit 3 which
6 represents PNM's 10.2% interest in that unit. PNM's application for approval of
7 the retirement of San Juan Units 2 and 3 and the referenced CCNs is currently
8 pending before the Commission in NMPRC Case No. 13-00390-UT. If approved,
9 these changes will not take effect until after the Capital Investment Period and,
10 therefore, they do not impact the capital investments included in PNM's cost of
11 service in this case. A separate CCN application has been filed with Commission
12 in NMPRC Case No. 15-00205-UT for the addition of the San Juan Gas Plant
13 which, if approved, will become operational after the Capital Investment Period.
14

15 **Q. PNM HAS PURCHASED CERTAIN LEASES REPRESENTING 64 MW**
16 **OF PALO VERDE UNIT 2 AND IS THIS CAPACITY NEEDED TO**
17 **SERVE PNM'S CUSTOMERS?**

18 **A.** Yes. As I discussed earlier, Palo Verde serves as an important source of base load
19 generation for PNM's customers that is needed now and in the foreseeable future.
20 In the face of the expiration of these leases in the near future, it was prudent for
21 PNM to purchase these leases to assure that important base load generation was
22 not lost or interrupted. PNM Witness Eden discusses the appropriateness of the
23 purchase costs of these leases.

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1 **Q. PLEASE DESCRIBE THE ADDITIONAL GENERATION RESOURCES**
2 **THAT PNM PLANS TO PLACE IN SERVICE DURING THE CAPITAL**
3 **INVESTMENT PERIOD.**

4 **A.** The following additional generation resources will be placed in service during the
5 Capital Investment Period:

6
7 **La Luz.** La Luz is a 40 MW gas peaking plant that was approved in NMPRC
8 Case No. 13-00175-UT. This facility is needed for voltage regulation and to meet
9 summer peak demand starting in 2016 and is forecasted to be in service by
10 December 2015.

11
12 **40 MW Solar Project.** PNM received Commission approval for a 40 MW Solar
13 Project in its Renewable Energy Portfolio Procurement Plan filing in NMPRC
14 Case No. 14-00158-UT. The 40 MW Solar Project is expected to be fully in
15 service by the fourth quarter of 2015.

16
17 **Q. ARE ALL OF THESE ADDITIONAL GENERATION RESOURCES**
18 **NECESSARY TO SERVE PNM'S NEW MEXICO CUSTOMERS?**

19 **A.** They are. This is addressed in the PNM 2014 Integrated Resource Plan ("IRP").
20 There is a current and future need for all of PNM's existing and proposed
21 generation resources. The blend of resource types – coal and nuclear base load,
22 gas intermediate and peaking, renewable generation and energy efficiency
23 programs – are required to reliably and cost-effectively provide electricity to

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PNM's customers. Most of the energy supplied to PNM's customers is generated by the low cost, base load resources. PNM must continue to invest capital and incur O&M expenses for its existing and planned generation resources to maintain reliability and cost-effectiveness.

IV. PNM'S GENERATION CAPITAL INVESTMENT PROCESS

Q. HOW DOES PNM SELECT CAPITAL PROJECTS FOR EXISTING GENERATION FACILITIES?

A. There are two processes for capital budgeting for existing generation Facilities. First, there is the process PNM uses for the generation facilities that PNM owns or for which PNM is the operating agent. Second, PNM participates in a similar capital budgeting process at Four Corners and Palo Verde, which are plants in which PNM has a partial ownership interest, but which PNM does not operate.

Q. PLEASE DESCRIBE THE BUDGET PROCESS USED FOR GENERATION FACILITIES THAT PNM OWNS OR PARTIALLY OWNS AND OPERATES.

A. The budget process for generation facilities that PNM owns, or partially owns and operates, begins by plant staff identifying potential projects that are considered essential to meet applicable regulatory compliance requirements and for safe and reliable operations. As explained by PNM Witness Buchanan, PNM Generation is provided annual capital targets for a five year period as a guide for budgeting.

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1 PNM develops cost estimates for the respective project budgets while working
2 within the capital targets. The estimating process involves internal and external
3 technical experts - engineers, manufacturers and other outside experts - who
4 define the project scope and develop the cost estimates using best available
5 information for each project. Senior management reviews the budget requests for
6 PNM and sets the final capital budget.

7
8 In the case of the budgets for San Juan and Luna, where PNM acts as operating
9 agent, PNM presents the proposed capital budgets to the respective owners at
10 these two facilities for review and final approval. Throughout this process, PNM
11 strives to balance the cost of each project with the benefit to customers that will
12 be derived from the project.

13
14 **Q. PLEASE DESCRIBE THE CAPITAL BUDGET PROCESS USED FOR**
15 **FOUR CORNERS AND PALO VERDE.**

16 **A.** Arizona Public Service Company ("APS") is the operating agent for both Four
17 Corners and Palo Verde. Very much like PNM, APS follows a rigorous process
18 to determine project prioritization, cost estimates and funding levels. APS
19 presents the capital plan for Palo Verde and Four Corners to the respective
20 ownership groups for each plant. The ownership groups are composed of a voting
21 member from each participant in that plant. The owners scrutinize APS's plans,
22 seek information and provide input on the proposed budgets. The final annual

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1 capital budgets are then put to a vote of each facility's owners and must be
2 approved by the requisite voting majority.

3
4 **Q. CAN YOU DESCRIBE HOW THE CAPITAL PROJECT COST**
5 **ESTIMATING PROCESS WORKS?**

6 **A.** Depending on the complexity of the project, PNM assembles data from a variety
7 of sources to develop cost estimates for generation projects. Initially, PNM's
8 Project Engineering staff develops cost estimates based on information from
9 recent similar projects, equipment suppliers, construction contractors and industry
10 information.

11
12 As the project is further refined, PNM often relies on a competitive bid process to
13 finalize cost estimates for capital projects. The Project Engineering staff assesses
14 the bids and selects the most qualified vendor or contractor to perform the work.
15 PNM reviews the bid in totality (cost, quality, schedule) when selecting the
16 winning bid and placing the contract.

17
18 Depending on the size and complexity of the project, estimating may also be
19 performed by an outside firm engaged to engineer the project. For large or
20 complex projects, estimating may be performed by an outside firm engaged in the
21 role of "Owner's Engineer." This is an industry standard practice. The firm
22 engaged as the Owner's Engineer is a firm with proven experience in designing
23 and executing projects of the scope and technology being considered.

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1
2 For large or complex projects, one of the critical decisions is the contracting
3 strategy. The contracting strategy influences the estimating strategy for the
4 continuing development of the project. For example, if the contracting strategy is
5 to use an Engineer, Procure, Construct (“EPC”) contract, the next refinement of
6 the project cost estimate will likely be based on proposals from the EPC bidders.
7 Depending on the structure of the request for proposals (“RFP”), either a single
8 proposal may be selected for EPC or separate parties may be selected for
9 engineering, equipment, supply and construction. If a multiple prime contracting
10 strategy is selected, the next refinement of the cost estimate will come from the
11 firm selected to perform the detail engineering for the project.

12
13 Assuming the project is authorized based on cost estimates produced in the
14 preceding steps; a periodic restatement of the cost estimate is made as the project
15 develops. Estimated values for equipment and construction services are replaced
16 with amounts quoted by firms competing for each specific contract. For large
17 projects that require multiple years to execute, the periodic restatement of the cost
18 estimate is necessary to establish an accurate annual forecast.

19
20 **Q. WHAT ARE THE COMMON TYPES OF COSTS THAT GO INTO**
21 **PROJECT COST ESTIMATES?**

22 **A.** Typical cost types and how they relate to the above activities include:

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1 110 and 120; Internal labor: This includes all labor performed by PNM
2 employees from permitting through to project commissioning. As mentioned
3 above, an assumption is made during the estimating process as to who will
4 perform the work (internal or external). As the project gets closer in time, this
5 assumption is reviewed based on current staff availability.

6 350 and 359; Materials and Equipment: This cost type includes all minor
7 materials and equipment which are typically purchased as a stock item from a
8 vendor or material provider. It includes items that PNM or its materials provider
9 routinely stock or can acquire quickly. Examples include pipe, fittings, electrical
10 cable, fasteners, valves, bearings, etc.

11 370 Outside Services: This cost type includes all outside professional services as
12 well as construction services. Professional services may include environmental
13 compliance and testing, engineering support, etc. This cost type also includes the
14 purchase of specialty engineered equipment or site specific items such as motors,
15 pumps, control systems, fans, compressors, conveyor belts and instrumentation.

16

17 **Q. ONCE CAPITAL PROJECTS ARE APPROVED, HOW DOES PNM**
18 **MINIMIZE COSTS TO CUSTOMERS?**

19 **A.** PNM actively manages its capital projects to ensure that the projects are
20 completed at the lowest reasonable cost and within budget. As I described
21 previously, each project is subject to a thorough scoping and design review
22 process. PNM utilizes its Procurement team to competitively price materials and
23 contract labor to achieve the lowest reasonable cost for customers. PNM utilizes

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1 a proactive process of reviews, cost controls, and communication to drive project
2 and site level accountability.

3

4 **Q. DESCRIBE THE PROCESS THAT PNM GENERATION USES TO**
5 **MONITOR EXPENDITURES UNDER ITS CAPITAL BUDGET**

6 **A.** PNM Generation reviews the status of the capital budget during monthly meetings
7 between the plant directors and the department managers at each facility.
8 Additionally, management reviews are held among the Vice President of
9 Generation, the Plant Directors, and the Director of Generation Construction
10 Project Management on a monthly basis. Luna and San Juan have additional
11 budget reviews held among the members of each facility's respective ownership
12 groups on a monthly basis. The goals of these reviews are to monitor the
13 investments at each plant and make sure that expenditures are prudent and within
14 the budgeted amount.

15

16 **Q. IS FLEXIBILITY SOMETIMES REQUIRED WITH RESPECT TO THE**
17 **IMPLEMENTATION OF PROJECTS?**

18 **A.** Flexibility in the specific projects to be completed is necessary to ensure the
19 management of unforeseen events and necessary unbudgeted expenses that can
20 arise during the year. For instance, equipment may fail, diverting the resources of
21 the engineering and project management staff from on-going projects as well as
22 requiring unbudgeted expenditures to ensure the supply of power to customers is
23 not jeopardized. Projects and associated expenditures therefore cannot always be

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1 completed in the timeframe originally forecasted. A process is in place for
2 managing mid-year changes, or “trade-offs” to ensure the funding of necessary,
3 but unbudgeted, capital expenditures while not exceeding the approved capital
4 target. The process requires documentation of the need for the new expenditure,
5 the identification of a budgeted project expenditure that will be reduced to
6 accommodate the new expenditure, and proper approvals. As a result of this
7 process, some projects may be delayed while others are accelerated, but the total
8 amount of capital invested during the budget period will not typically change by a
9 significant amount.

10
11 **Q. HOW IS BUDGETING HANDLED WITH RESPECT TO FACILITIES**
12 **THAT PROVIDE POWER TO PNM PURSUANT TO A PPA?**

13 **A.** Because PNM does not own or operate any of the facilities covered by PPAs and
14 only purchases power from these facilities, PNM is not involved in their
15 budgeting process. Additionally the PPA’s respective capital investments and
16 O&M costs are not included in PNM’s revenue requirements.

17
18 **V. PNM’S GENERATION CAPITAL INVESTMENTS**

19 **Q. WHAT TOPICS DO YOU ADDRESS IN THIS SECTION OF YOUR DIRECT**
20 **TESTIMONY?**

21 **A.** I address the capital costs associated with the additional generation resources that
22 I just described. I also discuss PNM’s capital investment plan for existing

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1 generation facilities during the Capital Investment Period and summarize the
2 benefits of, and justification for, making these investments. In addition, I show
3 how the investments were projected and that the amounts are reasonable forecasts
4 of the level of investment needed through the end of the Capital Investment
5 Period.

6
7 **Q. WHAT ARE THE CAPITAL COSTS THAT PNM EXPECTS TO INCUR**
8 **WITH RESPECT TO THE NEW GENERATION RESOURCES YOU**
9 **DESCRIBED AS BEING PLACED INTO SERVICE DURING THE**
10 **CAPITAL INVESTMENT PERIOD?**

11 **A.** I prepared Table CMO-2 which shows the estimated capital costs associated with
12 each of these new generation resources that PNM will incur during the Capital
13 Investment Period.

**Table CMO-2
Capital Costs for Generation Resources
Added During Capital Investment Period**

<u>Generating Plant</u>	<u>Estimated Capital Costs⁴</u>
40 MW Utility Scale Solar Project	\$77.8 million ⁵
La Luz Energy Center	\$55.3 million ⁶
Total	\$133.1 million

⁴ Represents estimated gross plant investment before adjustment for depreciation and other adjustments.

⁵ Total capital investment is \$79.3 million which includes \$1.5 million related to land already in plant in service at March 31, 2015.

⁶ Total capital investment is \$56 million which includes 0.7 million related to land already in plant in service at March 31, 2015.

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1 **Q. WHY DOES THE RED MESA WIND ENERGY CENTER NOT APPEAR**
2 **ON THE LIST?**

3 **A.** Red Mesa is providing generation pursuant to a PPA. Therefore, PNM will not
4 incur any capital or O&M costs associated with Red Mesa.

5

6 **Q. WHAT IS THE TOTAL PNM GENERATION CAPITAL INVESTMENT**
7 **DURING THE CAPITAL INVESTMENT PERIOD?**

8 **A.** PNM's total Generation capital investments during the Capital Investment Period
9 are \$496 million which excludes adjustments of \$18.3 million to reduce
10 forecasted capital investments in San Juan for PNM's anticipated additional 132
11 MW interest in the facility. These adjustments are discussed in the testimony of
12 PNM Witness Buchanan. The capital investments fall into three major categories.

13 1. Capital projects for new generation plants (La Luz and 40 MW Solar) are
14 \$133.1 million.

15 2. Capital projects at existing generation plants are \$199.4 million.

16 3. Capital to purchase 64 MW of the Palo Verde Unit 2 leases is \$163.5
17 million.

18 Table CMO-3 represents the total of PNM's generation capital expenditures for
19 the Capital Investment Period including construction work in progress ("CWIP")
20 estimated clearings from October 2016 through February 2017. The jurisdictional
21 allocations of these expenditures are discussed by PNM Witness Monroy.

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**Table CMO-3
Capital Costs for Generation Resources per Site
For the Capital Clearing Period by Tier⁷**

Business Segment	Linkage and Test				5 Months Post Test (CWIP)				Linkage and Test + CWIP = Grand Total			
	Tier 1	Tier 2	Tier 3	Total	Tier 1	Tier 2	Tier 3	Total	Tier 1	Tier 2	Tier 3	Grand Total
Generation	451,403,342	15,367,076	1,831,211	468,601,629	26,607,292	578,720	201,464	27,387,476	478,010,634	15,945,796	2,032,675	495,989,105
Afton	1,663,425	674,442	-	2,337,867	-	-	-	-	1,663,425	674,442	-	2,337,867
Bulk Power Building	1,406,849	217,622	-	1,624,472	82,592	-	-	82,592	1,489,441	217,622	-	1,707,064
Four Corners	13,444,776	152,087	-	13,596,863	2,735,458	-	-	2,735,458	16,180,234	152,087	-	16,332,321
La Luz	55,342,122	-	-	55,342,122	-	-	-	-	55,342,122	-	-	55,342,122
Lordsburg	782,805	119,522	54,669	956,997	-	37,208	-	37,208	782,805	156,730	54,669	994,205
Luna	3,172,489	563,015	-	3,735,503	-	-	-	-	3,172,489	563,015	-	3,735,503
Palo Verde	203,430,301	252,865	-	203,683,167	19,334,235	-	-	19,334,235	222,764,536	252,865	-	223,017,402
Reeves	1,565,229	395,301	248,545	2,209,075	-	-	-	-	1,565,229	395,301	248,545	2,209,075
Rio Bravo	-	1,096,096	318,117	1,414,213	-	-	-	-	-	1,096,096	318,117	1,414,213
San Juan	92,841,320	11,896,125	1,209,880	105,947,324	4,455,007	541,512	201,464	5,197,983	97,296,327	12,437,637	1,411,344	111,145,308
Solar	77,754,026	-	-	77,754,026	-	-	-	-	77,754,026	-	-	77,754,026
Grand Totals by Tier	451,403,342	15,367,076	1,831,211	468,601,629	26,607,292	578,720	201,464	27,387,476	478,010,634	15,945,796	2,032,675	495,989,105

1 **Q. CAN YOU DESCRIBE THE CAPITAL PROJECTS CONTAINED IN THIS**
2 **RATE CASE REQUEST?**

3 **A. Yes, please see PNM Exhibit CMO–2 for a summary listing and the detailed**
4 **information of each of the Generation Tier 1 capital projects organized by each**
5 **Generation site. This exhibit also includes the project details of the La Luz Gas**
6 **Plant and the 40 MW Solar Project already discussed. PNM Exhibit CMO–3 is a**
7 **summary listing and the detailed information of all the Generation Tier 2 capital**
8 **projects organized by Generation site. PNM Exhibit CMO–4 is a summary listing**
9 **and the detailed information of all the Generation Tier 3 capital projects organized**
10 **by each Generation site. These exhibits list each capital project with an**
11 **identification number, the associated Linkage and Test period cost, the associated**
12 **CWIP cost, the total project cost for each project tier and the fully supported**

⁷Tiers represent capital projects categorized by dollar value for the Capital Clearing Period. Tier 1 generation projects include those capital projects whose Capital Clearing Period value is equal to or greater than \$750,000. Tier 2 generation projects include those capital projects for which the Capital Clearing Period value is between \$100,000 and \$750,000. Tier 3 generation projects include those capital projects for which the Capital Clearing Period value is less than or equal to \$100,000. Each generation site has its capital projects and costs segregated into these three Tiers.

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1 details of each project. These exhibits are filed in hardcopy within this testimony
2 and electronically. Detailed project information including project justifications,
3 estimated completion dates, alternatives reviewed and budget figures by cost type
4 are hyperlinked from the project identification numbers in the electronic versions
5 of PNM Exhibit CMO-2 through PNM Exhibit CMO-4.

6
7 These three capital exhibits are a subset of all of PNM's total capital projects as
8 described in PNM Witness Buchanan's testimony. As discussed in PNM Witness
9 Buchanan's testimony, PNM has utilized a three tier system to categorize the
10 amount of detail required to describe each capital project. For Generation, there
11 are a total of 152 projects of which, 32 are Tier 1 projects representing 96% of the
12 capital clearings. There are 69 Tier 2 projects representing 3.2% of the capital
13 clearings. Finally, there are 51 Tier 3 projects representing less than 1% of the
14 capital clearings.

15
16 **Q. CAN YOU ADDRESS SOME OF THE MORE SIGNIFICANT CAPITAL**
17 **PROJECTS THAT ARE INCLUDED IN PNM'S REVENUE**
18 **REQUIREMENTS IN THIS CASE?**

19 **A.** Yes. I would like to highlight the more significant, i.e. Tier 1 capital projects, to
20 be undertaken during the Capital Investment Period. The described Tier 1
21 projects relate to eight of PNM's generation facilities, specifically San Juan, Palo
22 Verde, Four Corners, Afton, Luna, Lordsburg, Reeves, and the Aztec office
23 facility. Although Rio Bravo does not have a Tier 1 capital project, it was also

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1 included in the capital discussion for completeness. Each of these facilities is
2 addressed separately below.

3
4 **A. *San Juan Generating Station***

5 **Q. PLEASE PROVIDE ADDITIONAL BACKGROUND ON SAN JUAN AND**
6 **ITS ROLE IN PNM'S RESOURCE PORTFOLIO?**

7 **A.** San Juan is a low-cost, coal-fired power plant that PNM depends on as a base load
8 resource and for load following. It presently consists of four units and is located
9 near Waterflow, New Mexico. San Juan currently produces approximately fifty
10 percent of the energy used annually to supply PNM's customers' electricity needs.
11 Even with the proposed retirement of San Juan Units 2 and 3 at the end of 2017,
12 San Juan will continue to be an important base load generation resource for
13 PNM's customers. The plant has been in operation for over forty years and is
14 subject to the normal wear and tear that is associated with a base load plant that is
15 also used for system regulation necessary to utilize renewable generation
16 resources. To maintain needed reliability for the remaining years of use for Units
17 2 and 3 and the longer term use of Units 1 and 4, PNM must replace system
18 components. PNM minimizes the cost impact of repairing San Juan by
19 scheduling maintenance using a planned maintenance cycle.

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1 **Q. WHAT ARE SOME OF THE MAJOR CAPITAL PROJECTS THAT WILL**
2 **BE UNDERTAKEN AT SAN JUAN?**

3 **A.** The owners of San Juan Units 1 and 4 are implementing a major environmental
4 upgrade, the SNCR Project. The SNCR Project includes SNCR emission control
5 technology on Units 1 and 4 in order to comply with the Revised SIP. In
6 conjunction with the installation of SNCR, San Juan Unit 1 and Unit 4 are being
7 converted to a balanced draft configuration which is also included in the SNCR
8 Project. The conversion to balanced draft is required under the San Juan air
9 permits and is intended to assure that PNM continues to meet the National
10 Ambient Air Quality Standards (“NAAQS”) and mitigate workplace exposure to
11 particulates resulting from fly ash and ammonia emissions due to the installation
12 of SNCR, among other reasons.

13
14 **Q. CAN YOU PLEASE DESCRIBE WHAT YOU HAVE REFERRED TO AS**
15 **THE “SNCR PROJECT”?**

16 **A.** The San Juan SNCR Project encompasses both the installation of SNCR on San
17 Juan Units 1 and 4 as required by the Revised SIP as well as the conversion of
18 these units to a balanced draft configuration. They are denoted on PNM Exhibit
19 CMO-2 as projects:

- 20 • “U1 SNCR” (ID# 76121912)
- 21 • “U4 SNCR” (ID# 76421912)
- 22 • “SJGS SNCR costs PNM Share” (ID# 77021913)

23

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1 **Q. CAN YOU PLEASE GENERALLY DESCRIBE SNCR AND HOW IT**
2 **WORKS?**

3 **A.** SNCR is a post-combustion control technology for NO_x emissions. In very
4 general terms, SNCR uses an amine-based reagent (urea in San Juan's case) which
5 is injected into the boiler and reacts with Nitrogen Oxide ("NO_x") to reduce it to
6 molecular nitrogen ("N₂") and water. In order to inject the reagent, the boiler
7 walls must be penetrated and lances must be installed for the delivery of the
8 reagent into the heated boiler.

9

10 **Q. CAN YOU PLEASE GENERALLY DESCRIBE WHAT BALANCED**
11 **DRAFT IS AND HOW IT WORKS?**

12 **A.** The San Juan boilers were originally designed with only forced draft ("F.D.")
13 fans. These boilers and associated flues and ducts operate at positive pressure.
14 A positive pressure or "forced draft" system pushes or forces gases through
15 several pieces of equipment including the steam generator, particulate control
16 devices, scrubber, and up the stack. Solely pushing combustion air and
17 product gases through the entire system requires relatively high gas pressures
18 throughout the equipment path and results in the intrusion of flue gas into the
19 ambient air due to imperfect sealing between high temperature tube sections,
20 expansion joints, and ductwork transitions. The integrity of these seals is
21 compromised with time due to wear, particularly in load-following or cycling
22 duty. Coal combustion particles that accumulate outside of the boiler pressure
23 boundary pose various maintenance, health and safety issues.

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1 A balanced draft gas handling system both “pushes” and “pulls” the gas
2 through the entirety of the boiler and environmental controls which
3 significantly reduces, if not eliminates, the positive static gas pressure
4 throughout most of the gas path and eliminates intrusion of flue gas into the
5 ambient air
6

7 **Q. WHY IS IT NECESSARY TO CONVERT SAN JUAN TO A BALANCED**
8 **DRAFT CONFIGURATION?**

9 **A.** In a September 2011 Title V permit application, after consultation with the New
10 Mexico Environment Department (“NMED”) concerning San Juan’s fugitive
11 emissions, PNM made the commitment to convert to balanced draft when the
12 boilers were upgraded to meet the Regional Haze Federal or State Implementation
13 Plan. In a subsequent NSR permit modification issued by NMED in August 2012
14 that allowed the installation of either SCR under the federal plan or SNCR under
15 that state plan, NMED required San Juan to install balanced draft.
16

17 **Q. DOES BALANCED DRAFT HELP ASSURE COMPLIANCE WITH**
18 **RESPECT TO FUGITIVE EMISSIONS?**

19 **A.** Yes. Balanced draft is achieved by installing induced draft (“I.D.”) fans to
20 balance the pressure in the boilers, flues and ducts. This greatly lessens the escape
21 of untreated combustion products including particulate matter, SO₂, NO_x and
22 ammonia (from the SNCR) caused by the positive pressures created by the F.D.

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1 fans. The reduction in fugitive emissions will help ensure demonstrated
2 compliance with the NAAQS as well as with San Juan's air permits.

3
4 **Q. DOES BALANCE DRAFT POSITIVELY IMPACT THE SAFETY OF THE**
5 **SAN JUAN EMPLOYEES?**

6 **A.** Yes. As stated above, balanced draft will result in a significant reduction in
7 fugitive emissions and the ammonia associated with the SNCR process. The
8 reduction in these emissions provides a myriad of environmental, operational and
9 worker benefits by reducing the intrusion of combustion products prior to
10 environmental controls into the ambient air and improving ambient air quality in
11 the working environment and immediate plant vicinity.

12
13 **Q. DOES BALANCED DRAFT BENEFIT THE OPERATIONS OF THE SAN**
14 **JUAN PLANT?**

15 **A.** Yes. As stated above, balanced draft will result in a significant reduction in
16 fugitive emissions including fly ash. As the plant in general is exposed to less fly
17 ash, there will be lowered on-going maintenance and labor required to address
18 fugitive dust.

19
20 **Q. HOW MUCH OF THE COST FOR THE SNCR PROJECT WILL BE**
21 **INCURRED DURING THE CAPITAL INVESTMENT PERIOD?**

22 **A.** PNM's share of the anticipated costs for the SNCR Project during the Capital
23 Investment Period is \$35.9 million for San Juan Unit 1 and \$42.3 million for San

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Juan Unit 4. Included in the costs of Unit 4 are the costs associated with the additional 132 MW of capacity that PNM is seeking to acquire in NMPRC Case No. 13-00390. However, as previously discussed, the forecasted additional 132 MW capital interest was removed from the Capital Investment Period and Capital Clearings Period as described in PNM Witness Buchanan's testimony.

Q. HOW ARE THE COSTS OF THE SNCR PROJECT SPLIT BETWEEN BALANCED DRAFT AND SNCR?

A. Table CMO-4 details PNM's share of the costs allocated to balance draft and the SNCR's for Unit 1 and Unit 4. These costs include PNM's addition of 132 MW in San Juan Unit 4, but exclude the costs of the proposed 65 MW acquisition by PNMR – Development and Management Corporation.

**Table CMO - 4
Capital Costs Breakdown between Balanced Draft and SNCR
For the Capital Investment Period**

	Balanced Draft	SNCR	Total
SJ Unit 1	\$21,784,082	\$14,140,867	\$35,924,949
SJ Unit 4	\$30,492,959	\$11,792,876	\$42,285,835
Total	\$52,277,041	\$25,933,743	\$78,210,784

Q. CAN YOU EXPLAIN HOW TO TIE THE COSTS IN TABLE CMO-4 TO THE COSTS CONTAINED IN PNM EXHIBIT CMO-2?

A. PNM's total cost of the SNCR Project in Table CMO-4 is \$78,210,784 and includes \$281,220 of costs which will clear after the Linkage and Test Periods. The \$281,220 will be excluded from the rate case request and was subtracted from

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1 the \$78,210,784 yielding a revised total of \$77,929,564. The \$77,929,564 value
2 matches the total value of the three projects listed in PNM Exhibit CMO-2 as:

- 3 1. SJ U1 SNCR Project (ID# 76121912)
- 4 2. SJ U4 SNCR Project (ID# 76421912)
- 5 3. SJGS SNCR costs PNM Share (ID# 77021913)

6
7 **Q. ARE THE COSTS FOR THE SNCR PROJECT NECESSARY?**

8 **A.** Yes. They are required to comply with the EPA's Regional Haze Rule, Visibility
9 Transport Rule, the NAAQS, the San Juan New Source Review Permit, and the
10 San Juan Title V Operating permit.

11
12 **Q. WHAT ARE PNM'S PLANS FOR CAPITAL INVESTMENT IN SAN**
13 **JUAN UNITS 2 AND 3?**

14 **A.** Because of their proposed retirement, the Participants will not make capital
15 investments in Units 2 and 3 beyond what is reasonably necessary to keep them in
16 operation through 2017. There is currently one capital project for San Juan Unit 3,
17 Attenuator Spray Valve Replacement (ID# 76316015), which is anticipated to
18 be in service by December 31, 2015. The detailed description of this project is
19 contained in PNM Exhibit CMO-3. There are no current capital projects for San
20 Juan Unit 2.

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1 **Q. ARE THERE ANY OTHER SIGNIFICANT CAPITAL PROJECTS THAT**
2 **WILL BE IMPLEMENTED AT SAN JUAN DURING THE CAPITAL**
3 **INVESTMENT PERIOD?**

4 **A.** Yes, along with the SNCR Project on Units 1 and 4, there are an additional twelve
5 Tier 1, fifty two Tier 2, and thirty eight Tier 3 capital projects at San Juan. These
6 projects are listed and contain detailed descriptions in PNM Exhibit CMO-2
7 through PNM Exhibit CMO-4. In general, these projects target reliability, safety
8 and compliance, or opportunities to improve plant productivity or reduce O&M
9 costs. The Tier 1 projects are discussed in greater detail below.

10

11 There are four Tier 1 capital projects targeting the reliability of San Juan Unit 1.
12 These projects are:

- 13 1. Unit 1 Reheat Outlet Header (ID# 76116112)
14 2. Unit 1 Boiler Modifications (ID# 76116015)
15 3. Unit 1 Cooling Tower MCC's Replacement (ID# 76117618)
16 4. Unit 1 Economizer Ash Removal (ID# 76117915)

17 These projects address the obsolescence or wearing out of major components or
18 provide enhancements that support Unit 1's generation of electricity. Completion
19 of these capital projects will maintain or improve Unit 1 reliability.

20

21 There are two Tier 1 capital projects targeting the reliability of San Juan Unit 4.
22 These projects are:

- 23 1. Unit 4 Fly Ash System Upgrades (ID# 76416115)

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1 2. Unit 4 Economizer Ash Removal System (ID# 76417115)

2 Similar to Unit 1, these capital projects address the obsolescence or wearing out
3 of major components or provide enhancements that support Unit 4's generation of
4 electricity and will maintain or improve Unit 4 reliability.

5
6 Next, there are two capital projects that target the operation of the entire plant, not
7 any specific Unit. These projects are:

8 1. SJ common Lake Station Switchgear (ID# 76617109)

9 2. Emergent Work for 2016 (ID# 76616116)

10 The switchgear project will replace obsolete electrical equipment used to pump
11 water from the plant reservoir to the plant. The emergent work project will be
12 used to maintain the plant's reliability, safety and compliance by handling
13 unforeseen capital maintenance issues. These two capital projects support all of
14 the units and completion of the work will maintain or improve overall plant
15 performance.

16
17 Next, there are three Tier 1 capital projects that target the plant's safety and
18 compliance profile. These projects are:

19 1. Plant Common Shumway Arroyo Slurry Wall and Water Containment
20 (ID# 76617332)

21 2. Common Coal Handling (ID# 76616317)

22 3. Plant Common North Side Wastewater Product Line Replacement (ID#
23 76617724)

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1 The Shumway Arroyo Slurry Wall (ID# 76617332) is a required project
2 stemming from the Sierra Club Consent Decree (U.S.D.C. Case No. 10-cv-00332-
3 MCA-LAM). The “Common Coal Handling” project is a safety and compliance
4 project which is targeting the reduction of fugitive coal dust in the plant. Finally,
5 the “Plant Common North Side Wastewater Product Line Replacement” relates to
6 moving and replacing a section of the waste water pipe line. This line runs
7 underneath the limestone storage pile and can be damaged by the heavy
8 equipment frequenting the location.

9
10 Finally, there is one Tier 1 project which targets reducing the plant’s overall
11 O&M cost. This project is:

12 1. Plant Common Evaporation Pond Heightening (ID# 76616235)

13 This project will heighten the walls on the evaporation pond which will extend the
14 time intervals between pond dredging operations. Increasing the time interval
15 between dredging activities reduces the overall O&M costs of running the plant.

16
17 The estimated capital cost for all of the San Juan Capital projects during the
18 Capital Investment Period is \$105.9 million and, \$111.1 million for the Capital
19 Clearing period.

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1 **B. *Palo Verde Nuclear Generating Station***

2 **Q. PLEASE PROVIDE ADDITIONAL INFORMATION ABOUT PALO**
3 **VERDE AND ITS ROLE IN PNM'S GENERATION RESOURCE**
4 **PORTFOLIO.**

5 **A.** APS operates Palo Verde. Palo Verde is located west of Phoenix, Arizona, and is
6 the nation's largest nuclear generating station. The three units at Palo Verde came
7 on line between 1986 and 1988 and have operating licenses that extend to 2046
8 and 2047. As discussed by PNM Witness Eden, PNM owns or leases 10.2% of
9 each of the units at Palo Verde. Only Unit 1 and Unit 2 currently have CCNs to
10 serve PNM's New Mexico jurisdictional customers. Palo Verde Unit 3 is a
11 resource that was previously excluded from PNM's jurisdictional generating
12 resources, but PNM is requesting a CCN for its 134 MW interest in Palo Verde
13 Unit 3 in NMPRC Case No. 13-00390-UT. The requested CCN effective date is
14 January 1, 2018. Consequently, there are no Palo Verde Unit 3 costs included in
15 this rate case application. Palo Verde is an existing, reliable source of capacity
16 and energy.

17
18 **Q. WHAT ARE SOME OF THE SIGNIFICANT CAPITAL PROJECTS THAT**
19 **THE PALO VERDE OWNERS PLAN TO MAKE DURING THE CAPITAL**
20 **INVESTMENT PERIOD?**

21 **A.** The owners of Palo Verde have identified a number of capital projects that will
22 need to be implemented during the Capital Investment Period. On a collective

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1 basis, these projects represent a significant portion of PNM's capital spending
2 related to generation resources. There are approximately nine major capital
3 improvement initiatives that will be implemented at Palo Verde across all of the
4 units. The capital costs discussed below are for all three Palo Verde units. As
5 detailed by PNM Witness Monroy, adjustments have been made to PNM's
6 revenue requirements associated with Palo Verde because Unit 3 is not included
7 in PNM's Test Period cost of service, and to account for sales to wholesale
8 customers.

9
10 Nuclear generating units, including Palo Verde, must operate in compliance with
11 Nuclear Regulatory Commission ("NRC") regulations and oversight. Plant
12 operations are continuously reviewed by the NRC and failure to implement
13 capital projects that are necessary for the safe and reliable operation of a nuclear
14 plant can lead to regulatory action, including curtailment of operations in extreme
15 situations.

16
17 **Q. WHAT ROLE DOES CAPITAL INVESTMENT PLAY IN THE**
18 **AVAILABILITY OF PALO VERDE?**

19 **A.** Appropriate capital improvements are essential to insure that Palo Verde's
20 availability factor remains at or above industry benchmarks. Palo Verde provides
21 very cost-effective base load generation for PNM's customers. Therefore, the
22 more that Palo Verde is available to meet the needs of PNM customers, the lower
23 the cost of energy to customers.

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1 **Q. ARE THERE ANY SPECIFIC CAPITAL INVESTMENTS AT PALO**
2 **VERDE THAT PNM WISHES TO DETAIL?**

3 **A.**The majority of the ongoing capital investment at Palo Verde is captured in the
4 six Tier 1 projects entitled:

- 5 1. PV1 Capital structures all years (ID# 72123410)
- 6 2. PV2 Capital structures all years (ID# 72223410)
- 7 3. PV3 Capital structures all years (ID# 72323410)
- 8 4. PV Common capital structures all years (ID# 72423410)
- 9 5. PV Common water rec facility capital structures all years (ID# 72523410)
- 10 6. PV Common (ID# 72423008)

11

12 APS operates Palo Verde and prefers to aggregate multiple capital projects under
13 single blanket projects. All of the above six Tier 1 projects are structured in this
14 manner. Within these capital blanket project are multiple projects targeting work
15 to maintain the nuclear reactors, steam generation systems, turbine generators and
16 related nuclear safety components. Each of these individual projects is referred to
17 as a Capital Budget Item ("CBI"). Prior to the start of any CBI, the scope of
18 work, schedule, and costs are reviewed by the Palo Verde owners. The owners
19 then vote to approve the CBI and the associated capital expenditures. All of the
20 projects under these six Tier 1 projects are reviewed and approved in this manner.

21

22 The capital cost for these six Tier 1 projects during the Capital Investment period
23 is approximately \$39.9 million and is approximately \$59.2 million for the Capital

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1 Clearing period. A more detailed description of the Palo Verde Tier 1 capital
2 projects along with additional Tier 2 projects can be found in PNM Exhibit
3 CMO-2 and PNM Exhibit CMO-3.

4
5 **Q. ARE THERE OTHER NON-O&M EXPENDITURES ASSOCIATED**
6 **WITH PALO VERDE?**

7 A. Yes, there are two expenditures that I would like to highlight. First, as mentioned
8 earlier in my testimony, PNM is exercising renewal options to extend the terms of
9 the Palo Verde Unit 1 and Unit 2 leases, and purchasing 64 MW of capacity of
10 Unit 2 at fair market value. This project is identified in PNM Exhibit CMO-2 as
11 "PV Asset Lease" (ID# 72223006) and totals to approximately \$163.5 million
12 during the Capital Investment period. Additional detail on these capital costs can
13 be obtained in the testimony of PNM Witness Eden.

14
15 **Q. ARE THE PALO VERDE LEASE EXTENSIONS AND PURCHASES**
16 **NECESSARY TO SERVE PNM'S CUSTOMERS?**

17 A. Yes. As I stated before, Palo Verde provides needed base load generation on a
18 cost-effective and reliable basis. PNM's IRP includes generation capacity from
19 Palo Verde Units 1 and 2 at current levels.

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1 **Q. WHAT IS THE OTHER NON-O&M EXPENDITURE ASSOCIATED**
2 **WITH PALO VERDE?**

3 **A.** The second expenditure deals with the cost of nuclear fuel which is used by Palo
4 Verde to generate electricity. As part of the operations of the plant, APS
5 purchases, processes and stocks nuclear fuel waiting to be loaded into the reactor.
6 Palo Verde reloads its reactors with nuclear fuel on an eighteen month cycle.
7 Once the fuel has been loaded into the reactor, the nuclear process converts the
8 fuel to produce heat. This heat is used to boil water which creates the steam that
9 drives Palo Verde's turbines which in turn drive electric generators. After the
10 eighteen month cycle, approximately forty percent of the fuel rods will require
11 replacement due to the nuclear fission process.

12
13 As the operator of Palo Verde, APS provides PNM with an accounting of the
14 capital costs associated with nuclear fuel. The forecasted capital costs and
15 refueling activity are presented in Rule 530, Schedule B-7 for the linkage data and
16 test period. At March 31, 2015, the nuclear fuel capital account balances was
17 \$79.2 million. After taking into account forecasted purchases, refueling and
18 nuclear fuel amortization, the forecasted nuclear fuel capital account balances at
19 the end of the test period, September 30, 2016, is \$79.8 million. The forecasted
20 purchases, nuclear fuel reloads are based on information provided by APS. The
21 increase in the Test Period compared to the Base Period is due to an increase in
22 the cost of uranium and a new schedule for fuel rod fabrication. PNM relies on
23 the information from APS to project the nuclear fuel capital. Please refer to the

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1 testimony of PNM Witness Taylor for discussion of nuclear fuel amortization
2 related to nuclear fuel inventory balances.

3
4 **C. Four Corners Power Plant**

5 **Q. PLEASE PROVIDE SOME FURTHER BACKGROUND ON FOUR**
6 **CORNERS AND ITS ROLE IN PNM'S GENERATION PORTFOLIO?**

7 **A.** APS also operates the Four Corners Power Plant. Four Corners is located near
8 Fruitland, New Mexico and formerly consisted of five coal-fired generation units.
9 Four Corners Units 1, 2 and 3 have been retired for purposes of compliance with
10 the EPA's Regional Haze Rule. PNM does not own any interest in the retired
11 units. PNM owns a thirteen percent share of Four Corners Units 4 and 5, which it
12 acquired in 1969 and 1970, respectively. PNM owns a total of 200 MW of base
13 load capacity in Four Corners.

14
15 **Q. ARE THERE ANY SPECIFIC CAPITAL INVESTMENTS AT FOUR**
16 **CORNERS THAT PNM WISHES TO DETAIL?**

17 **A.** The majority of the ongoing capital investment at Four Corners is captured in one
18 Tier 1 project entitled:

19 1. Four Corners Facility Improvement (ID# 71519210)

20 APS operates Four Corners and prefers to aggregate multiple capital projects
21 under a single blanket project. The "Four Corners Facility Improvement" project
22 is structured in this manner. Included in this capital blanket project are multiple

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1 projects targeting reliability, safety, security and environmental compliance. Prior
2 to the start of any CBI, the scope of work, schedule, and costs are reviewed by the
3 Four Corners owners. The owners then vote to approve the CBI and the
4 associated capital expenditures. All of the projects under the “Four Corners
5 Facility Improvement” project are reviewed and approved in this manner.

6
7 The estimated capital cost for the Four Corners Facility Improvement project
8 during the Capital Investment Period is \$13.6 million, and \$16.3 million for the
9 Capital Clearing Period. A more detailed description of the Tier 1 Four Corners
10 Facility Improvement project, along with an additional Tier 2 project, can be found in
11 PNM Exhibit CMO – 2 and PNM Exhibit CMO – 3.

12
13 ***D. Afton Generating Station***

14 **Q. PLEASE PROVIDE SOME BACKGROUND INFORMATION ON**
15 **AFTON?**

16 **A.** Afton is a natural gas-fired generating plant that is wholly-owned and operated by
17 PNM, and is located near La Mesa in the southern part of New Mexico. It
18 consists of one General Electric (“GE”) Frame 7FA gas turbine, a heat recovery
19 steam generator, and a GE A10 steam turbine. Afton can be operated in a simple
20 cycle mode or as a combined cycle generating facility. Power generated at Afton
21 can be delivered to customers in southern New Mexico or to northern New
22 Mexico via contracted transmission rights.

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1 **Q. PLEASE DESCRIBE THE CAPITAL INVESTMENTS THAT PNM WILL**
2 **MAKE AT AFTON DURING THE CAPITAL INVESTMENT PERIOD.**

3 **A.** The majority of the ongoing capital investment at Afton is captured in the two
4 Tier 1 projects entitled:

- 5 1. Afton Minimum Load Limitation (OpFlex Turndown) (ID# 70716610)
- 6 2. Afton Capital Improvements 2016 (ID# 70716115)

7 The Afton Minimum Load Limitation (OpFlex Turndown) project is targeting
8 mechanical, control, and human interface improvements to the gas and steam
9 turbines. The capital cost for this project during the Capital Investment Period is
10 estimated to be \$0.9 million. The completion of this project will maintain or
11 improve Afton's overall reliability.

12
13 The Afton Capital Improvements 2016 is a blanket capital spending project.
14 These funds will be used to address emergent safety, regulatory and/or
15 performance issues in 2016. The estimated capital cost for the Afton Capital
16 Improvements 2016 project during the Capital Investment Period is \$0.8 million.
17 A more detailed description of both of these Tier 1 projects and all of the Tier 2
18 projects can be found in PNM Exhibits CMO – 2 and CMO - 3.

19

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1 ***E. Luna Energy Facility***

2 **Q. PLEASE PROVIDE BACKGROUND INFORMATION ON THE LUNA**
3 **ENERGY FACILITY?**

4 **A.** Luna is a 570 MW natural gas-fired combined cycle generating facility located
5 near Deming, New Mexico. The facility consists of two GE frame 7FA gas
6 turbines, two heat recovery steam generators, and one GE D11 steam turbine.
7 PNM, TEP, and Samchully Power and Utilities 1, LLC, jointly own equal shares
8 in Luna, with PNM serving as Operating Agent under the terms of the
9 participation agreement among the three owners. The owners have contracted
10 with the NAES Corporation to provide on-site operations and maintenance.
11 Power generated at Luna can be delivered to customers in southern New Mexico
12 or to northern New Mexico via owned or contracted transmission rights.

13
14 **Q. PLEASE DESCRIBE THE CAPITAL INVESTMENTS THAT PNM WILL**
15 **MAKE AT LUNA DURING THE CAPITAL INVESTMENT PERIOD?**

16 **A.** The majority of the ongoing capital investment at Luna is captured in a single Tier
17 1 expenditure entitled:

18 1. Luna GE Long Term Service Agreement ("LTSA") (ID# 74417010)

19 The LTSA capital work is performed under a contract between PNM and GE and
20 targets turbine reliability. Under the terms of the LTSA, GE performs all required,
21 periodic gas turbine major maintenance, which includes combustor inspections,
22 hot gas path inspections and major inspections, on a prescribed schedule based on

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1 gas turbine operating hours and fired starts. The estimated capital cost for the
2 Luna LTSA during the Capital Investment Period is \$3.2 million. Additional
3 descriptions of the Tier 1 LTSA project and all of the Luna Tier 2 projects can be found
4 in PNM Exhibit CMO-2 and PNM Exhibit CMO-3.

5
6 **Q. PLEASE PROVIDE MORE DETAIL ABOUT WHAT WORK WILL BE**
7 **PERFORMED BY GE UNDER THE LTSA.**

8 **A.** Required periodic major maintenance on the Luna gas turbines and steam turbine
9 is performed by GE under the terms of the LTSA between the Luna owners and
10 GE. Under the terms of the LTSA, GE performs all required, periodic gas turbine
11 major maintenance, which includes Hot Gas Path Inspections and Major
12 Inspections, as well as steam turbine Major Inspections, on a prescribed schedule
13 based on gas turbine operating hours and fired starts. At Luna, Gas Turbine Hot
14 Gas Path Inspections, which are performed every 900 starts or 24,000 operating
15 hours, whichever occurs first, are approximately 21 day outages where all of the
16 combustor parts (fuel nozzles, combustion sleeves, transition pieces, etc.) and
17 turbine parts (nozzles, blades, wear pads, etc.) are replaced. Gas Turbine Major
18 Inspections, which are performed every 2,700 starts or 72,000 operating hours,
19 whichever occurs first, are approximately forty-five day outages where, in
20 addition to the Hot Gas Path Inspection work scope, the compressor and the
21 generator are opened, inspected and tested, and the entire turbine rotor is removed
22 from the case for de-blading and testing. The Steam Turbine Major Inspection
23 work scope, performed during the Gas Turbine Major Inspection, includes an

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1 open/clean/close on the turbine, steam valve refurbishment, and generator
2 inspection and testing. The remaining major maintenance activities to be
3 performed under the current LTSA are Hot Gas Path Inspections on U2 and U1
4 gas turbines in the fall of 2017 and spring of 2018, respectively. Additional detail
5 can be found in PNM Exhibit CMO-2.

6
7 **Q. WHY DID PNM CHOOSE TO ENTER INTO THE LTSA WITH GE FOR**
8 **THE DESCRIBED WORK AT LUNA?**

9 **A.** PNM chose to enter into the LTSA with GE, as the gas turbine original equipment
10 manufacturer, due to the payments terms and risk sharing, which benefit PNM's
11 customers. First, the payment terms of the LTSA are structured to somewhat
12 levelize the year-to-year cash flow associated with routine major maintenance on
13 the gas turbine. Second, the LTSA provides a mechanism to share risks related to
14 any unexpected replacement costs. Under the terms of the LTSA, GE absorbs any
15 unexpected replacement costs for covered parts that do not perform as designed or
16 whose operating life is shorter than expected. The unexpected costs that are
17 avoided by the LTSA would otherwise be passed on to PNM's customers.

18
19 **Q. ARE SERVICE CONTRACTS, SUCH AS THE LTSA, COMMON IN THE**
20 **UTILITY INDUSTRY?**

21 **A.** They are quite common, and for utilities such as PNM with a limited fleet of gas
22 generation facilities, they represent the industry standard.

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F. Lordsburg Generating Station

Q. PLEASE DESCRIBE THE LORDSBURG GENERATING STATION?

A. Lordsburg is an 80 MW simple cycle natural gas-fired generation facility located in Hidalgo County, New Mexico. The plant consists of two GE LM6000 aero-derivative gas turbines that provide peaking power to PNM's customer base. Lordsburg is wholly-owned by PNM, and PNM has contracted with the NAES Corporation to provide on-site operations and maintenance on behalf of PNM. Power generated at Lordsburg can be delivered to customers in southern New Mexico or to northern New Mexico via owned or contracted transmission rights.

Q. PLEASE DESCRIBE THE CAPITAL INVESTMENTS THAT PNM WILL MAKE AT LORDSBURG DURING THE CAPITAL INVESTMENT PERIOD?

A. The majority of the ongoing capital investment at Lordsburg is captured in the Tier 1 project which is:

1. Combustion Turbine Upgrades (ID# 70316114)

This capital project targets multiple component replacements/upgrades on both generating units which are needed to ensure safe and reliable operation of the LM-6000 gas turbine engines. The estimated capital cost for the Lordsburg turbine upgrade during the Capital Investment Period is \$0.8 million. The completion of this project will maintain or improve Lordsburg's overall

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1 reliability. A more detailed description of the Tier 1 Combustion Turbine
2 Upgrade project along with all of the Tier 2 and Tier 3 projects can be found in
3 PNM Exhibit CMO-2, PNM Exhibit CMO-3 and PNM Exhibit CMO-4,
4 respectively.

5
6 ***G. Reeves Generating Station***

7 **Q. PLEASE PROVIDE SOME BACKGROUND INFORMATION ON THE**
8 **REEVES GENERATING STATION?**

9 **A.** Reeves is a 254 MW natural gas-fired generating plant that is wholly-owned and
10 operated by PNM, and is located in northern Albuquerque. Reeves consists of
11 three gas-fired conventional boiler and steam turbine units. Unit's 1 & 2 produce
12 44 MW each, and Unit 3 produces 66 MW. Power generated at Reeves can be
13 delivered to customers in northern and southern New Mexico via owned or
14 contracted transmission rights.

15
16 **Q. PLEASE DESCRIBE THE CAPITAL INVESTMENTS THAT PNM WILL**
17 **MAKE AT REEVES DURING THE CAPITAL INVESTMENT PERIOD?**

18 **A.** The majority of the ongoing capital investment at Reeves is captured in the two
19 Tier 1 projects which are:

- 20 1. Reeves Units 1, 2 & 3 Cooling Tower Upgrade (ID# 71317725)
21 2. Reeves U3 Upper Economizer Replacement (ID# 71316125).

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1 For the cooling tower upgrade project, several issues need to be addressed to
2 prevent structural failure. These cooling towers support all three Reeves units.
3 The estimated capital cost for the Reeves cooling tower upgrade during the
4 Capital Investment Period is \$0.8 million. The completion of this project will
5 maintain or improve Reeve's overall reliability.

6
7 For the Reeves Unit 3 Upper Economizer project, several of the upper economizer
8 tubes have been damaged or fatigued due to a failure in the boiler refractory
9 material. The refractory material has been replaced; however the upper
10 economizer tubes also need replacement. The estimated capital cost for the
11 Reeves economizer upgrade during the Capital Investment Period is \$0.8 million.
12 The completion of this project will maintain or improve Reeves Unit 3 reliability.
13 A more detailed description of both of these Tier 1 projects along with all of the
14 Tier 2 and Tier 3 Reeves projects can be found in PNM Exhibit CMO-2, PNM
15 Exhibit CMO-3, and PNM Exhibit CMO-4, respectively.

16
17 ***H. Rio Bravo Generating Station***

18 **Q. PLEASE PROVIDE INFORMATION ON RIO BRAVO?**

19 **A.** Rio Bravo is a simple-cycle 138 MW dual fuel generating plant that is wholly-
20 owned and operated by PNM, and is located in Albuquerque. Rio Bravo can
21 operate on diesel fuel or natural gas and consists of one GE Frame 7FA gas

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1 turbine. Power generated at Rio Bravo can be delivered to customers in northern
2 and southern New Mexico via owned or contracted transmission rights.

3
4 **Q. PLEASE DESCRIBE THE CAPITAL INVESTMENTS THAT PNM WILL**
5 **MAKE AT RIO BRAVO DURING THE CAPITAL INVESTMENT**
6 **PERIOD?**

7 **A.** Rio Bravo has no major Tier 1 capital projects. It does have several Tier 2 and
8 Tier 3 capital projects targeting compliance, safety and reliability of the station.
9 A more detailed description of each of these projects can be found in PNM
10 Exhibit CMO-3 and PNM Exhibit CMO-4, respectively.

11
12 ***I. Other Generation Facilities***

13 **Q. PLEASE DESCRIBE ANY OTHER TIER 1 CAPITAL PROJECTS NOT**
14 **ALREADY DISCUSSED.**

15 **A.** In addition to the capital investment at the above generating facilities, PNM will
16 be executing a capital project to maintain the Aztec office facility in Albuquerque
17 which houses the Generation administrative functions. This project is:

18 1. Aztec & Data Center Building Improvements (ID# 35730615)

19 This project targets building maintenance and will replace the roof, HVAC, and
20 elevator in PNM's Aztec facility. The estimated capital cost for the building
21 improvements during the Capital Investment Period is \$1.4 million. The total for
22 the Capital Clearing Period is \$1.5 million. A more detailed description of this Tier

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1 1 project along with all of the Tier 2 Aztec & Data Center Building Improvement
2 projects can be found in PNM Exhibit CMO-2 and PNM Exhibit CMO-3, respectively.
3

4 **V. PNM'S GENERATION NON-FUEL O&M EXPENDITURES**

5 **Q. WHAT TOPICS DO YOU ADDRESS IN THIS SECTION OF YOUR**
6 **DIRECT TESTIMONY?**

7 **A.** In this section of my direct testimony, I address the PNM Generation O&M
8 expenditures that were incurred in the Base Period to safely and reliably operate
9 PNM's generation facilities. In particular, I:

- 10 • Describe the process used to establish PNM's Generation O&M budget
11 and the oversight and management of these expenditures;
 - 12 • Confirm the reasonableness of the Base Period Generation O&M expenses
13 utilized by PNM Witness Monroy in his forecasts for these expenses in the
14 Test Year;
 - 15 • Confirm the appropriateness of including estimated additional O&M costs
16 for new generation facilities that will be placed in service before the end
17 of the Test Period;
 - 18 • Describe why it is appropriate to normalize the O&M expenses for certain
19 PNM generation resources;
- 20

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1 **Q. WHAT O&M EXPENDITURES ARE ASSOCIATED WITH PNM'S**
2 **GENERATION FACILITIES?**

3 **A.** PNM's Generation O&M expenses are the result of the day-to-day cost of safely
4 and reliably operating PNM's generation resources and expenditures that are
5 required to successfully execute the O&M work completed during scheduled
6 maintenance. O&M expenses in both cases are comprised of several categories.
7 The most significant expenses are the labor and labor-related expenses of the
8 employees and contract workers that operate and maintain PNM's generation
9 resources as well as those employees in generation support roles, such as resource
10 planning and development, and fuels.

11

12 **Q. WHAT IS THE PROCESS THAT PNM GENERATION USES TO**
13 **ESTABLISH THE O&M BUDGET?**

14 **A.** PNM's O&M budget development is a multi-step process. Staff from each plant
15 within PNM Generation reviews data from the previous years and evaluates
16 known changes. Each plant's staff adjusts the projection based on historical data
17 for known variances, such as scheduled maintenance work, additional contract
18 studies, etc., and inputs this data into PNM's budgeting system and projects
19 forward five years using standard escalation rates for these components. As
20 discussed in the testimony of PNM Witness Vavruska-Marcum, the escalation rate for
21 non-union labor is 2.5% and 2.0% for union labor. All non-labor costs are escalated at
22 1.5% as discussed in PNM Witness Monroy's testimony. Examples of cost categories
23 that are reviewed are staffing levels, payroll (both straight time and overtime),

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1 outside services, equipment and materials. Senior management approves the O&M
2 budget.

3
4 **Q. HOW DOES PNM HANDLE O&M BUDGETS FOR GENERATION**
5 **RESOURCES THAT ARE JOINTLY OWNED WITH OTHER PARTIES?**

6 **A.** For the jointly owned resources that PNM operates, San Juan and Luna, PNM
7 uses basically the same process that I just described in developing the O&M
8 budgets. However, the O&M budgets are then presented to the respective owner
9 representatives for these two facilities for review and approval.

10
11 **Q. HOW DOES PNM GENERATION DEVELOP SCHEDULED**
12 **MAINTENANCE COST ESTIMATES?**

13 **A.** For facilities that PNM operates, PNM Generation personnel develop scheduled
14 maintenance costs by compiling a list of items that need to be addressed during
15 each scheduled maintenance project. Cost estimates are then developed using
16 information related to cost of equipment/materials, any outside support services
17 needed and various other incidental costs that may be incurred during the
18 scheduled maintenance.

19
20 For facilities that PNM does not operate, the operating agent for those facilities
21 prepares an O&M budget that PNM Generation personnel review. The owners of
22 each generation facility must then vote to approve the O&M budgets.

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1 **Q. HOW DOES PNM MINIMIZE O&M COSTS TO CUSTOMERS?**

2 **A.** PNM actively manages projects to ensure that costs are consistent with budgeted
3 amounts. Of course, some projects will come in above and others below budget.
4 When necessary, PNM finds offsets to ensure that we achieve our overall O&M
5 budget targets for Generation. PNM utilizes its Procurement team to
6 competitively price materials and contract labor to achieve the lowest cost for
7 customers. PNM utilizes a proactive process of reviews, cost controls, and
8 communication to drive project and site level accountability. This results in a
9 process that meets operational and customer needs.

10

11 **Q. WHAT PROCESS DOES PNM GENERATION USE TO MANAGE ITS**
12 **O&M COSTS?**

13 **A.** PNM manages its O&M expenditures by reviewing all aspects of its operations
14 for savings. Management reviews of the O&M budget are held among the Vice
15 President of Generation, the Plant Directors, the Director of Wholesale Power
16 Marketing, and the Director of Generation Services on a monthly and quarterly
17 basis. Appropriate efforts are made to help ensure that the budgets remain on
18 target.

19

20 Luna and San Juan also have additional budget reviews held among the members
21 of the respective ownership groups on a monthly basis. The goal of these reviews
22 is to monitor the expenditures of each plant and make sure that expenditures are
23 prudent and within the expected amount. Unforeseen circumstances can result in

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1 scope changes that can cause cost variances and lead to changes to the
2 maintenance schedules. As noted previously, PNM continually attempts to
3 optimize scheduled maintenance as the need for maintenance work emerges at
4 each unit and as work is completed during forced outages.

5

6 **Q. ARE YOU FAMILIAR WITH THE GENERATION O&M EXPENSES**
7 **THAT PNM WITNESS MONROY USED FOR HIS BASE PERIOD**
8 **CALCULATION?**

9 **A.** Yes. PNM Witness Monroy used the actual Generation O&M expenditures for
10 the period between April 1, 2014 and March 31, 2015 in developing his Base
11 Period O&M expenses. The expenditures were made in conformity with the
12 O&M budgeting process that I just described and represent a reliable and
13 reasonable foundation for PNM Witness Monroy's cost of service analysis.

14

15 **Q. WHAT IS YOUR UNDERSTANDING OF HOW THE BASE PERIOD**
16 **GENERATION O&M EXPENSES WERE USED TO DEVELOP THE**
17 **TEST YEAR O&M EXPENSES?**

18 **A.** As explained by PNM Witness Monroy, he started with the Base Period
19 Generation expenditures and applied appropriate annual escalation factors to
20 derive his Test Period numbers. He also made certain adjustments that he
21 describes in his direct testimony.

22

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1 **Q. PNM WITNESS MONROY IS ALSO INCLUDING O&M COSTS FOR**
2 **NEW FACILITIES THAT WILL BE IN SERVICE DURING THE TEST**
3 **YEAR. IS THIS AN APPROPRIATE ADJUSTMENT TO MORE**
4 **ACCURATELY ESTIMATE PNM'S O&M EXPENSES?**

5 **A.** Yes. As I discussed above, it is anticipated that the 40 MW Solar Project will be
6 approved and in service before the end of 2015. Likewise, La Luz is forecasted to
7 be in service in December 2015. Rio Bravo is now a PNM-owned resource and
8 was in service in July 2014. There will be O&M costs associated with each of
9 these facilities that are appropriate to include in the Test Period.

10

11 **Q. ONE OF THE ADJUSTMENTS THAT PNM WITNESS MONROY MADE**
12 **TO ARRIVE AT HIS TEST YEAR O&M EXPENSES WAS TO LEVELIZE**
13 **GENERATION O&M COSTS RELATED TO POWER PLANT**
14 **OUTAGES. DO YOU AGREE THAT SUCH AN ADJUSTMENT**
15 **PROVIDES A MORE REPRESENTATIVE ESTIMATE OF**
16 **ANNUALIZED GENERATION O&M COSTS?**

17 **A.** Yes. Power plants are subject to periodic scheduled outages so that major
18 maintenance can be performed. Outages are typically very cost-intensive.
19 Planned major outages at San Juan typically occur every two to three years on
20 each unit. Planned major outages at Four Corners typically occur every six years
21 with a planned minor outage at the three year mid-point of the major outage for
22 each unit. Planned outages at Palo Verde typically take place about every
23 eighteen months on each unit. Depending on the year when outages are

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performed, they can skew any analysis of annual O&M expenses. For SJGS, Four Corners, and Palo Verde, PNM Witness Monroy analyzed the historical outage expenses incurred during the six year period from 2009 through 2014 to calculate an average outage expense. This time period would encompass one major outage for Four Corners, two to three major outages for San Juan, and four major outages for Palo Verde. This is a reasonable adjustment to make in order to derive representative O&M costs to be used for the Test Period.

Q. CAN YOU ADDRESS THE ADJUSTMENTS TO O&M EXPENSES FOR THE VARIOUS GENERATION FACILITIES?

A. Yes. As stated earlier, each generation facility's Base Period O&M expenditures had the appropriate annual escalation factors applied to derive the Test Period numbers as discussed by PNM Witness Monroy. Of all the generation facilities, only San Juan, Rio Bravo, La Luz and the 40 MW Solar Project had O&M adjustments which varied from the standard annual escalation factors. Table CMO-5 denotes which O&M expenses were adjusted for each of these sites.

**Table CMO – 5
Application of Non-Standard O&M Adjustments per Generation Site**

Generation Site	Labor	Overtime	Non – Labor
San Juan	Yes	No	Yes
Rio Bravo	No	No	Yes
La Luz	Yes	Yes	Yes
40 MW Solar	No	No	Yes

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1 Any O&M expense adjustments denoted as ‘yes’ in Table CMO – 5 are discussed
2 in detail separately below.

3
4 **Q. DESCRIBE HOW SAN JUAN’S TEST PERIOD NON-LABOR O&M**
5 **UREA EXPENSES WERE DEVELOPED**

6 **A.** The SNCR’s use urea, an amine-based reagent which is injected into the boiler
7 and reacts with NO_x to reduce it to molecular nitrogen (N₂) and water. The
8 two SNCRs were not in operation during the Base Period, but will be for a portion
9 of the Test Period starting on February 1st of 2016. Therefore, the non-labor
10 expenses for the urea consumed in the two SNCR’s need to be estimated and
11 added to the Test Year Non-Labor expenses. For the Test Period, it is estimated
12 that 2696 tons of urea will be consumed by the SNCR’s with an associated cost of
13 \$2,021,890 (PNM’s share). These urea costs were added to the non-labor O&M
14 total, but not escalated. PNM Exhibit CMO-5 contains the assumptions,
15 consumption rates and associated urea cost calculations.

16
17 **Q. DESCRIBE HOW SAN JUAN’S TEST PERIOD LABOR O&M EXPENSES**
18 **WERE DEVELOPED**

19 **A.** To develop the Test Period Labor O&M expenses, PNM needed to make
20 adjustments to the Base Period Expenses for employee headcount reductions due
21 to attrition. The total employee headcount in the March 27th 2015 pay period was
22 334. Due to the forecasted attrition of eight employees in the Linkage Period, the
23 total headcount at the end of the Linkage Period (September 30, 2016) is

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1 projected to be 326. The average labor costs of eight employees were then
2 subtracted from the March 2015 Base Period labor costs yielding an adjusted Base
3 Period labor cost for one pay period of \$440,791. This was the most conservative
4 cost approach as the eight employees are forecasted to leave across the entire
5 linkage period. A more detailed description of the methodology used to calculate
6 the Test Period Labor O&M expenses is provided and supported by PNM Exhibit
7 HEM-4 WP LA-6.

8
9 **Q. DESCRIBE HOW RIO BRAVO'S NON-LABOR O&M EXPENSES WERE**
10 **DEVELOPED.**

11 **A.** Rio Bravo became a PNM asset in July 2014 (three months into the 12 month
12 Base Period). To develop Rio Bravo's Base Period Non-Labor O&M expenses,
13 PNM needed to annualize the nine months of Non-Labor O&M Base Period
14 expenses. Since Rio Bravo is supported out of PNM's Reeves facility, the Labor
15 and Overtime O&M expenses are already captured in the Reeves Labor O&M
16 Expenses. Please see PNM Exhibit HEM-4 WP OM-9 for Rio Bravo labor
17 expenses.

18
19 The first step to develop the annualized Base Period was to capture the nine
20 months of actual Base Period Non-Labor O&M expenses. Next, two major
21 entries (LTSA annual bonus cost, Rio Bravo air permit credit) were removed to
22 annualize the 9 months expense to a full year of O&M. The Rio Bravo air permit
23 credit was a one-time, non-recurring entry, that is not expected to occur in the

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1 future, and the LTSA annual bonus costs was already an annual expense and did
2 not need to be annualized. The remaining expenses were then annualized to
3 provide the Base Period Non-Labor O&M expenses.

4
5 **Q. DESCRIBE HOW LA LUZ NON-LABOR O&M EXPENSES WERE**
6 **DEVELOPED.**

7 **A.** La Luz is a new 40 MW gas peaking plant and is forecasted to be in service by
8 December 2015. The majority of the La Luz O&M expenses were developed
9 using actual non-labor O&M expenses from Lordsburg, taking into consideration
10 differences in known operating characteristics, equipment, and chemicals needed
11 for environmental controls. Costs not associated with Lordsburg plant such as
12 selective catalytic reduction environmental controls, and facility specific costs
13 were obtained from other similar PNM gas plants including Luna, Afton and Rio
14 Bravo, in addition to various quotes from qualified vendors. As discussed by
15 PNM Witness Monroy, these costs were escalated at the standard 1.5% to provide
16 the test period expenses of \$615,208. PNM Exhibit CMO-6 contains the detailed
17 explanation for the La Luz non-labor O&M Expenses.

18
19 **Q. DESCRIBE HOW LA LUZ LABOR O&M EXPENSES WERE**
20 **DEVELOPED.**

21 **A.** Based on experience from other gas plants, PNM has projected that it will require
22 support from two employees to operate this plant. Base Period labor costs for two
23 employees were utilized to project the total Test Period Labor cost. For the union

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1 employee, both a 15% allocation for overtime and an additional required remote
2 pay differential was applied. All of the labor costs were escalated the standard
3 amounts to determine the annual costs. These costs were prorated to the nine
4 month Test Period yielding a total of \$202,433, inclusive of overtime costs. PNM
5 Exhibit CMO-7 provides the details of these calculations.

6
7 **Q. DESCRIBE HOW THE INCREMENTAL 40 MW SOLAR NON-LABOR**
8 **O&M EXPENSES WERE DEVELOPED.**

9 **A.** The 40 MW solar incremental non-labor O&M costs were developed from
10 existing PNM solar resources costs during the base period. Base Period costs
11 were annualized and escalated by the standard non-labor escalation rate. The
12 annualized base period costs totaled \$776,535. To calculate the incremental non-
13 labor O&M costs associated with the new 40 MW of solar, the base period non-
14 labor O&M costs of \$17,851 per MW were escalated by the non-labor standard of
15 1.5% yielding \$18,119 per MW. Then, the \$18,119 per MW was multiplied by
16 40 MWs which yielded an incremental solar non-labor O&M cost \$724,766.
17 Please see PNM Exhibit CMO – 8 for the 40 MW solar incremental non-labor
18 cost worksheet.

19 **Q. ARE THE GENERATION O&M COSTS THAT PNM SEEKS TO**
20 **RECOVER IN THIS CASE REASONABLE?**

21 **A.** Yes. The estimated O&M expenditures are reasonable because they are based on
22 actual expenditures that were incurred after undergoing a robust budgeting
23 process and represent costs that are necessary to provide for the operation and

**DIRECT TESTIMONY OF
CHRIS M. OLSON
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1 maintenance of PNM's generation facilities to ensure that the lowest cost
2 resources to PNM's customers are available as much as possible rather than
3 having to make more expensive external market purchases of generation.
4 Additionally, because these resources are necessary for the foreseeable future,
5 PNM's customers will get the benefit of a cost-effectively maintained generation
6 fleet.

VI. FUEL AND FUEL TRANSPORTATION COSTS

9 **Q. HOW IS THE SAN JUAN COAL PRICING INPUT FOR PROMOD**
10 **DEVELOPED?**

11 **A.** Coal is currently provided under a contract with BHP Billiton's San Juan Coal
12 Company ("SJCC"). Coal price projections for SJCC-supplied coal at San Juan
13 use the year-ahead budget information provided by SJCC as a basis from which to
14 project future coal prices. Future costs are projected by applying a high level
15 escalation of current-year mining costs and incorporating other adjustments that
16 may be suggested by future burn, inventory, mine production or other changes.
17 Historical SJCC budget information is used to estimate an overall escalation rate
18 for SJCC mining costs. Future costs are then converted into two pricing tiers,
19 known as "Base" and "Incremental" prices. The two pricing tiers are expressed in
20 \$/MMBTU and reflect the pricing structure in the SJCC Underground Coal Sales
21 Agreement, as well as forecasted coal quality, overall burn, inventory changes and
22 other factors that are known at the time the forecast is developed.

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1 **Q. HAS PNM ENTERED INTO A NEW COAL SUPPLY AGREEMENT FOR**
2 **SAN JUAN?**

3 **A.**Yes. PNM has entered into a new set of coal contracts with Westmoreland Coal
4 Company. Provided PNM receives the requisite approvals in NMPRC Case No.
5 13-00390-UT, the new coal agreements will result in significant fuel savings as
6 discussed by PNM Witness Taylor.

7

8 **Q. HOW WAS THE FOUR CORNERS COAL PRICING INPUT FOR**
9 **PROMOD DEVELOPED?**

10 **A.**The Four Corners Coal Supply Agreements (“CSAs”) are structured as Base Price
11 Escalated (BPE). The agreements specify how a base price is escalated after the
12 base date to yield current pricing. The escalators are generally national economic
13 indices. The 2010 CSA is currently in effect. The 2016 CSA becomes effective
14 in July 2016. The operating agent, APS, meets periodically with the participants
15 in the Fuels Committee regarding coal supply matters, including coal price
16 forecasting. At the June 18, 2015, Fuels Committee meeting, APS presented its
17 latest forecast of annual coal pricing through the term of the agreements in
18 conformance with the provisions of the CSAs. This forecast was used as the basis
19 of PNM’s internal coal cost forecasting.

20

21 **Q. A FUEL-RELATED COST ELEMENT ADDRESSED IN PNM WITNESS**
22 **TAYLOR’S TESTIMONY DEALS WITH FUEL TRANSPORTATION**

**DIRECT TESTIMONY OF
CHRIS M. OLSON
NMPRC CASE NO. 15-00261-UT**

1 COSTS FOR PNM'S GAS GENERATION FACILITIES. CAN YOU
2 EXPLAIN THE BASIS FOR THESE COSTS?

3 A. PNM's gas generation facilities use natural gas for fuel. The natural gas is
4 delivered to each facility via gas pipelines. The pipeline operators charge PNM
5 for the transportation and delivery of natural gas to PNM's gas generation plants.
6

7 Q. WHAT ARE THE ARRANGEMENTS WHEREBY GAS IS
8 TRANSPORTED TO PNM'S GAS FACILITIES?

9 A. PNM has firm transportation agreements with the pipeline operators. PNM has
10 acquired additional firm gas transportation to ensure a reliable supply of fuel to its
11 gas generation plants. For reliability considerations, PNM is shifting to more firm
12 transportation agreements instead of interruptible supplies. See PNM Exhibits
13 SAT-2 WP Fuel-7-Fixed Gas Transportation.
14

15 VII. CONCLUSION

16 Q. DO YOU HAVE ANY CONCLUDING OBSERVATIONS?

17 A. Yes. Generating electricity is a very capital intensive enterprise. PNM has a
18 portfolio of generation resources that has served its customers well and requires
19 ongoing investments to safely, reliably and efficiently operate in the future. The
20 coal and nuclear base load plants have been the foundation of PNM's low cost
21 generation, which is reflected in PNM's reasonable rates. Investments in the
22 baseload plants as well as the other units in PNM's generation fleet are necessary

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1 now and in the future to maintain the reliable level of service and low costs while
2 complying with all federal and state regulations. The costs associated with
3 investing in generation resources and operating and maintaining the generation
4 resources that PNM is presenting in this rate case are reasonable and necessary to
5 continue to provide cost-effective, reliable electricity to PNM's customers.

6
7 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

8 **A. Yes.**

GCG#520342

Resume of Chris M. Olson

PNM Exhibit CMO-1

Is contained in the following 1 page.

CHRIS M. OLSON

**EDUCATIONAL AND PROFESSIONAL
SUMMARY**

Address: Public Service Company of New
Mexico Aztec Facility
2401 Aztec Road NE, Building A
Albuquerque, New Mexico 87107

Position: Vice President, PNM Generation, 2012 to Present

Previous Positions:

Corval Group, 2008 – 2012
Vice President, Power & Energy

DTE Energy, 2008
Director & Chief Engineer, Fossil Operations

Xcel Energy, 2000 – 2008
Plant Director, Sherburne County Generating Plant

Northern States Power, 1982 – 2000
General Manager, Regional Plants
Manager, NSPW Generation
Manager, Hydro Plants
Superintendent, A.S. King Plant
Engineer, Plant Engineering & Construction

Westinghouse Electric Corporation, 1980 – 1982
Field Service Engineer

Professional Affiliation:

Registered Engineer, State of Minnesota

Education:

University of Minnesota, Bachelor of Mechanical Engineering
University of Minnesota, Carlson School of Management, Minnesota Executive
Program

Tier 1 Generation Capital Projects

PNM Exhibit CMO-2

Is contained in the following 175 pages.

Electronic Instructions:

To view detailed costs for each project, click project to highlight then Press "CTRL" and left click on mouse.

To return back to index from detailed costs, click "CTRL" and "Home"

Monday, August 17, 2015

1:26:35 PM

PNM EXHIBIT CMO-2-Generation Tier 1 Capital Projects

Link/Test

CWIP

Total

Contents

Afton	\$1,663,425	\$0	\$1,663,425.....	4
Project No:70716115 Afton Capital Improvements 2016	\$779,414	\$0	\$779,414.....	5
Project No:70716610 Afton minimum Load Limitation (OpFlex Turndown)	\$884,011	\$0	\$884,011.....	9
Bulk Power Building Alloc.....	\$1,406,849	\$82,592	\$1,489,441.....	13
Project No:35730615 Aztec & Data Center Building Improvements	\$1,406,849	\$82,592	\$1,489,441.....	14
Four Corners..	\$13,444,776	\$2,735,458	\$16,180,234.....	20
Project No:71519210 Four Corners Facility Improveme	\$13,444,776	\$2,735,458	\$16,180,234.....	21
La Luz	\$55,342,122	\$0	\$55,342,122.....	26
Project No:75218816 40MW natural gas peaker 2016 COD	\$55,342,122	\$0	\$55,342,122.....	27
Lordsburg.....	\$782,805	\$0	\$782,805.....	32
Project No:70316114 Combustion Turbine Upgrades	\$782,805	\$0	\$782,805.....	33
Luna	\$3,172,489	\$0	\$3,172,489.....	37
Project No:74417010 Luna GE LTSA	\$3,172,489	\$0	\$3,172,489.....	38
Palo Verde	\$203,430,301	\$19,334,235	\$222,764,536.....	43

Project No:72123410	PV1 capital structures all years	\$3,436,562	\$3,596,903	\$7,033,465	44
Project No:72223006	PV Lease Asset Purchase	\$163,530,000	\$0	\$163,530,000	50
Project No:72223410	PV2 capital structures all years	\$6,011,090	\$1,095,548	\$7,106,638	55
Project No:72323410	PV3 capital structures all years	\$5,189,155	\$3,536,414	\$8,725,569	61
Project No:72423008	PV Common	\$0	\$5,403,321	\$5,403,321	67
Project No:72423410	PV Common capital structures all years	\$18,447,408	\$4,593,321	\$23,040,730	72
Project No:72523410	PV Common Water Rec Facility capital structures all years	\$6,816,085	\$1,108,728	\$7,924,813	78
Reeves		\$1,565,229	\$0	\$1,565,229	83
Project No:71316125	Reeves U3 Upper Economizer Repl	\$758,966	\$0	\$758,966	84
Project No:71317725	Reeves Units 1,2&3 Cooling Tower Up	\$806,263	\$0	\$806,263	89
San Juan		\$92,841,320	\$4,455,007	\$97,296,327	95
Project No:76116015	Unit 1 Boiler Modifications	\$1,562,424	\$0	\$1,562,424	96
Project No:76116112	Unit 1 Reheat Outlet Header	\$2,538,719	\$0	\$2,538,719	100
Project No:76117618	Unit 1 cooling tower MCC's Replacement	\$1,346,529	\$0	\$1,346,529	105
Project No:76117915	Unit 1 Economizer Ash Removal	\$1,145,315	\$0	\$1,145,315	110
Project No:76121912	SJ U1 SNCR	\$34,331,323	\$0	\$34,331,323	115
Project No:76416115	Unit 4 Flyash System Upgrades	\$1,296,441	\$0	\$1,296,441	120
Project No:76417115	Unit 4 Economizer Ash Removal System	\$1,847,024	\$0	\$1,847,024	125
Project No:76421912	SJ U4 SNCR	\$40,440,539	\$0	\$40,440,539	130
Project No:76616116	Emergent Work 2016	\$0	\$781,483	\$781,483	135
Project No:76616235	Plant Common Evaporation Pond Heightening	\$0	\$786,371	\$786,371	140

Project No:76616317	Common Coal Handling	.....	\$1,742,024	.....	\$0	.....	\$1,742,024....	145
Project No:76617109	SJ common Lake Station Switchge	.....	\$2,212,496	.....	\$0	.....	\$2,212,496....	149
Project No:76617332	Plant Common Shumway Arroyo Slurry Wall and Water Containment	.....	\$0	.....	\$2,887,153	.....	\$2,887,153....	154
Project No:76617724	Plant Common North Side Wastewater Product Line Replacement	.....	\$1,220,784	.....	\$0	.....	\$1,220,784....	159
Project No:77021913	SJGS SNCR costs PNM Share	.....	\$3,157,702	.....	\$0	.....	\$3,157,702....	164
Solar	.....	.....	\$77,754,026	.....	\$0	...	\$77,754,026....	170
Project No:75518015	Utility Scale Solar 40 MW	\$77,754,026	\$0	...	\$77,754,026....	171

Totals for Report	\$451,403,342.....	\$26,607,292...	\$478,010,634
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Afton

Project No: 70716115 Afton Capital Improvements 2016

Company: 003
Location: 707 Afton

Project Information

Construction Start Date 1/1/2016 Estimated Completion Date 12/31/2016

List Interim In-Service Dates

Individual Capital Improvement Projects funded under this Project Fund will be placed In Service as appropriate. All Capital Improvement Projects funded under this Project Fund will be completed and In Service prior to December 31, 2016.

Project Need Justification

This project shall encompass a number of smaller emergent capital improvement projects at Afton in 2016. These capital improvement projects shall address emergent safety, regulatory, and/or performance issues to ensure the ongoing safe, compliant, efficient, and reliable operation of the plant. The largest of the identified capital improvement projects (approximately \$500K) is an upgrade of the gas turbine Mark VI turbine, LS2100 starting system and EX2100 excitation control systems to faster and more reliable Mark IVe, LS2100e and EX2100e control systems. Other smaller project needs identified at this time include addition of a water-based fire suppression system to the capital spares warehouse and structural improvements to the air-cooled condenser to address vibration issues.

Project Alternatives

Capital Improvement Projects funded under this Project Fund will be completed only after approval to spend capital to address an emergent need. For each identified project, alternatives will be evaluated on a cost basis and based on each alternative's expected effectiveness at addressing the emergent need.

Technical Aspects

Each capital improvement project will be properly evaluated and engineered to effectively address the emergent need in a cost effective manner. The largest of the identified capital improvement projects is an upgrade of the gas turbine Mark VI, LS2100 and EX2100 control systems to faster and more reliable Mark IVe, LS2100e and EX2100e control systems.

Project Estimate Approach

The overall cost estimate for this project fund was based largely on vendor proposals for the projects scoped to date, i.e., the control system upgrades (\$500K) and warehouse fire suppression system (\$60K). The remainder of the overall cost estimate for this project fund is based on historical estimate of need for capital funds for emergent projects in a typical year. The estimated costs include vendor costs for labor and materials, which varies for each project. For smaller projects of this nature that do not involve significant PNM labor to manage, we typically do not include PNM labor in these cost estimates as this is typically minimal. The vendor selected for each project is the one that can best balance overall project costs with outage duration and mitigation of risk.

Page 1

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	70716115	Year	2015									
	Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	92,914	0	92,914	0	0	232,286	418,114
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	0	0	0	7,730	0	7,730	0	0	19,326	34,787
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	0	0	0	0	100,644	0	100,644	0	0	251,612	452,901
	825-Clearings	0	0	0	0	0	0	0	0	0	0	0
	Clr Sum	0	0	0	0	0	0	0	0	0	0	0
	Proj Net	0	0	0	0	100,644	0	100,644	0	0	251,612	452,901

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	70716115	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	75,000	0	50,000	0	35,000	0	0	160,000
	370-Outside Services	418,114	0	0	0	46,457	0	75,000	0	50,000	0	40,000	0	0	629,571
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	34,787	0	0	0	3,865	0	12,480	0	8,320	0	6,240	0	0	65,692
	928-AFUDC Debt Reg	0	793	794	795	841	886	142	285	380	475	71	142	0	5,604
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	452,901	793	794	795	51,163	886	162,622	285	108,700	475	81,311	142	0	860,867
	825-Clearings	0	0	0	0	0	-507,332	0	0	0	-272,082	0	-81,453	0	-860,867
	Clr Sum	0	0	0	0	0	-507,332	0	0	0	-272,082	0	-81,453	0	-860,867
	Proj Net	452,901	793	794	795	51,163	-506,446	162,622	285	108,700	-271,607	81,311	-81,311	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	70716115	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	160,000	0	0	0	0	0	0	0	0	0	0	0	0	160,000
	370-Outside Services	629,571	0	0	0	0	0	0	0	0	0	0	0	0	629,571
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	65,692	0	0	0	0	0	0	0	0	0	0	0	0	65,692
	928-AFUDC Debt Reg	5,604	0	0	0	0	0	0	0	0	0	0	0	0	5,604
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	860,867	0	0	0	0	0	0	0	0	0	0	0	0	860,867
	825-Clearings	-860,867	0	0	0	0	0	0	0	0	0	0	0	0	-860,867
	Clr Sum	-860,867	0	0	0	0	0	0	0	0	0	0	0	0	-860,867
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Project No: 70716610 Afton minimum Load Limitation (OpFlex Turndown)

Company: 003
Location: 707 Afton

Project Information

Construction Start Date 1/1/2014 Estimated Completion Date 5/31/2016

List Interim In-Service Dates

The Row 0 compressor blade replacement project was placed in service on March 13, 2015. It is anticipated that the HMI upgrade project will be in service by October 30, 2015. It is anticipated that the Mark VI and EX2100 control system upgrades will be in service by the end of May 2016. All Capital Improvement Projects funded under this Project Fund will be completed and In Service prior to December 31, 2016.

Project Need Justification

This project involves three capital improvements to the Afton gas and steam turbines. 1) installation of upgraded Row 0 compressor blades on the gas turbine to replace the current blades design that has been prone to costly (\$125K/year) water erosion from inlet fogging, 2) upgrade of gas turbine and steam turbine human-machine interfaces (HMI) from unsupported Windows XP to Windows 7 systems, to allow for optimal cyber security patching of these systems compliant with NERC critical infrastructure protection requirements, and 3) upgrade of the steam turbine Mark VI and EX2100 control systems to faster and more reliable Mark IVe and EX2100e control systems.

Project Alternatives

To address the compressor Row 0 blade erosion problem, replacement of the fogging system with an evaporative cooler was weighed against upgrading the blades to a more erosion-resistant design. It was determined that the upgraded blades would cost about 1/3 of the cost of an evaporative cooling system. The second two upgrades to the turbine HMI's and the steam turbine Mark VI control system are to be performed by the original equipment manufacturer, General Electric. These upgrades will be much less expensive than wholesale change out of the control systems to offerings from other vendors.

Technical Aspects

All of these turbine upgrade projects will be performed by the original equipment manufacturer, General Electric. The existing Row 0 compressor blades will be replaced with an upgraded design that is resistant to costly erosion due to inlet air fogging. The existing HMI computers (4) will be replaced with upgraded computers running the latest software that operates on a supported Windows 7 platform. The Mark VI and EX2100 upgrades will involve replacement of 14 year old distributed control system components and control software with faster and more robust components and software.

Project Estimate Approach

All of the project costs are based on GE cost proposals which were \$435K for the Row 0 Blade Replacement, \$185K for the Turbine HMI Upgrades, and \$265K for the Steam turbine Control System Upgrades. These proposals reflect a 10% discount under the existing GE Continuing Services Agreement with PNM for Afton. Overall, the costs for these projects are split about 75% for parts and 25% for engineering and installation labor. For smaller projects of this nature that do not involve significant PNM labor to manage, we typically do not include PNM labor in these cost estimates as this is typically minimal and expensed.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	70716610	Year	2015											
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
	110-Straight Time-General	0		0	0	0	0	0	0	0	0	0	0	
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0	
	350-Material Issues-Major	0		0	0	0	0	0	0	0	0	0	0	
	370-Outside Services	374,094		0	0	0	86,015	25,500	94,516	68,000	0	130,039	778,163	
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0	
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0	
	391-Jt Proj Bills to PNM-Non-Labor	0		0	0	0	0	0	0	0	0	0	0	
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0	
	610-Expenses - General	0		0	0	0	0	0	0	0	0	0	0	
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0	
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0	
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0	
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0	
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0	
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0	
	913-Payroll Taxes Load	0		0	0	0	0	0	0	0	0	0	0	
	914-Pension and Benefits Load	0		0	0	0	0	0	0	0	0	0	0	
	915-Injuries and Damages Load	0		0	0	0	0	0	0	0	0	0	0	
	918-San Juan AR-Labor	0		0	0	0	0	0	0	0	0	0	0	
	921-Stores / Purchasing Load	0		0	0	0	0	0	0	0	0	0	0	
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0	
	925-E and S Loads	0		0	0	0	0	0	0	0	0	0	0	
	926-A and G Loads	31,125		0	0	0	7,156	2,122	7,864	5,658	0	10,819	64,743	
	928-AFUDC Debt Reg	527		1,048	0	0	120	276	446	675	774	478	4,344	
	929-AFUDC - Equity Regular	809		1,496	0	0	171	395	636	964	1,106	682	6,259	
	937-San Juan AR - Other	0		0	0	0	0	0	0	0	0	0	0	
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0	
	Cost Sum	406,554		2,543	0	0	93,463	28,293	103,461	75,297	1,880	142,018	853,509	
	825-Clearings	0		-409,097	0	0	0	0	0	0	-187,484	0	-596,582	
	Clr Sum	0		-409,097	0	0	0	0	0	0	-187,484	0	-596,582	
	Proj Net	406,554		-406,554	0	0	93,463	28,293	103,461	75,297	-185,604	142,018	256,927	

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	70716610	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	778,163	0	0	0	26,008	0	0	0	0	0	0	0	0	804,171
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	64,743	0	0	0	2,164	0	0	0	0	0	0	0	0	66,907
	928-AFUDC Debt Reg	4,344	450	450	451	477	502	0	0	0	0	0	0	0	6,674
	929-AFUDC - Equity Regular	6,259	0	0	0	0	0	0	0	0	0	0	0	0	6,259
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	853,509	450	450	451	28,649	502	0	0	0	0	0	0	0	884,011
	825-Clearings	-596,582	0	0	0	0	-287,429	0	0	0	0	0	0	0	-884,011
	Clr Sum	-596,582	0	0	0	0	-287,429	0	0	0	0	0	0	0	-884,011
	Proj Net	256,927	450	450	451	28,649	-286,927	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	70716610	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	804,171	0	0	0	0	0	0	0	0	0	0	0	0	804,171
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	66,907	0	0	0	0	0	0	0	0	0	0	0	0	66,907
	928-AFUDC Debt Reg	6,674	0	0	0	0	0	0	0	0	0	0	0	0	6,674
	929-AFUDC - Equity Regular	6,259	0	0	0	0	0	0	0	0	0	0	0	0	6,259
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	884,011	0	0	0	0	0	0	0	0	0	0	0	0	884,011
	825-Clearings	-884,011	0	0	0	0	0	0	0	0	0	0	0	0	-884,011
	Clr Sum	-884,011	0	0	0	0	0	0	0	0	0	0	0	0	-884,011
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Bulk Power Building Alloc

Project No: 35730615 Aztec & Data Center Building Improvements

Company: 003

Location: 357 Bulk Power Building Allocation

Project Information

Construction Start Date 4/1/2015

Estimated Completion Date 12/31/2019

List Interim In-Service Dates

0

Project Need Justification

For 2015, this project includes replacement of asphalt, roof, elevator, HVAC system, and renovation of two conference rooms and two employee lounges:

- 1) Asphalt Replacement: The asphalt in the parking lot is used by 200+ building occupants on a daily basis and is worn and broken in areas. This could prevent a safety hazard when weather conditions allow ice and water to enter the asphalt.
- 2) HVAC System Replacement: The current HVAC system is past its useful life and in need of replacement instead of continued breakdown maintenance. This replacement will provide a safe work environment for building occupants and provide remote HVAC monitoring and control from Downtown Albuquerque Headquarters.
- 3) Roof Replacement: The current roof is more than ten years old, past its useful life, and does not provide dependable coverage for the building assets and its occupants.
- 4) Elevator Replacement: The elevator is past its useful life and parts are obsolete. This is the only elevator in the building and meets the Americans with Disabilities (ADA) requirement for access. The risk in not completing this project is a potential safety or ADA violation and increased operations and maintenance labor and parts' costs.
- 5) Building Renovations: Renovation of two conference rooms and two lounges. Other renovations as inefficiencies and maintenance issues are identified.

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Project Alternatives

- 1) Asphalt Replacement: Continue to patch and monitor the parking lot asphalt for needed repairs. The scope has not been identified for this project but will be developed by PNM's Building Maintenance Supervisor, General Services Manager, and Supply Chain Analyst. The scope will allow for request and review of the bids for the best cost-effective replacement.
- 2) HVAC System Replacement: Continue to receive service calls at the Downtown facility from building occupants when the temperature varies too high or low; and have Downtown personnel visit the Aztec building to monitor the system. The HVAC system will be replaced with the most efficient and cost-effective system possible, providing a warranty consistent with this type of work.
- 3) Roof Replacement: PNM Building Maintenance has been patching, repairing, and helping the systems get by but breakdown is becoming more frequent and is jeopardizing the work environment of building occupants.
- 4) Elevator Replacement: PNM Building Maintenance continue to provide breakdown maintenance in conjunction with the outside elevator contractor. This will not provide for ADA reliability and operations and maintenance labor efficiencies.
- 5) Building Renovations: The two conference rooms and employee lounges in the building are currently outdated as to audio-visual equipment, videoconferencing capabilities, and furniture functionality. The rooms are usable but are not as functional as similar building rooms.

Technical Aspects

- 1) Asphalt Replacement: Removal of current asphalt and replacement.
- 2) HVAC System Replacement: Removal of the current rooftop unit(s) and replacement with efficient and cost-effective replacements. Project scope will include related wiring, ductwork, and connection for full operation.
- 3) Roof Replacement: Removal of the current roof and skylights, as seasonal weather permits, and replacement with roofing material and skylights which will be identified in the scope and bid following PNM's Supply Chain process.
- 4) Elevator Replacement: Removal and replacement of the current elevator with equipment which will be identified in the scope and bid following PNM's Supply Chain process.
- 5) Building Renovations: Conference room, employee lounge, and other building renovations will be identified, appropriate scopes written, and bid following PNM's Supply Chain process.

Project Estimate Approach

- 1) Asphalt Replacement: This project has not had a complete scope written or the bid process initiated, but a budget placeholder is estimated at \$200k. The work on this project will be 100% completed by an outside contractor after a bid is awarded.
- 2) HVAC System Replacement: This project is estimated at \$408,839 which includes removal of the current HVAC system and replacement with one 3-ton heat pump unit, one 15-ton heat pump unit, and one 20-ton heat pump unit. The project will include electrical work, new disconnects and t-stats, duct work and crane service. The work will be 100% completed by an outside contractor after a bid is awarded.
- 3) Roof Replacement: This project is estimated at \$312,000 and includes 216,393 square feet of current roof removal and replacement with a 15 year material warranty, meet Albuquerque Energy Code, and be White and Energy Star rated. The work will be 100% completed by an outside contractor after a bid is awarded.
- 4) Elevator Replacement: This project has not had a complete scope written or the bid process initiated, but a budget placeholder is estimated at \$84k. The work on this project will be 100% completed by an outside contractor after a bid is awarded.
- 5) Building Renovations: The balance of approximately \$395,000 will be used for building renovations including conference room and lounge equipment and furnishings replacement. The scope and cost has not yet been identified and funds would be requested through the PNM CDAP process. It is anticipated that 100% of the requested work would be completed by outside contractors after bids are awarded.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	35730615	Year	2015											
Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total			
110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0			
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0			
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0			
370-Outside Services	0	0	0	320,327	320,327	320,327	320,327	0	0	0	1,281,308			
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0			
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0			
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0			
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0			
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0			
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0			
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0			
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0			
426-Capitalized Interest	0	0	0	785	2,357	3,937	5,524	6,334	0	0	18,936			
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0			
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0			
913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0			
914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0			
915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0			
918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0			
921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0			
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0			
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0			
926-A and G Loads	0	0	0	26,651	26,651	26,651	26,651	0	0	0	106,605			
928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0			
929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0			
937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0			
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0			
Cost Sum	0	0	0	347,763	349,335	350,915	352,502	6,334	0	0	1,406,849			
825-Clearings	0	0	0	0	0	0	0	-1,406,849	0	0	-1,406,849			
Clr Sum	0	0	0	0	0	0	0	-1,406,849	0	0	-1,406,849			
Proj Net	0	0	0	347,763	349,335	350,915	352,502	-1,400,516	0	0	0			

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	35730615	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	1,281,308	0	0	25,000	0	0	25,000	0	0	25,000	0	25,000	0	1,381,308
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	18,936	0	0	63	122	134	192	262	262	316	391	441	521	21,640
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	106,605	0	0	2,080	0	0	2,080	0	0	2,080	0	2,080	0	114,925
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,406,849	0	0	27,143	122	134	27,272	262	262	27,396	391	27,521	521	1,517,873
	825-Clearings	-1,406,849	0	0	0	0	0	0	0	0	0	0	0	-111,025	-1,517,874
	Clr Sum	-1,406,849	0	0	0	0	0	0	0	0	0	0	0	-111,025	-1,517,874
	Proj Net	0	0	0	27,143	122	134	27,272	262	262	27,396	391	27,521	-110,504	-1

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	35730615	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	1,381,308	0	0	0	0	0	0	0	0	0	0	0	0	1,381,308
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	21,640	0	0	0	0	0	0	0	0	0	0	0	0	21,640
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	114,925	0	0	0	0	0	0	0	0	0	0	0	0	114,925
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,517,873	0	0	0	0	0	0	0	0	0	0	0	0	1,517,873
	825-Clearings	-1,517,874	0	0	0	0	0	0	0	0	0	0	0	0	-1,517,874
	Clr Sum	-1,517,874	0	0	0	0	0	0	0	0	0	0	0	0	-1,517,874
Proj Net		-1	0	0	0	0	0	0	0	0	0	0	0	0	-1

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Four Corners

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Project No: 71519210 Four Corners Facility Improveme

Company: 003
Location: 715 Four Corners

Project Information

Construction Start Date 1/1/2015 Estimated Completion Date N/A

List Interim In-Service Dates

In-Service dates are individual project dependent and scheduled throughout the calendar year. Monthly updates are provided by APS to ensure we maintain in-service dates up to date.

Project Need Justification

As the operator, Arizona Public Service (APS) identifies the projects into one of the following categories: Safety, Environmental, Regulatory, Strategic, Reliability.

At the time a project is identified, the project is assigned to a budget category. The APS plant, financial and projects department work together to assign the category. Projects that fall under a specific safety regulation (i.e. OSHA), code or standard (i.e. Boiler Code, NFPA) or is an obvious risk to personnel or equipment, are classified as Safety (examples may include safety access platforms or electrical arc protection). Projects that fall under a specific environmental regulation (i.e. CAA, MATS, CCR) or the project is related to an environmental system (i.e. Baghouse, Scrubber, Ponds) are classified as Environmental (examples may include baghouse bag replacements or improvements to the sulfur scrubber controls). Projects that fall under a specific regulation (i.e. CIP, State Laws) are classified as Regulatory. Projects that have O&M savings or Equivalent Availability Factor (EAF) impact are classified as Reliability (examples may include equipment such as pump, compressor or other equipment replacements). Projects related to Cultural, Community, Facilities, IT and Communications are classified as Strategic.

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Project Alternatives

Numerous alternatives are considered on a project by project basis which are recorded in individual project request documentation. Alternatives are considered not as cost effective. The APS Capital Project process can be referenced for project alternatives evaluations. Often times, large scale projects will be preceded by an engineering study that typically outlines the number of alternatives and benefits/costs of the various alternatives.

Technical Aspects

Some of the larger projects are safety related, including Coal Silo Wall Replacement, High Energy Valve Replacement. Some projects are environmental compliance related including Baghouse Bags replacements, Scrubber Outlook Duct Liner replacement, Baghouse Fly Ash Removal Controls upgrades, Plant Perimeter Security Upgrade, Coal Burner Replacements. Some of the high dollar projects are related to operational reliability (driven by the system review assessment process), and include, GSU Centerphase Replacement., Main Air Compressor Replacement, LP Field Rewind and Generator Rewedge, Boiler Tube Bundle Replacement, Air Heater Basket Replacement, UPS Power Supply upgrade, Fan Rotor Replacement, Feedwater Heater Replacement.

The System Health process is conducted by APS by breaking down its plants into many different process areas and systems. These process areas are assigned to subject matter experts (SME) or process teams who act as the system health experts. The SME/team has the responsibility to evaluate system health for these process areas based on equipment condition and performance parameters. The SME/team reviews and evaluates system issues including equipment reliability issues, forced outage related information, corrective maintenance history, work order backlog, vendor bulletins, etc. and assigns a system health color (Green, White, Yellow or Red) to the system. Systems or process areas with yellow or red colors require a system health plan to move

Project Estimate Approach

Projects are estimated by APS Capital projects group by utilizing an independent third party engineering firm. The APS Engineering Service Provider (ESP) has a team of engineers/resources who develops project scopes, cost estimates and milestone schedules for new projects or projects in the Long Range Forecast (LRF). The ESP works with the plant project sponsors, SMEs and APS Projects department to develop the cost estimates using the ESP's vast experience, expertise and project database. The ESP also works with the APS Maintenance and Modification Contractor (MMC) to develop construction cost estimates for the new projects.

Below is an estimated average of project estimate breakdown by cost category.

Engineering	20%
Materials	20%
Construction	40%
Travel	2%
Loads (Direct/OH)	13%
Taxes	5%

Cost Year 01

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project 71519210	Year	2016												
Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
370-Outside Services	1,391	0	0	0	0	0	0	0	0	0	0	0	0	1,391
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
391-Jt Proj Bills to PNM-Non-Labor	27,014,637	1,712,315	2,080,443	2,413,598	2,984,690	1,459,077	872,875	895,375	895,375	895,375	895,375	895,375	895,375	43,909,885
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
610-Expenses - General	-115	0	0	0	0	0	0	0	0	0	0	0	0	-115
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
921-Stores / Purchasing Load	9	0	0	0	0	0	0	0	0	0	0	0	0	9
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
926-A and G Loads	221,500	14,041	17,060	19,792	24,474	11,964	7,158	7,342	7,342	7,342	7,342	7,342	7,342	360,041
928-AFUDC Debt Reg	512,855	13,963	17,280	21,164	25,455	15,353	17,421	19,011	20,612	21,827	23,418	22,728	24,348	755,435
929-AFUDC - Equity Regular	650,573	0	0	0	0	0	0	0	0	0	0	0	0	650,573
937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost Sum	28,400,851	1,740,319	2,114,783	2,454,554	3,034,619	1,486,394	897,454	921,728	923,329	924,544	926,135	925,445	927,065	45,677,220
825-Clearings	-21,285,433	-30,110	-63,454	-290,627	-8,037,750	-9,524	0	-6,800	-229,081	-15,535	-1,320,085	0	-1,276,288	-32,564,687
Clr Sum	-21,285,433	-30,110	-63,454	-290,627	-8,037,750	-9,524	0	-6,800	-229,081	-15,535	-1,320,085	0	-1,276,288	-32,564,687
Proj Net	7,115,417	1,710,209	2,051,329	2,163,927	-5,003,131	1,476,870	897,454	914,928	694,248	909,009	-393,950	925,445	-349,223	13,112,532

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	71519210	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	1,391	0	0	0	0	0	0	0	0	0	0	0	0	1,391
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	43,909,885	1,167,861	1,167,861	0	0	0	0	0	0	0	0	0	0	46,245,607
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-115	0	0	0	0	0	0	0	0	0	0	0	0	-115
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	9	0	0	0	0	0	0	0	0	0	0	0	0	9
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	360,041	9,576	9,576	0	0	0	0	0	0	0	0	0	0	379,193
	928-AFUDC Debt Reg	755,435	43,387	47,180	0	0	0	0	0	0	0	0	0	0	846,002
	929-AFUDC - Equity Regular	650,573	25,690	27,936	0	0	0	0	0	0	0	0	0	0	704,199
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	45,677,220	1,246,514	1,252,553	0	0	0	0	0	0	0	0	0	0	48,176,287
	825-Clearings	-32,564,687	-48,821	-90,264	0	0	0	0	0	0	0	0	0	0	-32,703,772
	Clr Sum	-32,564,687	-48,821	-90,264	0	0	0	0	0	0	0	0	0	0	-32,703,772
	Proj Net	13,112,532	1,197,693	1,162,289	0	0	0	0	0	0	0	0	0	0	15,472,514

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La Luz

Project No: 75218816 40MW natural gas peaker 2016 COD

Company: 003
Location: 752 La Luz

Project Information

Construction Start Date 7/15/2014 Estimated Completion Date 8/31/2016

List Interim In-Service Dates

0

Project Need Justification

This new generation plant construction project was approved by the NMPRC in June 2014. PNM's most recent load and resource projections show that PNM needs to install a new peaking facility before the summer 2016 system peak to assure its ability to continue to provide reliable electric service. A new generation plant is needed to serve peak load and reserve margin in the Path 48 transmission area and to support intermittent renewable resources. The plant will be located in Valencia County, near Belen, NM. The additional capacity provides support to PNM's transmission system to respond to a sudden loss of generation and improve PNM's ability to better manage voltages and mitigate local transmission loading issues. The plant will also provide a number of important benefits for PNM and its customers, including: providing voltage support to the northern New Mexico transmission system; providing quick-start capability; balancing demand and supply, which is increasingly important with growing amounts of variable (renewable) resources on the Company's system; using low amounts of water; and having state of the art air pollution control equipment.

Project Alternatives

PNM conducted a two-phase process to evaluate bids received from developers to provide peaking resources for its system. PNM analyzed over 30 bids submitted in response to a PNM capacity supply RFI. The bids included various technologies including purchased power agreements, aero-derivative gas turbine, reciprocating engines, and turnkey ownership proposals. Ultimately, PNM selected the bid with the lowest cost that best met the load and resource projections, which was submitted by Wellhead Construction, Inc. Wellhead proposed to install an LM6000 aero-derivative gas turbine, manufactured by General Electric Company. The site selected is adjacent to existing PNM transmission facilities and near natural gas pipelines.

Technical Aspects

The 40MW LM6000 natural gas peaker provides fast start capability for quick response to load, can be remotely operated, has low maintenance costs, requires minimum staffing, and is a familiar technology. The unit is equipped with continuous emissions monitoring, a selective catalytic reduction unit to reduce nitrous oxides, and an oxidation catalyst to reduce carbon monoxide. The plant location is adjacent to PNM's 115kV Belen Switching Station, its point of interconnection.

Project Estimate Approach

The project estimates were developed as part of the bidding evaluation process. Phase I scored the bids based on price and technical criteria (credit quality, term qualifications, project engineering, stakeholder process, environmental and siting plan, fuel supply, and generation technology). Phase II involved a more detailed examination of the short-listed bids to evaluate transmission availability and cost, pricing, credit risk, timing of resource availability, and the ability to meet PNM's system operation needs. Direct negotiations were also held with the short-listed bidders to clarify and reduce

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

bid prices. The selected bid had the lowest NPV of the 34 bids that were received.

The NMPRC-approved funds for the project will pay for the labor, materials, and all other related costs to ready the plant to generate electricity, including infrastructure to supply the unit with natural gas and connect it to the electric grid. The current cost estimates include costs for Wellhead to construct the facility and for PNM to purchase the LM6000 generator from GE, gas and electric interconnection costs, land/site/community costs, PNM project management costs including labor, legal, and permitting costs, taxes and AFUDC. Interconnection costs were based on local switching station and gas pipeline site planning as well as typical interconnection costs for similar facilities. Internal project management cost estimates are based on similar scope projects. Taxes and AFUDC costs are based on statutory and approved rates.

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Cost Year 01

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	75218816	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	499,106	0	0	0	0	0	0	0	0	0	0	0	0	499,106
	120-Overtime-General	247	0	0	0	0	0	0	0	0	0	0	0	0	247
	350-Material Issues-Major	14,020,143	0	0	0	0	0	0	0	0	0	0	0	0	14,020,143
	370-Outside Services	3,050,607	0	0	0	0	0	0	0	0	0	0	0	0	3,050,607
	374-Outside Svcs Legal	194,208	0	0	0	0	0	0	0	0	0	0	0	0	194,208
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	3,422,856	0	0	0	0	0	0	0	0	0	0	0	0	3,422,856
	805-Land and Land Rights	718,727	0	0	0	0	0	0	0	0	0	0	0	0	718,727
	807-Non Refundable Contribution	10,000	0	0	0	0	0	0	0	0	0	0	0	0	10,000
	829-Construction Adjustment	33,714,856	0	0	0	0	0	0	0	0	0	0	0	0	33,714,856
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	35,436	0	0	0	0	0	0	0	0	0	0	0	0	35,436
	914-Pension and Benefits Load	158,443	0	0	0	0	0	0	0	0	0	0	0	0	158,443
	915-Injuries and Damages Load	18,000	0	0	0	0	0	0	0	0	0	0	0	0	18,000
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	108,719	0	0	0	0	0	0	0	0	0	0	0	0	108,719
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	928-AFUDC Debt Reg	21,061	0	0	0	0	0	0	0	0	0	0	0	0	21,061
	929-AFUDC - Equity Regular	27,589	0	0	0	0	0	0	0	0	0	0	0	0	27,589
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	55,999,999	0	0	0	0	0	0	0	0	0	0	0	0	55,999,999
	825-Clearings	-55,999,999	0	0	0	0	0	0	0	0	0	0	0	0	-55,999,999
	Clr Sum	-55,999,999	0	0	0	0	0	0	0	0	0	0	0	0	-55,999,999
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	75218816	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	499,106	0	0	0	0	0	0	0	0	0	0	0	0	499,106
	120-Overtime-General	247	0	0	0	0	0	0	0	0	0	0	0	0	247
	350-Material Issues-Major	14,020,143	0	0	0	0	0	0	0	0	0	0	0	0	14,020,143
	370-Outside Services	3,050,607	0	0	0	0	0	0	0	0	0	0	0	0	3,050,607
	374-Outside Svcs Legal	194,208	0	0	0	0	0	0	0	0	0	0	0	0	194,208
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	3,422,856	0	0	0	0	0	0	0	0	0	0	0	0	3,422,856
	805-Land and Land Rights	718,727	0	0	0	0	0	0	0	0	0	0	0	0	718,727
	807-Non Refundable Contribution	10,000	0	0	0	0	0	0	0	0	0	0	0	0	10,000
	829-Construction Adjustment	33,714,856	0	0	0	0	0	0	0	0	0	0	0	0	33,714,856
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	35,436	0	0	0	0	0	0	0	0	0	0	0	0	35,436
	914-Pension and Benefits Load	158,443	0	0	0	0	0	0	0	0	0	0	0	0	158,443
	915-Injuries and Damages Load	18,000	0	0	0	0	0	0	0	0	0	0	0	0	18,000
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	108,719	0	0	0	0	0	0	0	0	0	0	0	0	108,719
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	928-AFUDC Debt Reg	21,061	0	0	0	0	0	0	0	0	0	0	0	0	21,061
	929-AFUDC - Equity Regular	27,589	0	0	0	0	0	0	0	0	0	0	0	0	27,589
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	55,999,999	0	0	0	0	0	0	0	0	0	0	0	0	55,999,999
	825-Clearings	-55,999,999	0	0	0	0	0	0	0	0	0	0	0	0	-55,999,999
	Clr Sum	-55,999,999	0	0	0	0	0	0	0	0	0	0	0	0	-55,999,999
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Lordsburg

Company: 003
Location: 703 Lordsburg

Construction Start Date	1/1/2014	Estimated Completion Date	11/30/2015
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Work on Unit 1 Turbine occurred in Spring 2014 with an In-Service date of July 9, 2014. Work on Unit 2 Turbine will occur in Fall 2015 with an expected In-Service date by November 30, 2015.

This project entails the implementation of several General Electric (GE) Product Bulletin mandates concerning multiple component replacements/upgrades needed to ensure the continued safe and reliable operation of the LM-6000 gas turbine engines at Lordsburg. In particular, GE has found that the currently installed high-pressure rotor disk is prone to cracking and is recommended to be replaced with an improved design component prior to 3,000 thermal cycles. Unit 1 currently has about 2,900 cycles and component replacements are scheduled for Spring 2014, while Unit 2 currently has about 2,700 cycles and component replacements are scheduled for Fall 2015. Failure to implement these substantial component replacements/upgrades could lead to dangerous and much more costly catastrophic failures.

The project scope was evaluated against the do nothing option. The do nothing option is not recommended due to the critical need to implement these improvements, which if not implemented, would lead to unacceptable risks to safety, reliability, and would increase future costs should a catastrophic failure occur. Project scope was sent out for competitive bidding to two qualified LM-6000 overhaul vendors. The vendor selected provided a proposal that best balanced overall project costs with outage duration and mitigation of risk.

The scope of work includes removal of the GE LM6000 aero derivative gas turbine and shipment to a qualified service facility for installation of new and improved Stage 1 High-Pressure Rotor Disk, Forward Fan Shaft and Low-Pressure Turbine Coupling Nuts, #1 & #3 Bearing Seals, Inlet Gearbox Assembly Insert, Air Collector Baffle, High-Pressure Turbine Rotor Diffuser Vane Ring, and HP Turbine Rotor Stage 1 Disk Air Baffle Ring. The turbine will then be shipped back to Lordsburg for re-installation.

The majority of the project costs are estimated based on vendor turnkey cost proposals from two service facilities qualified to provide the required parts and services for GE LM6000 aero derivative gas turbines to complete the entire scope of work. Though the proposals differed slightly, the estimated costs are approximately 70% for new parts and about 30% for associated labor. Though a very small percentage of the overall costs, the cost estimate includes estimated costs for excess insurance and taxes associated with the project. The vendor selected to perform this work will be the one determined to have provided a proposal that best balanced overall project costs with outage duration and mitigation of risk.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	70316114	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0		0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0		0	0	0	0	0	0	0	0	0	0
	370-Outside Services	803,925		-299,500	0	0	0	0	0	714,000	0	0	1,218,425
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0		0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0		0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0		0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0		0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0		0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0		0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0		0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0		0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	66,887		-24,918	0	0	0	0	0	59,405	0	0	101,373
	928-AFUDC Debt Reg	8,091		421	5	5	5	5	5	1,002	2,005	0	11,545
	929-AFUDC - Equity Regular	11,097		601	7	8	8	8	8	1,431	2,862	0	16,028
	937-San Juan AR - Other	0		0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	890,000		-323,397	13	13	13	13	13	775,837	4,867	0	1,347,371
	825-Clearings	-564,566		0	0	0	0	0	0	0	-782,805	0	-1,347,371
	Clr Sum	-564,566		0	0	0	0	0	0	0	-782,805	0	-1,347,371
	Proj Net	325,434		-323,397	13	13	13	13	13	775,837	-777,939	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	70316114	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	1,218,425	0	0	0	0	0	0	0	0	0	0	0	0	1,218,425
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	101,373	0	0	0	0	0	0	0	0	0	0	0	0	101,373
	928-AFUDC Debt Reg	11,545	0	0	0	0	0	0	0	0	0	0	0	0	11,545
	929-AFUDC - Equity Regular	16,028	0	0	0	0	0	0	0	0	0	0	0	0	16,028
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,347,371	0	0	0	0	0	0	0	0	0	0	0	0	1,347,371
	825-Clearings	-1,347,371	0	0	0	0	0	0	0	0	0	0	0	0	-1,347,371
	Clr Sum	-1,347,371	0	0	0	0	0	0	0	0	0	0	0	0	-1,347,371
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	70316114	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	1,218,425	0	0	0	0	0	0	0	0	0	0	0	0	1,218,425
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	101,373	0	0	0	0	0	0	0	0	0	0	0	0	101,373
	928-AFUDC Debt Reg	11,545	0	0	0	0	0	0	0	0	0	0	0	0	11,545
	929-AFUDC - Equity Regular	16,028	0	0	0	0	0	0	0	0	0	0	0	0	16,028
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,347,371	0	0	0	0	0	0	0	0	0	0	0	0	1,347,371
	825-Clearings	-1,347,371	0	0	0	0	0	0	0	0	0	0	0	0	-1,347,371
	Clr Sum	-1,347,371	0	0	0	0	0	0	0	0	0	0	0	0	-1,347,371
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Luna

Project No: 74417010 Luna GE LTSA

Company: 003
Location: 744 Luna

Project Information

Construction Start Date 1/1/2014 Estimated Completion Date 06/30/2015

List Interim In-Service Dates

TBD - In Service dates for each major maintenance activity based on when these activities are performed. Major maintenance is performed on a prescribed schedule based on gas turbine starts and operating hours. Note that under current operating patterns, Luna is a starts based plant, and thus, the number of starts establishes major maintenance intervals. The remaining major maintenance activities to be performed under the LTSA are a Major Inspection on U2 gas turbine in Fall 2014, a Major Inspection on U1 gas turbine and the steam turbine in Spring 2015, and Hot Gas Path Inspections on U2 and U1 gas turbines in Fall 2017 and Spring 2018, respectively.

Project Need Justification

This Project Fund is for required periodic major maintenance on the Luna gas turbines and steam turbine under the terms of a Long-Term Services Agreement (LTSA) between the Luna Owners and General Electric. Under the terms of the LTSA, General Electric performs all required, periodic gas turbine major maintenance, which includes Hot Gas Path Inspections and Major Inspections, as well as steam turbine Major Inspections, on a prescribed schedule based on gas turbine operating hours and fired starts. The remaining major maintenance activities to be performed under the LTSA are a Major Inspection on U1 gas turbine and the steam turbine in Spring 2015, and Hot Gas Path Inspections on U2 and U1 gas turbines in Fall 2017 and Spring 2018, respectively.

Project Alternatives

Instead of performing major maintenance on the Luna gas and steam turbine using PNM personnel, the Luna Owners entered this industry-standard LTSA with the turbine original equipment manufacturer General Electric in 2004. First, the payment terms of the LTSA are structured to somewhat levelize the year-to-year cash flow associated with routine major maintenance on the gas turbine. Second, the LTSA provides the Luna Owners and stakeholders with a partner to share risk. Under the terms of the LTSA, GE absorbs any unexpected replacement costs for covered parts that do not perform as designed or whose operating life is shorter than expected. As such, the LTSA provides the Luna Owners and its stakeholders a valuable hedge against risk.

Technical Aspects

At Luna, Gas Turbine Major Inspections, which are performed every 2,700 starts or 72,000 operating hours, whichever occurs first, are approximately 45 day outages where all of the combustor parts (fuel nozzles, combustion sleeves, transition pieces, etc.) and turbine parts (nozzles, blades, wear pads, etc.) are replaced, the compressor and the generator are opened, inspected and tested, and the entire turbine rotor is removed from the case for de-blading and testing. The Steam Turbine Major Inspection work scope, performed during the Gas Turbine Major Inspection, includes an open/clean/close on the turbine, steam valve refurbishment, and generator inspection and testing.

Project Estimate Approach

The estimated base costs for required, periodic major maintenance on the Luna gas and steam turbines are determined based on cost calculations defined in the LTSA. The base costs are determined by the number of fired hours and factored starts that each unit will accumulate between major maintenance events. The base costs are then escalated using future year estimates for the applicable US Bureau of Labor Statistics indices used to calculate escalated costs, as defined in the LTSA and described under "Alternate Escalation Assumptions". For example, the total base costs for the Unit 1 Gas Turbine and Steam Turbine Major Inspections was determined to be \$8,825K based on Unit 1 Gas Turbine accumulating 18,226 fired hours and 963 starts since the previous major maintenance event. The escalation factor for 2015 is 23.14%, so the escalated costs are \$10,868K. Based on the scope of major maintenance work, the escalated costs are appropriately split 72% capital and 28% O&M. Finally, since this is a joint-owned facility, these costs are further split approximately equally among the three owners.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	74417010	Year	2015									
	Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	6,699,253	8,276,000	376,000	0	0	0	0	0	0	0	15,351,253
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	-4,495,642	-5,516,782	-250,642	0	0	0	0	0	0	0	-10,263,066
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	44,885	0	0	0	0	0	0	0	0	0	44,885
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0
	928-AFUDC Debt Reg	54,361	3,850	7,900	8,124	0	0	0	0	0	0	74,235
	929-AFUDC - Equity Regular	41,682	5,498	11,279	11,600	0	0	0	0	0	0	70,059
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	122,596	229,245	10,415	0	0	0	0	0	0	0	362,257
	Cost Sum	2,467,134	2,997,812	154,953	19,724	0	0	0	0	0	0	5,639,623
	825-Clearings	-2,467,134	0	0	-3,172,489	0	0	0	0	0	0	-5,639,623
	Clr Sum	-2,467,134	0	0	-3,172,489	0	0	0	0	0	0	-5,639,623
	Proj Net	0	2,997,812	154,953	-3,152,765	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	74417010	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	15,351,253	0	0	0	0	0	0	0	0	0	0	0	0	15,351,253
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	-10,263,066	0	0	0	0	0	0	0	0	0	0	0	0	-10,263,066
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	44,885	0	0	0	0	0	0	0	0	0	0	0	0	44,885
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	928-AFUDC Debt Reg	74,235	0	0	0	0	0	0	0	0	0	0	0	0	74,235
	929-AFUDC - Equity Regular	70,059	0	0	0	0	0	0	0	0	0	0	0	0	70,059
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	362,257	0	0	0	0	0	0	0	0	0	0	0	0	362,257
	Cost Sum	5,639,623	0	0	0	0	0	0	0	0	0	0	0	0	5,639,623
	825-Clearings	-5,639,623	0	0	0	0	0	0	0	0	0	0	0	0	-5,639,623
	Clr Sum	-5,639,623	0	0	0	0	0	0	0	0	0	0	0	0	-5,639,623
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	74417010	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	15,351,253	0	0	0	0	0	0	0	0	0	0	0	0	15,351,253
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	-10,263,066	0	0	0	0	0	0	0	0	0	0	0	0	-10,263,066
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	44,885	0	0	0	0	0	0	0	0	0	0	0	0	44,885
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	928-AFUDC Debt Reg	74,235	0	0	0	0	0	0	0	0	0	0	0	0	74,235
	929-AFUDC - Equity Regular	70,059	0	0	0	0	0	0	0	0	0	0	0	0	70,059
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	362,257	0	0	0	0	0	0	0	0	0	0	0	0	362,257
	Cost Sum	5,639,623	0	0	0	0	0	0	0	0	0	0	0	0	5,639,623
	825-Clearings	-5,639,623	0	0	0	0	0	0	0	0	0	0	0	0	-5,639,623
	Clr Sum	-5,639,623	0	0	0	0	0	0	0	0	0	0	0	0	-5,639,623
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Palo Verde

Project No: 72123410 PV1 capital structures all years

Company: 003
Location: 721 Palo Verde

Project Information

Construction Start Date 1/1/2015 Estimated Completion Date N/A

List Interim In-Service Dates

0

Project Need Justification

Palo Verde completes capital projects annually to maintain the facility in compliance with Nuclear Regulatory Commission regulations and to provide the highest capacity factor that is economically justified. This capital program has been developed after extensive internal review by the Operating Agent, PVNGS, and has been reviewed by each of the participant owners. Failure to maintain plant equipment adds risks not carried by non-nuclear facilities in that plant performance and operating authorization is continually analyzed by the Nuclear Regulatory Commission under Federal guidelines.

Approximately 34% of the total Unit 1 projects are associated with Plant Modifications, 64% are associated with Equipment Purchase or Replacements. The projects with the most significant dollars in Plant Modifications are Cooling Tower Life Extension (\$750K), Inverter Modification (\$600K), Loss of Phase Startup Transformer (\$240K), and Security Access Control (\$330K).

The projects with the most significant dollars in Equipment Purchase or Replacements are Spray Pond Concrete Replacement (\$2.3M), Control Element Assembly Replacement (\$1.2M), Circulating Water Pipeline Replacement (\$330K), Diesel Fuel Oil Yard Piping Replacement (\$310K), and Hypo Trench Replacement (\$140K).

The two largest projects (Spray Pond Concrete Replacement and Control Element Assembly Replacement) are representative of most projects; they are replacements in like kind and therefore there is no Alternatives.

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Project Alternatives

With a 10.2% ownership of PVNGS, PNM is one of seven parties to a Participation Agreement that runs through 2047. This contract provides the only alternative for review of capital projects recommended by the Operating Agent. Under the Participation Agreement (PA), the Owner-Participants have reviewed and approved the recommended 2015 capital improvement budget. The PA provides a resolution process for any Owner(s) who disagree with the NRC Licensee and plant Operator's (Arizona Public Service) recommendations for Capital and O&M expenditures. The PA further provides that the contesting Owner must continue to pay their share of the Operating Agent's invoice for disputed projects pending final resolution. Failure to do so places PNM in risk of default. This again, places Palo Verde in a unique situation with multiple Owner-Participant's review and approval decisions.

The two largest projects (Spray Pond Concrete Replacement and Control Element Assembly Replacement) are representative of most projects; they are replacements in like kind and therefore, there are no Alternatives. Both of these are critical safety components of the reactor system. Any degradation to component operability will lead to a shutdown of the generating unit.

Technical Aspects

This involves multiple projects related to maintain the nuclear reactor, steam generation, turbine generator, and related nuclear safety components. This project represents 32 capital improvement initiatives on Unit 1 out of approximately 200 for PV during 2015. Major initiatives include expenditures to replace the generator excitation system; Reactor Coolant pump motor replacement; nuclear reactor control element assembly replacement and concrete replacement for the ultimate heat sink, spray pond.

Project Estimate Approach

Palo Verde uses AACE (Association for the Advancement of Cost Engineering) standards for cost estimations. These standards are recognized by the Department of Energy through DOE G 413.3-21. Palo Verde is active in a collaborative program with other Nuclear Plants that shares cost information as well as looking for opportunities to jointly enter into vendor contracts for cost optimization. Project scope and alternatives are initially identified by Palo Verde, with cost estimates developed consistent with industry practices.

PNM is the operating agent for San Juan Generating Station and follows a similar process to APS at Palo Verde. Individual project estimates are developed by the Palo Verde project managers group.

Approximately 34% of total Unit 1 are projects associated with Plant Modifications, 64% are associated with Equipment Purchase or Replacements.

The projects with the most significant dollars in Equipment Purchases or Replacements are Spray Pond Concrete Replacement (\$2.3M), Control Element Assembly Replacement (\$1.2M), Circulating Water Pipeline Replacement (\$330K), Diesel Fuel Oil Yard Piping Replacement (\$310K), and Blow down Trench Replacement (\$140K).

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	72123410	Year	2015									
	Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	14,259,363	232,315	372,545	234,314	244,861	353,348	310,060	147,553	227,358	527,218	16,908,935
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-423,023	0	0	0	0	0	0	0	0	0	-423,023
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	116,929	1,905	3,055	1,921	2,008	2,897	2,542	1,210	1,864	4,323	138,656
	928-AFUDC Debt Reg	217,210	6,651	7,479	8,314	8,988	9,728	10,548	10,740	11,239	12,290	303,187
	929-AFUDC - Equity Regular	271,284	9,497	10,678	11,870	12,833	13,889	15,060	15,335	16,048	17,548	394,042
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	14,441,763	250,368	393,756	256,419	268,690	379,863	338,211	174,838	256,509	561,379	17,321,796
	825-Clearings	-11,977,720	0	0	0	-36,333	-39,768	-181,698	-21,342	0	-227,922	-12,484,783
	Clr Sum	-11,977,720	0	0	0	-36,333	-39,768	-181,698	-21,342	0	-227,922	-12,484,783
	Proj Net	2,464,043	250,368	393,756	256,419	232,357	340,095	156,513	153,496	256,509	333,456	4,837,013

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	72123410	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	16,908,935	321,932	280,092	618,610	950,885	681,074	188,476	309,835	182,274	217,178	249,839	280,704	425,911	21,615,745
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-423,023	0	0	0	0	0	0	0	0	0	0	0	0	-423,023
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	138,656	2,640	2,297	5,073	7,797	5,585	1,546	2,541	1,495	1,781	2,049	2,302	3,492	177,254
	928-AFUDC Debt Reg	303,187	8,749	8,978	9,787	11,189	12,226	11,955	10,169	10,595	9,910	10,339	10,825	11,390	429,299
	929-AFUDC - Equity Regular	394,042	0	0	0	0	0	0	0	0	0	0	0	0	394,042
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	17,321,796	333,321	291,367	633,470	969,871	698,885	201,977	322,545	194,364	228,869	262,227	293,831	440,793	22,193,316
	825-Clearings	-12,484,783	-180,962	0	0	-240,943	-605,717	-1,283,582	-14,943	-603,353	0	0	-44,368	-3,552,535	-19,011,186
	Clr Sum	-12,484,783	-180,962	0	0	-240,943	-605,717	-1,283,582	-14,943	-603,353	0	0	-44,368	-3,552,535	-19,011,186
	Proj Net	4,837,013	152,359	291,367	633,470	728,928	93,168	-1,081,605	307,602	-408,989	228,869	262,227	249,463	-3,111,742	3,182,130

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	72123410	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	21,615,745	204,898	162,037	0	0	0	0	0	0	0	0	0	0	21,982,680
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-423,023	0	0	0	0	0	0	0	0	0	0	0	0	-423,023
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	177,254	1,680	1,329	0	0	0	0	0	0	0	0	0	0	180,263
	928-AFUDC Debt Reg	429,299	10,404	11,042	0	0	0	0	0	0	0	0	0	0	450,745
	929-AFUDC - Equity Regular	394,042	6,160	6,538	0	0	0	0	0	0	0	0	0	0	406,740
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	22,193,316	223,142	180,946	0	0	0	0	0	0	0	0	0	0	22,597,404
	825-Clearings	-19,011,186	0	0	0	0	0	0	0	0	0	0	0	0	-19,011,186
	Clr Sum	-19,011,186	0	0	0	0	0	0	0	0	0	0	0	0	-19,011,186
	Proj Net	3,182,130	223,142	180,946	0	0	0	0	0	0	0	0	0	0	3,586,218

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Project No: 72223006 PV Lease Asset Purchase

Company: 003
Location: 722 Palo Verde

Project Information
Construction Start Date 1/1/2016 Estimated Completion Date
List Interim In-Service Dates
Project Need Justification

PNM is a participant in the three units of Palo Verde Nuclear Generating Station (PVNGS), also known as the Arizona Nuclear Power Project (“ANPP”). PNM is entitled to 10.2% of the power and energy generated by PVNGS, which equates to 402 MW of generation capacity equally split among Units 1, 2 and 3. PNM’s 10.2% ownership is comprised of a combination of direct ownership and leasing arrangements. Currently, PNM has ownership interests of 2.3% in Unit 1, 4.6% in Unit 2 and 10.2% in Unit 3 and has leasehold interests of 7.9% in Unit 1 and 5.6% in Unit 2. PNM is exercising renewal options to extend the terms of one Palo Verde Nuclear Generating Station Unit 2 lease and to purchase 3 at fair market value.

Project Alternatives
Procuring the ongoing generation capacity at Palo Verde Nuclear Generating Station is the most cost-effective option for PNM to meet the needs of its customer and its shareholders. By securing the generation capacity at PVNGS, PNM will maintain the diversity of its generation mix which aligns with the most recent integrated resource plan.

Technical Aspects
PNM is a participant in the three units of PVNGS with various utilities, including Arizona Public Service Company, the operating agent of PVNGS. PNM is entitled to 10.2% of the power and energy generated by PVNGS, which equates to 402 MW of generation capacity, equally split amount Units 1, 2 and 3. PNM’s 10.2% ownership is comprised of a combination of direct ownership and leasing arrangements. Currently, PNM has ownership interests of 2.3% in Unit 1, 4.6% in Unit 2, and 10.2% in Unit 3 and has leasehold interests of 7.9% in Unit 1 and 5.6% in Unit 2.

PNM has irrevocably agreed to purchase three leases at current market prices, and can assess market conditions between now and 2024 to determine the optimal strategy for the additional leases that have been renewed. Although the purchase of the three PVNGS Unit 2 leases would not change PNM’s 10.2% ownership in PVNGS Unit 2, the purchase of the leases would change the Unit 2 ownership mix by increasing the ownership interest with a corresponding decrease in the leasing arrangements. The table below summarizes PNM’s Unit 1 and 2 leases:

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

PVNGS Unit	Capacity MW	Initial Lease Term	Max renewal Term	Status
Unit 1	15	2015	2023	Extended to 2023
Unit 1	18	2015	2023	Extended to 2023
Unit 1	22	2015	2023	Extended to 2023
Unit 1	49	2015	2023	Extended to 2023
Unit 2	10	2016	2024	Extended to 2024
Unit 2	15	2016	2018	Agreement to Purchase
Unit 2	18	2016	2018	Agreement to Purchase
Unit 2	31	2016	2018	Agreement to Purchase

Project Estimate Approach

On January 13, 2014, PNM notified the lessors of the other three Unit 2 leases (totaling 64 MW) that it would exercise the fair market value purchase options specified in the leases, and has since negotiated agreements with each lessor regarding the purchase price for each lease. On February 25, 2014, PNM entered into a letter agreement with CGI Capital, Inc. ("CGI") specifying a fair market value for 31.25 MW of generating capacity at Unit 2 of \$78.2 million or \$2,500/kW as of the end of the original lease term, January 15, 2016. On May 1, 2014, PNM entered into a letter agreement with Cypress Verde LLC and Cypress Second PV Partnership (together, the "Cypress Entities") specifying a fair market value for 32.76 MW of generating capacity at Unit 2 of \$85.2 million or \$2,600/kW as of the end of the original lease term, January 15, 2016.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	72223006	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0		0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0		0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0		0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	388,944		0	0	0	0	0	0	0	0	0	388,944
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0		0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0		0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0		0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0		0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0		0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0		0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0		0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	3,215		0	0	0	0	0	0	0	0	0	3,215
	928-AFUDC Debt Reg	4,708		0	0	0	0	0	0	0	0	0	4,708
	929-AFUDC - Equity Regular	1,409		0	0	0	0	0	0	0	0	0	1,409
	937-San Juan AR - Other	0		0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	398,277		0	0	0	0	0	0	0	0	0	398,277
	825-Clearings	-398,277		0	0	0	0	0	0	0	0	0	-398,277
	Clr Sum	-398,277		0	0	0	0	0	0	0	0	0	-398,277
	Proj Net	0		0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	72223006	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	388,944	0	0	0	0	0	0	0	0	0	0	0	0	388,944
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	163,530,000	0	0	0	0	0	0	0	0	0	0	0	163,530,000
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	3,215	0	0	0	0	0	0	0	0	0	0	0	0	3,215
	928-AFUDC Debt Reg	4,708	0	0	0	0	0	0	0	0	0	0	0	0	4,708
	929-AFUDC - Equity Regular	1,409	0	0	0	0	0	0	0	0	0	0	0	0	1,409
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	398,277	163,530,000	0	0	0	0	0	0	0	0	0	0	0	163,928,277
	825-Clearings	-398,277	-163,530,000	0	0	0	0	0	0	0	0	0	0	0	-163,928,277
	Clr Sum	-398,277	-163,530,000	0	0	0	0	0	0	0	0	0	0	0	-163,928,277
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	72223006	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	388,944	0	0	0	0	0	0	0	0	0	0	0	0	388,944
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	163,530,000	0	0	0	0	0	0	0	0	0	0	0	0	163,530,000
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	3,215	0	0	0	0	0	0	0	0	0	0	0	0	3,215
	928-AFUDC Debt Reg	4,708	0	0	0	0	0	0	0	0	0	0	0	0	4,708
	929-AFUDC - Equity Regular	1,409	0	0	0	0	0	0	0	0	0	0	0	0	1,409
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	163,928,277	0	0	0	0	0	0	0	0	0	0	0	0	163,928,277
	825-Clearings	-163,928,277	0	0	0	0	0	0	0	0	0	0	0	0	-163,928,277
	Clr Sum	-163,928,277	0	0	0	0	0	0	0	0	0	0	0	0	-163,928,277
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Project No: 72223410 PV2 capital structures all years

Company: 003
Location: 722 Palo Verde

Project Information		
<u>Construction Start Date</u>	1/1/2015	<u>Estimated Completion Date</u>
<u>List Interim In-Service Dates</u>		
0		

Project Need Justification
Palo Verde completes capital projects annually to maintain the facility in compliance with Nuclear Regulatory Commission regulations and to provide the highest capacity factor that is economically justified. This capital program has been developed after extensive internal review by the Operating Agent, PVNGS, and has been reviewed by each of the participant owners. Failure to maintain plant equipment adds risks not carried by non-nuclear facilities in that plant performance and operating authorization is continually analyzed by the Nuclear Regulatory Commission under Federal guidelines.

Approximately 40% of the total Unit 2 projects are associated with Plant Modifications, 45% are associated with Equipment Purchase or Replacements, and 15% are associated with Fukushima projects.

The projects with the most significant dollars in Plant Modifications are Cooling Tower Life Extension (\$635K), Security Access Control (\$335K), Inverter Modification (\$285K), Measurement Uncertainty Power Uprate (\$185K), Loss of Phase Startup Transformer (\$170K), and Spray Pond Chemical Addition Upgrades (\$140K).

The projects with the most significant dollars in Equipment Purchase or Replacements are Main Transformer Replacement (\$814K), Reactor Coolant Pump Motor Replacement (\$665K), Fixed In-Core Detectors (\$300K), Essential Spray Pond Backwash Pipe Replacement (\$250K), and Hypo Trench Replacement (\$150K).

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Project Alternatives

With a 10.2% ownership of PVNGS, PNM is one of seven parties to a Participation Agreement that runs through 2047. This contract provides the only alternative for review of capital projects recommended by the Operating Agent. Under the Participation Agreement (PA), the Owner-Participants have reviewed and approved the recommended 2015 capital improvement budget. The PA provides a resolution process for any Owner(s) who disagree with the NRC Licensee and plant Operator's (Arizona Public Service) recommendations for Capital and O&M expenditures. The PA further provides that the contesting Owner must continue to pay their share of the Operating Agent's invoice for disputed projects pending final resolution. Failure to do so places PNM in risk of default. This again, places Palo Verde in a unique situation with other Owner-Participant's review and approval decisions.

Sample alternative considerations for projects:

Polar Crane- Run to failure; Replacement of Crane; Replacement of electric drive and upgrade with Variable Frequency Drives (selected).

Main Transformer Replacement- Run to failure; Rebuild spare transformer in Mexico facilities; Purchase new Transformer (selected).

Reactor Coolant Pump motor- Run to failure; Use spare contaminated motor from WPPS, refurbish; Use spare contaminated motor from unit 2, refurbish (selected); purchase new motor.

Technical Aspects

This involves multiple projects relating to maintaining the nuclear reactor, steam generation, turbine generator, and related nuclear safety components. This project represents 39 capital improvement initiatives on Unit 2 out of approximately 200 for PV during 2015. Major initiatives include expenditures to replace the generator excitation system; Main Transformer replacement; life extension work on the cooling towers; Fukushima modifications and the replacement of a nuclear reactor coolant pump motor.

Project Estimate Approach

Palo Verde uses AACE (Association for the Advancement of Cost Engineering) standards for cost estimations. These standards are recognized by the Department of Energy through DOE G 413.3-21. Palo Verde is active in a collaborative program with other Nuclear Plants that shares cost information as well as looking for opportunities to jointly enter into vendor contracts for cost optimization. Project scope and alternatives are initially identified by Palo Verde, with cost estimates developed consistent with industry practices.

PNM is the operating agent for San Juan Generating Station and follows a similar process to APS at Palo Verde. Individual project estimates are developed by the Palo Verde project managers group.

Approximately 40% of total Unit 2 are projects associated with Plant Modifications, 45% are associated with Equipment Purchase or Replacements, and 15% are associated with Fukushima projects.

The projects with the most significant dollars in Plant Modifications are Cooling Tower Life Extension (\$635K), Security Access Control (\$335K), Inverter Modification (\$285K), Measurement Uncertainty Power Uprate (\$185K), Loss of Phase Startup Transformer (\$170K), and Spray Pond Chemical Addition Upgrades (\$140K). The projects with the most significant dollars in Equipment Purchases or Replacements are Main Transformer Replacement (\$814K), Reactor Coolant Pump Motor Replacement (\$665K), Fixed In-Core Detectors (\$300K), Essential Spray Pond Backwash Pipe Replacement (\$250K), and Blow down Trench Replacement (\$150K).

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	72223410	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0		0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0		0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0		0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	14,351,903		110,833	241,169	389,762	423,565	650,168	557,512	1,703,767	284,682	251,818	18,965,179
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-824,198		0	0	0	0	0	0	0	0	0	-824,198
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0		0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0		0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0		0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0		0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0		0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0		0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	117,686		909	1,978	3,196	3,473	5,331	4,572	13,971	2,334	2,065	155,515
	928-AFUDC Debt Reg	257,122		14,205	14,751	15,663	16,631	18,130	19,812	22,873	24,792	19,188	423,167
	929-AFUDC - Equity Regular	325,854		20,283	21,062	22,364	23,746	25,886	28,287	32,658	35,398	27,397	562,935
	937-San Juan AR - Other	0		0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	14,228,367		146,230	278,960	430,986	467,415	699,514	610,183	1,773,269	347,206	300,468	19,282,597
	825-Clearings	-8,771,550		0	0	-72,599	0	0	0	-313,305	-2,505,292	-2,697,427	-14,360,174
	Clr Sum	-8,771,550		0	0	-72,599	0	0	0	-313,305	-2,505,292	-2,697,427	-14,360,174
	Proj Net	5,456,817		146,230	278,960	358,386	467,415	699,514	610,183	1,459,965	-2,158,086	-2,396,960	4,922,424

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	72223410	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	18,965,179	49,592	220,422	106,366	120,809	268,586	99,328	234,967	196,962	134,966	117,749	129,642	879,505	21,524,073
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-824,198	10,938	10,938	10,938	10,938	10,938	10,938	10,938	10,938	10,938	10,938	10,938	10,938	-692,942
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	155,515	496	1,897	962	1,080	2,292	904	2,016	1,705	1,196	1,055	1,153	7,302	177,573
	928-AFUDC Debt Reg	423,167	8,668	8,940	9,264	9,499	9,879	10,240	10,054	10,436	10,767	10,842	11,099	11,713	544,568
	929-AFUDC - Equity Regular	562,935	0	0	0	0	0	0	0	0	0	0	0	0	562,935
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	19,282,597	69,694	242,197	127,530	142,326	291,695	121,410	257,975	220,041	157,867	140,584	152,832	909,458	22,116,206
	825-Clearings	-14,360,174	0	0	0	0	0	-295,864	-20,578	0	-106,024	0	-179,875	-915,673	-15,878,188
	Clr Sum	-14,360,174	0	0	0	0	0	-295,864	-20,578	0	-106,024	0	-179,875	-915,673	-15,878,188
	Proj Net	4,922,424	69,694	242,197	127,530	142,326	291,695	-174,454	237,397	220,041	51,843	140,584	-27,043	-6,215	6,238,019

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	72223410	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	21,524,073	337,600	190,087		0	0	0	0	0	0	0	0	0	22,051,760
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-692,942	0	0	0	0	0	0	0	0	0	0	0	0	-692,942
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	177,573	2,768	1,559	0	0	0	0	0	0	0	0	0	0	181,900
	928-AFUDC Debt Reg	544,568	20,293	21,237	0	0	0	0	0	0	0	0	0	0	586,098
	929-AFUDC - Equity Regular	562,935	12,015	12,575	0	0	0	0	0	0	0	0	0	0	587,525
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	22,116,206	372,676	225,458	0	0	0	0	0	0	0	0	0	0	22,714,340
	825-Clearings	-15,878,188	0	0	0	0	0	0	0	0	0	0	0	0	-15,878,188
	Clr Sum	-15,878,188	0	0	0	0	0	0	0	0	0	0	0	0	-15,878,188
	Proj Net	6,238,019	372,676	225,458	0	0	0	0	0	0	0	0	0	0	6,836,153

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Project No: 72323410 PV3 capital structures all years

Company: 003
Location: 723 Palo Verde

Project Information

Construction Start Date 1/1/2015 Estimated Completion Date P/V

List Interim In-Service Dates

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Project Need Justification

Palo Verde completes capital projects annually to maintain the facility in compliance with Nuclear Regulatory Commission regulations and to provide the highest capacity factor that is economically justified. This capital program has been developed after extensive internal review by the Operating Agent, PVNGS, and reviewed by each of the participant owners. Failure to maintain plant equipment adds risks not carried by non-nuclear facilities in that plant performance and operating authorization is continually analyzed by the Nuclear Regulatory Commission under Federal guidelines.

Approximately 43% of the total Unit 3 projects are associated with Plant Modifications, 40% are associated with Equipment Purchase or Replacements, and 17% are associated with Fukushima projects.

The projects with the most significant dollars in Plant Modifications are Cooling Tower Life Extension (\$1.4M), Spray Pond Filtration System (\$460K), Plant Computer PC/COLSS (\$415K), Security Access Control (\$340K), Inverter Modification (\$285K), Spray Pond Margin Recovery (\$260K), Duct Banks & Cabling Replacement (\$200K), And Loss of Phase on Startup Transformer (\$180K).

The projects with the most significant dollars in Equipment Purchase or Replacements are High Pressure Turbine Diaphragms Replacement (\$910K), Main Transformer Replacement (\$825K), Reactor Coolant Pump Motor Replacement (\$1M), CW Pipeline Replacement (\$130K), Station Battery Replacement (\$120K), and Hypo Trench Replacement (\$120K).

The projects with the most significant dollars in Fukushima related projects are Fukushima Plant Mods (\$1M) and Temp Power Connections (\$420K).

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Project Alternatives

With a 10.2% ownership of PVNGS, PNM is one of seven parties to a Participation Agreement that runs through 2047. This contract provides the only alternative for review of capital projects recommended by the Operating Agent. Under the Participation Agreement (PA), the Owner-Participants have reviewed and approved the recommended 2015 capital improvement budget. The PA provides a resolution process for any Owner(s) who disagree with the NRC Licensee and plant Operator's (Arizona Public Service) recommendations for Capital and O&M expenditures. The PA further provides that the contesting Owner must continue to pay their share of the Operating Agent's invoice for disputed projects pending final resolution. Failure to do so places PNM in risk of default. This again, places Palo Verde in a unique situation in that other Owner-Participants review and approval decisions.

Sample alternative considerations for projects:

Cooling Tower Life Extension: Run to failure; Replace most deteriorated components pending replacement analysis (selected); replace Cooling Towers.

High Pressure Diaphragms: Repair individually as found during outages; Replace with latest design and materials as a whole (selected).

Technical Aspects

This involves multiple projects related to maintaining the nuclear reactor, steam generation, turbine generator, and related nuclear safety components. This project represents 31 capital improvement initiatives on Unit 3 out of ~200 for PV during 2015. Major initiatives include expenditures to replace the generator excitation system; life extension work on the cooling towers; Fukushima modifications and HP turbine diaphragm replacement.

Project Estimate Approach

Palo Verde uses AACE (Association for the Advancement of Cost Engineering) standards for cost estimations. These standards are recognized by the Department of Energy through DOE G 413.3-21. Palo Verde is active in a collaborative program with other Nuclear Plants that shares cost information as well as looking for opportunities to jointly enter into vendor contracts for cost optimization. Project scope and alternatives are initially identified by Palo Verde, with cost estimates developed consistent with industry practices.

PNM is the operating agent for San Juan Generating Station and follows a similar process to APS at Palo Verde. Individual project estimates are developed by the Palo Verde project managers group.

Approximately 43% of total Unit 3 are projects associated with Plant Modifications, 40% are associated with Equipment Purchase or Replacements, and 17% are associated with Fukushima projects.

The projects with the most significant dollars in Plant Modifications are Cooling Tower Life Extension (\$1.4M), Spray Pond Filtration System (\$460K), Plant Computer PC/COLSS (\$415K), Security Access Control (\$340K), Inverter Modification (\$285K), Spray Pond Margin Recovery (\$260K), Duct Banks & Cabling Replacement (\$200K), and Loss of Phase on Startup Transformer (\$180K).

The projects with the most significant dollars in Equipment Purchase or Replacements are HP Turbine Diaphragms Replacement (\$910K), Main Transformer

Replacement (\$825K), Reactor Cooling Pump Motor Replacement (\$1M), Circulating Water Pipeline Replacement (\$130K), Station Battery Replacement (\$120K), and Blow down Trench Replacement (\$120K). The projects with the most significant dollars in Fukushima related projects are Fukushima Plant Modifications (\$1M) and Temporary Power Connections (\$420K).

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	72323410	Year	2015									
	Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	13,343	0	0	0	0	0	0	0	0	0	13,343
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	12,654,839	1,143,175	401,921	117,320	255,877	235,436	220,606	194,269	184,518	213,772	15,621,733
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-501,800	0	0	0	0	0	0	0	0	0	-501,800
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	339,564	19,310	21,908	9,368	3,971	5,109	6,171	7,145	8,041	8,441	429,027
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	888	0	0	0	0	0	0	0	0	0	888
	914-Pension and Benefits Load	4,000	0	0	0	0	0	0	0	0	0	4,000
	915-Injuries and Damages Load	339	0	0	0	0	0	0	0	0	0	339
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	103,884	9,374	3,296	962	2,098	1,931	1,809	1,593	1,513	1,753	128,213
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	12,615,057	1,171,859	427,124	127,650	261,946	242,475	228,586	203,007	194,072	223,966	15,695,743
	825-Clearings	-8,921,320	-223,817	-3,056,549	-1,391,003	0	0	0	0	-120,262	-247,849	-13,960,800
	Clr Sum	-8,921,320	-223,817	-3,056,549	-1,391,003	0	0	0	0	-120,262	-247,849	-13,960,800
	Proj Net	3,693,738	948,042	-2,629,425	-1,263,353	261,946	242,475	228,586	203,007	73,810	-23,883	1,734,943

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	72323410	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	13,343	0	0	0	0	0	0	0	0	0	0	0	0	13,343
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	15,621,733	370,790	320,484	314,038	130,907	223,808	180,724	222,421	304,776	354,164	1,060,943	398,004	411,937	19,914,729
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-501,800	0	0	0	0	0	0	0	0	0	0	0	0	-501,800
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	429,027	9,091	10,059	11,852	12,474	14,292	14,620	16,039	17,297	18,297	22,191	21,860	20,593	617,692
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	888	0	0	0	0	0	0	0	0	0	0	0	0	888
	914-Pension and Benefits Load	4,000	0	0	0	0	0	0	0	0	0	0	0	0	4,000
	915-Injuries and Damages Load	339	0	0	0	0	0	0	0	0	0	0	0	0	339
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	128,213	3,040	2,628	2,575	1,073	1,835	1,482	1,824	2,499	2,904	8,700	3,264	3,378	163,415
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	15,695,743	382,921	333,171	328,465	144,454	239,935	196,826	240,284	324,572	375,365	1,091,834	423,128	435,908	20,212,606
	825-Clearings	-13,960,800	0	-78,433	0	-51,219	0	0	0	0	-20,022	-660,630	-843,442	-2,032,342	-17,646,888
	Clr Sum	-13,960,800	0	-78,433	0	-51,219	0	0	0	0	-20,022	-660,630	-843,442	-2,032,342	-17,646,888
	Proj Net	1,734,943	382,921	254,738	328,465	93,235	239,935	196,826	240,284	324,572	355,343	431,204	-420,314	-1,596,434	2,565,718

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project 72323410	Year	2017												
Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
110-Straight Time-General	13,343	0	0	0	0	0	0	0	0	0	0	0	0	13,343
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
391-Jt Proj Bills to PNM-Non-Labor	19,914,729	89,332	249,961	0	0	0	0	0	0	0	0	0	0	20,254,022
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
610-Expenses - General	-501,800	0	0	0	0	0	0	0	0	0	0	0	0	-501,800
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
426-Capitalized Interest	617,692	13,206	14,138	0	0	0	0	0	0	0	0	0	0	645,036
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
913-Payroll Taxes Load	888	0	0	0	0	0	0	0	0	0	0	0	0	888
914-Pension and Benefits Load	4,000	0	0	0	0	0	0	0	0	0	0	0	0	4,000
915-Injuries and Damages Load	339	0	0	0	0	0	0	0	0	0	0	0	0	339
918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
926-A and G Loads	163,415	733	2,050	0	0	0	0	0	0	0	0	0	0	166,198
928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost Sum	20,212,606	103,271	266,149	0	0	0	0	0	0	0	0	0	0	20,582,026
825-Clearings	-17,646,888	0	0	0	0	0	0	0	0	0	0	0	0	-17,646,888
Clr Sum	-17,646,888	0	0	0	0	0	0	0	0	0	0	0	0	-17,646,888
Proj Net	2,565,718	103,271	266,149	0	0	0	0	0	0	0	0	0	0	2,935,138

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Project No: 72423008 PV Common

Company: 003
Location: 724 Palo Verde

Project Information

Construction Start Date 1/1/2015 Estimated Completion Date

List Interim In-Service Dates

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Project Need Justification

Palo Verde completes capital projects annually to maintain the facility's compliance with Nuclear Regulatory Commission regulations and to provide the highest capacity factor that is economically justified. This capital program has been developed after extensive internal review by the Operating Agent, PVNGS, and has been reviewed by each of the participant owners. Failure to maintain plant equipment adds risks not carried by non-nuclear facilities in that plant performance and operating authorization is continually analyzed by the Nuclear Regulatory Commission under Federal guidelines. This is one project which is the Nuclear Administrative & Technical Manual (NATM) Replacement. This update was required by the NRC for continued operation of Palo Verde.

The original reactor operating license requires NATM under the Code of Federal Regulations, 10CFR Part 50. NATM includes over 1,300 technical procedures and over 480 administrative procedures. Each of these procedures forms the basis for other operational procedures and practices guiding the maintenance, operation and radiological safety of the plant. During the escalated enforcement action by the NRC in the late 2000's at Palo Verde, Palo Verde agreed to update these procedures. This requires a very rigorous process in itself, involving a cross section of subject matter experts analyzing key actions that the procedures address, validating the actions and then developing new or updated procedures.

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Project Alternatives

With a 10.2% ownership of PVNGS, PNM is one of seven parties to a Participation Agreement that runs through 2047. This contract provides the only alternative for review of capital projects recommended by the Operating Agent. Under the Participation Agreement (PA), the Owner-Participants have already reviewed and approved the recommended 2015 capital improvement budget. The PA provides a resolution process for any Owner(s) who disagree with the NRC Licensee and plant Operator's (Arizona Public Service) recommendations for Capital and O&M expenditures. The PA further provides that the

contesting Owner must continue to pay their share of the Operating Agent's invoice for disputed projects pending final resolution. Failure to do so places PNM in risk of default. This again, places Palo Verde in a unique situation in that other Owner-Participants review and approval decisions. All of the Project Numbers (724) are Common across the generating facility.

As noted in the project justification section, the successful execution of this project requires the work of multiple subject matter experts familiar with specific technical and administrative aspects of the Palo Verde engineering design basis from which the nuclear operating license is issued. This is the only path and alternative from which this project could be successfully completed.

Because this NATM replacement was a requirement by a Federal regulatory agency, there was no real alternative to this project. As noted in the project justification section, the successful execution of this project requires the work of multiple subject matter experts familiar with specific technical and administrative aspects of the Palo Verde engineering design basis from which the nuclear operating license is issued. This is the only path and alternative from which this project could be successfully completed.

NATM replacement projects of five other nuclear sites were evaluated. Lessons learned from the most successful of these projects were adapted including dedicating Palo Verde subject matter experts to verification and validation of the procedures. At a higher level, three Alternatives were considered: Status Quo- cycling through specific changes one at a time thorough augmentation of the existing procedure writing staff. Due to regulatory conditions at the time and an untenable duration for total review and replacement under this option, it was determined to not be viable. Systematic Upgrade- Unlike the status quo, this augmentation would be to a level allowing procedures to be systematically reviewed in small batches. It was determined that this approach would require an eight-year project duration with cost risks due to escalation over this time period. NATM Procedure Replacement (selected)- This approach provided a dedicated team as noted in the justification section, to replace the NATM over a three-year schedule. This approach was best in line with the existing regulatory actions of the time and also provided a short timeframe to help complete the project with a consistent product.

Technical Aspects

This funding project involves a key requirement for the maintenance and operation of the nuclear reactor, steam generation, turbine generator, and related nuclear safety components. All of the 724 series projects are common across the generating facility and represent 97 capital improvement initiatives out of the ~200 scheduled at PV during 2015. As noted in the project justification section, this particular project is the replacement of the procedures manual, NATM, required for continued operation of the nuclear reactors at Palo Verde.

Project Estimate Approach

Palo Verde uses AACE (Association for the Advancement of Cost Engineering) standards for cost estimations. These standards are recognized by the Department of Energy through DOE G 413.3-21. Palo Verde is active in a collaborative program with other Nuclear Plants that shares cost information as well as looking for opportunities to jointly enter into vendor contracts for cost optimization. Project scope and alternatives are initially identified by Palo Verde, with cost estimates developed consistent with industry practices. PNM is the operating agent for San Juan Generating Station and follows a similar process to APS at Palo Verde. Individual project estimates are developed by the Palo Verde project managers group. This is a very labor intensive process with approximately 21% of the project cost being in-house labor, 66% being contract labor and the balance of 13% being materials and other. While the dedicated resources varied over time, the initial team consisted of five in-house members and eleven contract members. Contract members were experienced procedure writers within the nuclear industry.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	72423008	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0		0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0		0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0		0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	10,607,495		21,463	21,463	21,463	21,463	21,463	21,463	21,463	21,463	21,463	10,800,662
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-1,917		0	0	0	0	0	0	0	0	0	-1,917
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0		0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0		0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0		0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0		0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0		0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0		0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	86,981		176	176	176	176	176	176	176	176	176	88,565
	928-AFUDC Debt Reg	431,255		12,498	12,632	12,767	12,902	13,039	13,176	13,314	13,453	13,593	548,629
	929-AFUDC - Equity Regular	438,152		17,845	18,036	18,228	18,422	18,617	18,813	19,010	19,209	19,409	605,740
	937-San Juan AR - Other	0		0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	11,561,966		51,981	52,307	52,634	52,963	53,295	53,628	53,963	54,301	54,641	12,041,679
	825-Clearings	-6,722,720		0	0	0	0	0	0	0	0	0	-6,722,720
	Clr Sum	-6,722,720		0	0	0	0	0	0	0	0	0	-6,722,720
	Proj Net	4,839,246		51,981	52,307	52,634	52,963	53,295	53,628	53,963	54,301	54,641	5,318,959

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	72423008	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	10,800,662	0	0	0	0	0	0	0	0	0	0	0	0	10,800,662
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-1,917	0	0	0	0	0	0	0	0	0	0	0	0	-1,917
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	88,565	0	0	0	0	0	0	0	0	0	0	0	0	88,565
	928-AFUDC Debt Reg	548,629	9,308	9,324	9,341	9,357	9,374	9,390	9,406	9,423	9,439	9,456	9,472	4,744	656,663
	929-AFUDC - Equity Regular	605,740	0	0	0	0	0	0	0	0	0	0	0	0	605,740
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	12,041,679	9,308	9,324	9,341	9,357	9,374	9,390	9,406	9,423	9,439	9,456	9,472	4,744	12,149,713
	825-Clearings	-6,722,720	0	0	0	0	0	0	0	0	0	0	-2,711,125	-2,715,869	-12,149,714
	Clr Sum	-6,722,720	0	0	0	0	0	0	0	0	0	0	-2,711,125	-2,715,869	-12,149,714
	Proj Net	5,318,959	9,308	9,324	9,341	9,357	9,374	9,390	9,406	9,423	9,439	9,456	-2,701,653	-2,711,125	-1

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	72423008	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	10,800,662	0	0	0	0	0	0	0	0	0	0	0	0	10,800,662
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-1,917	0	0	0	0	0	0	0	0	0	0	0	0	-1,917
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	88,565	0	0	0	0	0	0	0	0	0	0	0	0	88,565
	928-AFUDC Debt Reg	656,663	0	0	0	0	0	0	0	0	0	0	0	0	656,663
	929-AFUDC - Equity Regular	605,740	0	0	0	0	0	0	0	0	0	0	0	0	605,740
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	12,149,713	0	0	0	0	0	0	0	0	0	0	0	0	12,149,713
	825-Clearings	-12,149,714	0	0	0	0	0	0	0	0	0	0	0	0	-12,149,714
	Clr Sum	-12,149,714	0	0	0	0	0	0	0	0	0	0	0	0	-12,149,714
	Proj Net	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1

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Project No: 72423410 PV Common capital structures all years

Company: 003
Location: 724 Palo Verde

Project Information

Construction Start Date 1/1/2015 Estimated Completion Date N/A

List Interim In-Service Dates

0

Project Need Justification

Palo Verde completes capital projects annually to maintain the facility's compliance with Nuclear Regulatory Commission regulations and provide the highest capacity factor that is economically justified. This capital program has been developed after extensive internal review by the Operating Agent, PVNGS, and reviewed by each of the participant owners. Failure to maintain plant equipment adds risks not carried by non-nuclear facilities in that plant performance and operating authorization is continually analyzed by the Nuclear Regulatory Commission under Federal guidelines.

Approximately 37% of the total Common projects are associated with General Plant Improvement projects, 32% are associated with Fukushima, and 18% are associated with Computer related projects.

The projects with the most significant dollars in General Plant Improvements are an Infrastructure Project (\$3M), Site Integration Project (\$700K), Ingress/Egress Parking Lot Modifications (\$670K), Construction Power Replacement (\$580K), Drainage Reconfiguration (\$560K), and Internal Protected Area Delay Barriers (\$460K).

The projects with the most significant dollars in Fukushima projects are Emergency Response Equipment (\$2M), Mitigating Strategies (\$1.5M), and Seismic Hazards Validation Update (\$1.5M).

The projects with the most significant dollars in Computer related projects are PRA Model-Fire (\$630K), CAP Issue Tracking System (\$560K), Microsoft Licensing Fees (\$280K), PM Equipment Configuration Document (\$260K), Chemistry Software Replacement (\$160K), Start-Up Test Activity Reduction System (\$135K), and Cribmaster Software (\$110K).

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017 one with a projected in-service date by February 2017.

Project Alternatives

With a 10.2% ownership of PVNGS, PNM is one of seven parties to a Participation Agreement that runs through 2047. This contract provides the only alternative for review of capital projects recommended by the Operating Agent. Under the Participation Agreement (PA), the Owner-Participants have already reviewed and approved the recommended 2015 capital improvement budget. The PA provides a resolution process for any Owner(s) who disagree with the NRC Licensee and plant Operator's (Arizona Public Service) recommendations for Capital and O&M expenditures. The PA further provides that the contesting Owner must continue to pay their share of the Operating Agent's invoice for disputed projects pending final resolution. See additional discussion on Lease Agreement provisions for Unit 2 below. Failure to do so places PNM in risk of default. This again, places Palo Verde in a unique situation in that other Owner-Participants review and approval decisions.

Sample alternative considerations for projects:

Infrastructure Project- No integration of new Warehouse and Outage support facilities in Protected Area; Extend the Protected Area for resource optimization (selected).

Emergency Response Equipment- This was a Regulatory requirement consequent to the Fukushima Japan 2011 event and no alternatives were considered.

Technical Aspects

This funding project involves multiple projects relating to the maintenance of the nuclear reactor, steam generation, turbine generator, and related nuclear safety components. All of the 724 series projects are common across the generating facility and represent 97 capital improvement initiatives out of the ~200 scheduled at PV during 2015. Major initiatives include Fukushima emergency response equipment; emergency equipment storage building; NATM replacement; extension of the Protected Area zone; security access system upgrades and cyber security regulation initiatives.

Project Estimate Approach

Palo Verde uses AACE (Association for the Advancement of Cost Engineering) standards for cost estimations. These standards are recognized by the Department of Energy through DOE G 413.3-21. Palo Verde is active in a collaborative program with other Nuclear Plants that shares cost information as well as looking for opportunities to jointly enter into vendor contracts for cost optimization. Project scope and alternatives are initially identified by Palo Verde, with cost estimates developed consistent with industry practices.

Sample alternative considerations for projects:

Infrastructure Project- No integration of new Warehouse and Outage support facilities in Protected Area; Extend the Protected Area for resource optimization (selected).

Emergency Response Equipment- This was a Regulatory requirement consequent to the Fukushima Japan 2011 event and no alternatives were considered.

PNM is the operating agent for San Juan Generating Station and follows a similar process to APS at Palo Verde. Individual project estimates are developed by the Palo Verde project managers group.

Approximately 37% of the total Common projects are associated with General Plant Improvement projects, 32% are associated with Fukushima, and 18% are associated with Computer related projects.

The projects with the most significant dollars in General Plant Improvements are an Infrastructure Project (\$3M), Site Integration Project (\$700K), Ingress/Egress Parking Lot Modifications (\$670K), Construction Power Replacement (\$580K), Drainage Reconfiguration (\$560K), and Internal Protected Area Delay Barriers (\$460K).

The projects with the most significant dollars in Fukushima projects are Emergency Response Equipment (\$2M), Mitigating Strategies (\$1.5M), and Seismic Hazards Validation Update (\$1.5M).

The projects with the most significant dollars in Computer related projects are Probability Risk Assessment Model-Fire (\$630K), Corrective Action Plan Issue Tracking System (\$560K), Microsoft Licensing Fees (\$280K), Preventative Maintenance Equipment Configuration Document (\$260K), Chemistry Software Replacement (\$160K), Start-Up Test Activity Reduction System (\$135K), and Cribmaster Software (\$110K).

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	72423410	Year	2015										
Cost_Type	Bal 3/31/15			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
110-Straight Time-General	0			0	0	0	0	0	0	0	0	0	0
120-Overtime-General	0			0	0	0	0	0	0	0	0	0	0
350-Material Issues-Major	0			0	0	0	0	0	0	0	0	0	0
370-Outside Services	0			0	0	0	0	0	0	0	0	0	0
374-Outside Svcs Legal	0			0	0	0	0	0	0	0	0	0	0
377-Outside Services-Temp Labor	0			0	0	0	0	0	0	0	0	0	0
391-Jt Proj Bills to PNM-Non-Labor	21,451,822			870,927	815,028	950,335	782,036	652,710	561,629	612,698	599,656	334,772	27,631,613
530-Employee Expense	0			0	0	0	0	0	0	0	0	0	0
610-Expenses - General	-210,715			0	0	0	0	0	0	0	0	0	-210,715
805-Land and Land Rights	0			0	0	0	0	0	0	0	0	0	0
807-Non Refundable Contribution	0			0	0	0	0	0	0	0	0	0	0
829-Construction Adjustment	-958,800			0	0	0	0	0	0	0	0	0	-958,800
426-Capitalized Interest	0			0	0	0	0	0	0	0	0	0	0
908-Luna AR - Labor	0			0	0	0	0	0	0	0	0	0	0
909-Luna AR - Other	0			0	0	0	0	0	0	0	0	0	0
913-Payroll Taxes Load	0			0	0	0	0	0	0	0	0	0	0
914-Pension and Benefits Load	0			0	0	0	0	0	0	0	0	0	0
915-Injuries and Damages Load	0			0	0	0	0	0	0	0	0	0	0
918-San Juan AR-Labor	0			0	0	0	0	0	0	0	0	0	0
921-Stores / Purchasing Load	0			0	0	0	0	0	0	0	0	0	0
922-Minor Material Load	0			0	0	0	0	0	0	0	0	0	0
925-E and S Loads	0			0	0	0	0	0	0	0	0	0	0
926-A and G Loads	175,905			7,142	6,683	7,793	6,413	5,352	4,605	5,024	4,917	2,745	226,579
928-AFUDC Debt Reg	397,304			26,285	27,743	29,572	31,233	33,081	33,671	34,438	34,757	26,964	675,047
929-AFUDC - Equity Regular	503,349			37,530	39,612	42,224	44,595	47,234	48,075	49,171	49,626	38,499	899,915
937-San Juan AR - Other	0			0	0	0	0	0	0	0	0	0	0
961-Luna A&G PNMR D&V	0			0	0	0	0	0	0	0	0	0	0
Cost Sum	21,358,865			941,883	889,066	1,029,924	864,276	738,377	647,980	701,330	688,956	402,980	28,263,638
825-Clearings	-11,597,470			-347,857	-247,379	-300,676	-81,839	-463,651	-376,082	-570,905	-3,579,698	-4,332,723	-21,898,279
Clr Sum	-11,597,470			-347,857	-247,379	-300,676	-81,839	-463,651	-376,082	-570,905	-3,579,698	-4,332,723	-21,898,279
Proj Net	9,761,395			594,027	641,687	729,248	782,437	274,726	271,898	130,425	-2,890,742	-3,929,743	6,365,359

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	72423410	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	27,631,613	328,460	684,522	763,756	856,127	764,000	749,986	944,643	618,692	644,824	488,173	480,584	631,707	35,587,087
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-210,715	0	0	0	0	0	0	0	0	0	0	0	0	-210,715
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	-958,800	0	0	0	0	0	0	0	0	0	0	0	0	-958,800
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	226,579	2,693	5,613	6,263	7,020	6,265	6,150	7,746	5,073	5,288	4,003	3,941	5,180	291,814
	928-AFUDC Debt Reg	675,047	11,429	12,343	13,642	14,822	16,083	16,003	16,958	17,173	18,256	8,765	8,253	7,502	836,276
	929-AFUDC - Equity Regular	899,915	0	0	0	0	0	0	0	0	0	0	0	0	899,915
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	28,263,638	342,582	702,478	783,661	877,969	786,348	772,139	969,347	640,938	668,368	500,941	492,778	644,389	36,445,576
	825-Clearings	-21,898,279	0	0	-155,688	-111,455	-824,848	-324,311	-682,300	-35,498	-6,012,500	-789,530	-998,323	-1,651,399	-33,484,131
	Clr Sum	-21,898,279	0	0	-155,688	-111,455	-824,848	-324,311	-682,300	-35,498	-6,012,500	-789,530	-998,323	-1,651,399	-33,484,131
	Proj Net	6,365,359	342,582	702,478	627,973	766,514	-38,500	447,828	287,047	605,440	-5,344,132	-288,589	-505,545	-1,007,010	2,961,445

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	72423410	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	35,587,087	364,834	532,297	0	0	0	0	0	0	0	0	0	0	36,484,218
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	-210,715	0	0	0	0	0	0	0	0	0	0	0	0	-210,715
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	-958,800	0	0	0	0	0	0	0	0	0	0	0	0	-958,800
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	291,814	2,992	4,365	0	0	0	0	0	0	0	0	0	0	299,171
	928-AFUDC Debt Reg	836,276	9,960	7,788	0	0	0	0	0	0	0	0	0	0	854,024
	929-AFUDC - Equity Regular	899,915	5,898	4,611	0	0	0	0	0	0	0	0	0	0	910,424
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	36,445,576	383,684	549,061	0	0	0	0	0	0	0	0	0	0	37,378,321
	825-Clearings	-33,484,131	-1,154,070	0	0	0	0	0	0	0	0	0	0	0	-34,638,201
	Clr Sum	-33,484,131	-1,154,070	0	0	0	0	0	0	0	0	0	0	0	-34,638,201
	Proj Net	2,961,445	-770,386	549,061	0	0	0	0	0	0	0	0	0	0	2,740,120

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Project No: 72523410 PV Common Water Rec Facility capital structures all years

Company: 003
Location: 725 Palo Verde

Project Information

Construction Start Date 1/1/2015 Estimated Completion Date

List Interim In-Service Dates

0

Project Need Justification

Palo Verde completes capital projects annually to maintain the facility's compliance with Nuclear Regulatory Commission regulations and to provide the highest capacity factor that is economically justified. This capital program has been developed after extensive internal review by the Operating Agent, PVNGS, and has been reviewed by each of the participant owners. Failure to maintain plant equipment adds risks not carried by non-nuclear facilities in that plant performance and operating authorization is continually analyzed by the Nuclear Regulatory Commission under Federal guidelines.

The projects with the most significant dollars in Common Water Reclamation are a 7th Clarifier Train (\$3.4M), Sewage Treatment Plant (\$1.3M), Clarifiers Life Extension (\$720K), and Domestic Water Well (\$240K).

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Project Alternatives

With a 10.2% ownership of PVNGS, PNM is one of seven parties to a Participation Agreement that runs through 2047. This contract provides the only alternative for review of capital projects recommended by the Operating Agent. Under the Participation Agreement (PA), the Owner-Participants have already reviewed and approved the recommended 2015 capital improvement budget. The PA provides a resolution process for any Owner(s) who disagree with the NRC Licensee and plant Operator's (Arizona Public Service) recommendations for Capital and O&M expenditures. The PA further provides that the contesting Owner must continue to pay their share of the Operating Agent's invoice for disputed projects pending final resolution. See additional discussion on Lease Agreement provisions for Unit 2 below. Among many requirements are specific provisions that "PNM will cause the Operating Agent to maintain the said property and plant in such condition that it will have the capacity and functional ability to perform, on a continuing basis in normal commercial operation..." (DOCID-1-FL-8A). Failure to do so places PNM in risk of default. This again, places Palo Verde in a unique situation in that other Owner-Participants review and

Projects with clearings in 2015 and 2016, Budget data for 2015 – 2017

approval decisions.

Sample alternative considerations for projects:

7th Clarifier Train- Status Quo with piecemeal repair of existing trains; Add 7th Train for needed operating margin during outages and critical summer months (selected).

Sewage RX Plant- Replace components in-place due to end-of-life for system; Replace Plant and relocate to Wastewater Facility for integrated operation (selected).

Technical Aspects

This involves multiple projects relating to the maintenance of the nuclear reactor, steam generation, turbine generator, and related nuclear safety components. All of the 724 series projects are common across the generating facility and represent 97 capital improvement initiatives out of the ~200 that are scheduled at PV during 2015. Major initiatives include Fukushima emergency response equipment; emergency equipment storage building; NATM replacement; extension of the Protected Area zone; security access system upgrades and cyber security regulation initiatives.

Project Estimate Approach

Palo Verde uses AACE (Association for the Advancement of Cost Engineering) standards for cost estimations. These standards are recognized by the Department of Energy through DOE G 413.3-21.

Palo Verde is active in a collaborative program with other Nuclear Plants that shares cost information as well as looking for opportunities to jointly enter into vendor contracts for cost optimization.

The projects with the most significant dollars in Common Water Reclamation are a 7th Clarifier Train (\$3.4M), Sewage Treatment Plant (\$1.3M), Clarifier Life Extension (\$720K), and a Domestic Water Well (\$240K).

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	72523410	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0		0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0		0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0		0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	9,538,148		498,637	229,643	189,536	346,249	178,112	178,582	314,323	190,332	244,678	11,908,240
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0		0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0		0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0		0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0		0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0		0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0		0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0		0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	78,213		4,089	1,883	1,554	2,839	1,461	1,464	2,577	1,561	2,006	97,648
	928-AFUDC Debt Reg	143,639		7,782	8,624	8,235	8,983	9,720	10,244	10,949	11,673	12,311	232,159
	929-AFUDC - Equity Regular	170,392		11,111	12,314	11,758	12,826	13,879	14,627	15,633	16,666	17,577	296,784
	937-San Juan AR - Other	0		0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	9,930,391		521,619	252,464	211,084	370,897	203,171	204,918	343,482	220,232	276,573	12,534,830
	825-Clearings	-7,161,730		-59,225	-383,187	0	0	0	0	0	0	-463,485	-8,067,627
	Clr Sum	-7,161,730		-59,225	-383,187	0	0	0	0	0	0	-463,485	-8,067,627
	Proj Net	2,768,661		462,394	-130,723	211,084	370,897	203,171	204,918	343,482	220,232	-186,912	4,467,203

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	72523410	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	11,908,240	397,922	254,388	342,802	412,529	209,426	203,674	222,217	200,838	230,336	322,157	174,726	374,809	15,254,064
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	97,648	3,263	2,086	2,811	3,383	1,717	1,670	1,822	1,647	1,889	2,642	1,433	3,073	125,084
	928-AFUDC Debt Reg	232,159	8,169	8,340	8,882	9,490	9,552	7,514	1,768	1,598	1,981	2,224	2,667	3,156	297,500
	929-AFUDC - Equity Regular	296,784	0	0	0	0	0	0	0	0	0	0	0	0	296,784
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	12,534,830	409,354	264,814	354,495	425,402	220,695	212,858	225,807	204,083	234,206	327,023	178,826	381,038	15,973,431
	825-Clearings	-8,067,627	-238,951	0	-42,055	-287,653	-1,382,179	-3,505,569	-312,533	0	-141,247	0	0	-979,847	-14,957,661
	Clr Sum	-8,067,627	-238,951	0	-42,055	-287,653	-1,382,179	-3,505,569	-312,533	0	-141,247	0	0	-979,847	-14,957,661
	Proj Net	4,467,203	170,403	264,814	312,440	137,749	-1,161,484	-3,292,711	-86,726	204,083	92,959	327,023	178,826	-598,809	1,015,770

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	72523410	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	15,254,064	445,822	228,847	0	0	0	0	0	0	0	0	0	0	15,928,733
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	125,084	3,656	1,877	0	0	0	0	0	0	0	0	0	0	130,617
	928-AFUDC Debt Reg	297,500	3,928	2,812	0	0	0	0	0	0	0	0	0	0	304,240
	929-AFUDC - Equity Regular	296,784	2,326	1,665	0	0	0	0	0	0	0	0	0	0	300,775
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	15,973,431	455,732	235,201	0	0	0	0	0	0	0	0	0	0	16,664,364
	825-Clearings	-14,957,661	-698,962	0	0	0	0	0	0	0	0	0	0	0	-15,656,623
	Clr Sum	-14,957,661	-698,962	0	0	0	0	0	0	0	0	0	0	0	-15,656,623
	Proj Net	1,015,770	-243,230	235,201	0	0	0	0	0	0	0	0	0	0	1,007,741

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Reeves

Project No: 71316125 Reeves U3 Upper Economizer Repl

Company: 003
Location: 713 Reeves

Project Information

Construction Start Date 1/1/2016 Estimated Completion Date 6/30/2015

List Interim In-Service Dates

0

Project Need Justification

The economizer is the first bundle of tubes in a natural gas-fired boiler water/steam cycle. The purpose of the economizer is to improve boiler efficiency by using exhaust gases from the boiler to preheat the feed water before it flows into the boiler.

The upper economizer tubes were overheated due to damaged boiler refractory. Boiler refractory is the insulated medium that protects the tubes from direct flame contact. Refractory has been repaired and several tubes have been replaced recently, but many of the upper economizer tubes have been fatigued so the economizer tubes needs to be replaced in order to reduce outages and improve unit reliability.

Project Alternatives

Option 1: Replace only small sections of tubing. This approach is not a viable long term solution and is not cost effective. Many of the other tubes have been fatigued and extensive replacement is required.

Option 2: Replace all upper economizer tubes. This is the most cost effective and long term solution. This is the recommended option.

Technical Aspects

Overheating of economizer tubes can result from a defective refractory, no economizer flow, and over-firing during startup. All these issues are being addressed by the installation of a temperature pyrometer and implementation of revised operating procedures related to over-firing conditions during startup. The economizer tube bundles will be purchased from the vendor. A contractor will remove the damage tube bundles and install the new tube bundles during the unit 3 2015 spring outage.

Project Estimate Approach

Major cost components of the project include contract services which include engineering, mobilization/de-mobilization, contract labor, construction equipment, inspections, gross receipts tax, commissioning and contingency. Contract services attributed to 43% of the total costs. In addition, other costs include materials, AFDUC, loads and internal project management (PNM labor). Material attributed to 46% of the costs, loads attributed to 10% of the costs and internal project management attributed to 1% of the costs.

Internal project management was estimated based on the time it would take the project manager to initiate the work order, initiate request for bids, Projects with clearings in 2015 and 2016, Budget data for 2015 – 2017 evaluate bids, oversee the project work effort, and to track and reports project costs. A quote was provided by the vendor for the tube bundles six months before the project began in order to receive the material on schedule. There was only a sole bidder for the tube bundles because the tube bundles had to be provided by the boiler manufacture.

Early in 2015, fixed price bids were solicited from several contractors. The scope of the work included removal of existing tube bundles and installation of the new tube bundles. Three bidders provide bids for the project. The bid was awarded to the successful contractor for implementation of the project. The criteria used to award the bid included cost, schedule, experience, and compliance with scope of work. For this project, cost was the main determining factor for the award.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	71316125	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0		0	3,320	2,500	0	0	0	0	0	0	5,820
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	265,924		0	0	0	0	0	0	0	0	0	265,924
	370-Outside Services	0		0	110,000	309,000	0	0	0	0	0	0	419,000
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0		0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0		0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0		0	224	169	0	0	0	0	0	0	392
	914-Pension and Benefits Load	0		0	1,011	762	0	0	0	0	0	0	1,773
	915-Injuries and Damages Load	0		0	163	123	0	0	0	0	0	0	286
	918-San Juan AR-Labor	0		0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	1,782		0	0	0	0	0	0	0	0	0	1,782
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0		0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	22,125		0	9,428	25,917	0	0	0	0	0	0	57,470
	928-AFUDC Debt Reg	2,660		0	0	0	0	0	0	0	0	0	2,660
	929-AFUDC - Equity Regular	3,858		0	0	0	0	0	0	0	0	0	3,858
	937-San Juan AR - Other	0		0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	296,350		0	124,147	338,470	0	0	0	0	0	0	758,966
	825-Clearings	0		0	0	0	-758,966	0	0	0	0	0	-758,966
	Clr Sum	0		0	0	0	-758,966	0	0	0	0	0	-758,966
	Proj Net	296,350		0	124,147	338,470	-758,966	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	71316125	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	5,820	0	0	0	0	0	0	0	0	0	0	0	0	5,820
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	265,924	0	0	0	0	0	0	0	0	0	0	0	0	265,924
	370-Outside Services	419,000	0	0	0	0	0	0	0	0	0	0	0	0	419,000
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	392	0	0	0	0	0	0	0	0	0	0	0	0	392
	914-Pension and Benefits Load	1,773	0	0	0	0	0	0	0	0	0	0	0	0	1,773
	915-Injuries and Damages Load	286	0	0	0	0	0	0	0	0	0	0	0	0	286
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	1,782	0	0	0	0	0	0	0	0	0	0	0	0	1,782
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	57,470	0	0	0	0	0	0	0	0	0	0	0	0	57,470
	928-AFUDC Debt Reg	2,660	0	0	0	0	0	0	0	0	0	0	0	0	2,660
	929-AFUDC - Equity Regular	3,858	0	0	0	0	0	0	0	0	0	0	0	0	3,858
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	758,966	0	0	0	0	0	0	0	0	0	0	0	0	758,966
	825-Clearings	-758,966	0	0	0	0	0	0	0	0	0	0	0	0	-758,966
	Clr Sum	-758,966	0	0	0	0	0	0	0	0	0	0	0	0	-758,966
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	71316125	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	5,820	0	0	0	0	0	0	0	0	0	0	0	0	5,820
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	265,924	0	0	0	0	0	0	0	0	0	0	0	0	265,924
	370-Outside Services	419,000	0	0	0	0	0	0	0	0	0	0	0	0	419,000
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	392	0	0	0	0	0	0	0	0	0	0	0	0	392
	914-Pension and Benefits Load	1,773	0	0	0	0	0	0	0	0	0	0	0	0	1,773
	915-Injuries and Damages Load	286	0	0	0	0	0	0	0	0	0	0	0	0	286
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	1,782	0	0	0	0	0	0	0	0	0	0	0	0	1,782
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	57,470	0	0	0	0	0	0	0	0	0	0	0	0	57,470
	928-AFUDC Debt Reg	2,660	0	0	0	0	0	0	0	0	0	0	0	0	2,660
	929-AFUDC - Equity Regular	3,858	0	0	0	0	0	0	0	0	0	0	0	0	3,858
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	758,966	0	0	0	0	0	0	0	0	0	0	0	0	758,966
	825-Clearings	-758,966	0	0	0	0	0	0	0	0	0	0	0	0	-758,966
	Clr Sum	-758,966	0	0	0	0	0	0	0	0	0	0	0	0	-758,966
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Company: 003
Location: 713 Reeves

Construction Start Date	1/1/2015	Estimated Completion Date	7/31/2015
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The purpose of this Project is to upgrade the Unit 1, 2 and 3 cooling towers ("Project") located at PNM's Reeves gas fired generating plant located in Albuquerque New Mexico. Initially the Project was estimated at approximately \$800,000. This work effort included resolution of Reeves U1 cooling tower structural issues, cooling tower distribution basin deck breakage repairs, hoist and stairway anchoring and fan deck upgrades for five cells. Structural issues are a safety issue so these upgrades are necessary. Unit 1 and Unit 2 cooling tower's fill replacement. Fill replacement is necessary for the units to maintain unit full load capability and minimize water consumption. In addition, distribution valve replacement are required for unit 3.

Over time, the structure of the cooling tower degrades. To minimize structural failures, various components of the cooling tower need to be replaced. In addition, the heat transferring components, the splash fill material, degrade over time and reach its end of its useful life. If the cooling tower splash fill material is not replaced, the output of the generating facility will be greatly reduced. The structural upgrades and splash fill material replacement occurred during the Reeves Units planned spring outages.

During the course of construction, a discovery was made in Unit 2 that expanded the scope of the project increasing the estimate to approximately \$1,253,200 and therefore meeting the requirement to file a 440 for a generation project. PNM examined the Unit 2 cooling tower water distribution headers which run the length of the tower below the top deck and are supported by approximately 160 pressure-treated 2X8 beams. PNM discovered that nearly all of the 2X8 support beams were damaged and needed to be replaced. This structural condition was not discovered during the initial scoping of the Project because these horizontal structural members were hidden by the Unit cooling tower splash fill which was removed for replacement in the initial Project.

The examination has necessitated the replacing/upgrading of horizontal joist support systems and replacing splash fill for six top half cells in the Unit 2 cooling tower. Because the splash fill located in the top half cells has to be removed for the replacement of the horizontal joint support systems, it is cost effective to complete during construction of the Project. Additionally, once the new splash fill is installed it cannot be removed and reused.

PNM deemed replacing/upgrading of horizontal joist support systems, in the Project, necessary for two reasons, safety and cost.

(1) Safety - If the beams were to fail prior to upgrade the cooling tower could be seriously damaged due to the heavy header piping falling into the cooling tower basin. Anyone in the area could be harmed if they were present at the time of the failure.

Projects with clearings in 2015 and 2016, Budget data for 2015 – 2017

(2) Cost – an additional \$100,000 would be required to complete the replacement of the beams at a later date because the new splash fill used during the initial Project would have to be removed and replaced; as it cannot be reused and becomes damaged during removal.

This Project eliminates the potentially high reliability risk from the loss of generation at Reeves generating facility. Reeves Units 1, 2, and 3 would not be able to meet full load dispatch demand if the splash fill material components of the cooling tower were not replaced.

Project Alternatives

The do nothing option is not a feasible approach as structural problems create safety issues that need to be addressed.

Another option that was considered was to delay the cooling tower repair for a few more years. Still, there are pending structural issues that affect safety, therefore, this option was not considered viable.

Another alternative was to replace the support systems at a separate time, but because the splash fill located in the top half cells has to be removed for the replacement of the horizontal joint support systems, it is cost effective to complete during construction of the Project. Additionally, once the new splash fill is installed it cannot be removed and reused.

The Project is the only alternative consistent with the goal of maintaining generation reliability

Technical Aspects

The cooling tower project will be implemented during unit outages in 2015.

Structural issues at Reeve's Unit 2 cooling tower included addressing cooling tower distribution basin deck breakage, hoist and stairway anchoring and fan deck replacement required for five of the 6 cells. The structural issues identified deemed the upgrades necessary. In order to return the cooling tower to a condition that meets the Cooling Tower Institute Standards, major structural and performance components needed to be replaced. Additionally, Reeve's Unit 1 and Unit 2 cooling tower's needed splash fill material replacement which is a process similar to replacing cooling pads in a swamp cooler, but of a much larger magnitude. Splash fill material replacement for Units 1 and 2 is necessary to maintain full cooling capability and minimize water consumption.

Additionally the initial Project included distribution valve replacement for Unit 3. Distribution valve replacement was necessary because balancing water flows among the cells and isolating cells for maintenance could no longer be performed.

Project Estimate Approach

The scope of work was sent out for bid to various contractors. Contractors will perform all engineering, provide all material, equipment and labor for the project. Three bidders were requested to bid on the project. Two bidders declined so the bid was awarded to the remaining sole bidder. The selected bidder met all requirements of the project scope, experience and PNM's budget requirements for the project.

The estimate for the initial Project was under the \$1,000,000 threshold required by Rule 440 reporting for generation projects; however, since the scope of the initial Project expanded after the field inspection, as described above, the cost of the work performed for this Project has now been estimated to be approximately \$1,253,200. Major cost components of the project include contract services which include engineering, mobilization/de-mobilization, materials, contract labor, construction equipment, inspections, gross receipts tax, commissioning and contingency. Contract services attributed to 88% of

the total costs. In addition, other costs include AFDUC, loads and internal project management (PNM labor). Loads attributed to 11% of the costs and internal project management attributed to 1% of the costs.

Internal project management was estimated based on the time it would take the project manager to initiate the work order, initiate request for bids, evaluate bids, oversee the project work effort, and to track and reports project costs.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	71317725	Year	2015										
Cost_Type	Bal 3/31/15			Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
110-Straight Time-General	0			1,500	2,500	3,636	0	0	0	0	0	0	7,636
120-Overtime-General	0			0	0	0	0	0	0	0	0	0	0
350-Material Issues-Major	0			0	0	0	0	0	0	0	0	0	0
370-Outside Services	0			45,849	308,566	369,826	0	0	0	0	0	0	724,241
374-Outside Svcs Legal	0			0	0	0	0	0	0	0	0	0	0
377-Outside Services-Temp Labor	0			0	0	0	0	0	0	0	0	0	0
391-Jt Proj Bills to PNM-Non-Labor	0			0	0	0	0	0	0	0	0	0	0
530-Employee Expense	0			0	0	0	0	0	0	0	0	0	0
610-Expenses - General	0			0	0	0	0	0	0	0	0	0	0
805-Land and Land Rights	0			0	0	0	0	0	0	0	0	0	0
807-Non Refundable Contribution	0			0	0	0	0	0	0	0	0	0	0
829-Construction Adjustment	0			0	0	0	0	0	0	0	0	0	0
426-Capitalized Interest	0			0	0	0	0	0	0	0	0	0	0
908-Luna AR - Labor	0			0	0	0	0	0	0	0	0	0	0
909-Luna AR - Other	0			0	0	0	0	0	0	0	0	0	0
913-Payroll Taxes Load	0			101	169	245	0	0	0	0	0	0	515
914-Pension and Benefits Load	0			457	762	1,108	0	0	0	0	0	0	2,326
915-Injuries and Damages Load	0			74	123	179	0	0	0	0	0	0	376
918-San Juan AR-Labor	0			0	0	0	0	0	0	0	0	0	0
921-Stores / Purchasing Load	0			0	0	0	0	0	0	0	0	0	0
922-Minor Material Load	0			0	0	0	0	0	0	0	0	0	0
925-E and S Loads	0			0	0	0	0	0	0	0	0	0	0
926-A and G Loads	0			3,939	25,881	31,072	0	0	0	0	0	0	60,892
928-AFUDC Debt Reg	0			67	570	1,532	2,065	0	0	0	0	0	4,233
929-AFUDC - Equity Regular	0			96	813	2,187	2,948	0	0	0	0	0	6,044
937-San Juan AR - Other	0			0	0	0	0	0	0	0	0	0	0
961-Luna A&G PNMR D&V	0			0	0	0	0	0	0	0	0	0	0
Cost Sum	0			52,083	339,383	409,785	5,013	0	0	0	0	0	806,263
825-Clearings	0			0	0	0	-806,263	0	0	0	0	0	-806,263
Clr Sum	0			0	0	0	-806,263	0	0	0	0	0	-806,263
Proj Net	0			52,083	339,383	409,785	-801,250	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	71317725	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	7,636	0	0	0	0	0	0	0	0	0	0	0	0	7,636
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	724,241	0	0	0	0	0	0	0	0	0	0	0	0	724,241
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	515	0	0	0	0	0	0	0	0	0	0	0	0	515
	914-Pension and Benefits Load	2,326	0	0	0	0	0	0	0	0	0	0	0	0	2,326
	915-Injuries and Damages Load	376	0	0	0	0	0	0	0	0	0	0	0	0	376
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	60,892	0	0	0	0	0	0	0	0	0	0	0	0	60,892
	928-AFUDC Debt Reg	4,233	0	0	0	0	0	0	0	0	0	0	0	0	4,233
	929-AFUDC - Equity Regular	6,044	0	0	0	0	0	0	0	0	0	0	0	0	6,044
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	806,263	0	0	0	0	0	0	0	0	0	0	0	0	806,263
	825-Clearings	-806,263	0	0	0	0	0	0	0	0	0	0	0	0	-806,263
	Clr Sum	-806,263	0	0	0	0	0	0	0	0	0	0	0	0	-806,263
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	71317725	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	7,636	0	0	0	0	0	0	0	0	0	0	0	0	7,636
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	724,241	0	0	0	0	0	0	0	0	0	0	0	0	724,241
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	515	0	0	0	0	0	0	0	0	0	0	0	0	515
	914-Pension and Benefits Load	2,326	0	0	0	0	0	0	0	0	0	0	0	0	2,326
	915-Injuries and Damages Load	376	0	0	0	0	0	0	0	0	0	0	0	0	376
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	60,892	0	0	0	0	0	0	0	0	0	0	0	0	60,892
	928-AFUDC Debt Reg	4,233	0	0	0	0	0	0	0	0	0	0	0	0	4,233
	929-AFUDC - Equity Regular	6,044	0	0	0	0	0	0	0	0	0	0	0	0	6,044
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	806,263	0	0	0	0	0	0	0	0	0	0	0	0	806,263
	825-Clearings	-806,263	0	0	0	0	0	0	0	0	0	0	0	0	-806,263
	Clr Sum	-806,263	0	0	0	0	0	0	0	0	0	0	0	0	-806,263
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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San Juan

Project No: 76116015 Unit 1 Boiler Modifications

Company: 003

Location: 761 San Juan

Project Information

Construction Start Date 2/13/2015

Estimated Completion Date 6/30/2105

List Interim In-Service Dates

Project Need Justification

A utility boiler is a non-redundant critical asset in a coal fired power plant. Major maintenance activities on this asset meet the criteria for capitalization.

These major maintenance activities occur during periodic planned unit outages with durations between 20 and 50 days. San Juan Unit 1 has a planned outage of 50 days in 2015. The scope of work is driven by performance issues that have resulted in unscheduled and forced outages, specifically slag build up and pluggage occurring between the bottom of the secondary superheater and the upper slope, overheating of superheater tubes and tube wall erosion in the horizontal reheater. Slagging, pluggage and erosion are all causes of boiler tube failures which result in unscheduled unit outages. The scope of work includes shortening the length and changing the geometry of 594 superheater tubes, installing 318 linear feet of erosion barrier across the top of the horizontal reheater, installing tube shields and spacer bars and removing and capping 48 division wall tubes.

Project Alternatives

As these are major maintenance activities designed to return the asset from worn conditions back to original design specifications, there are no technical alternatives. These activities are mostly remove and replace in-kind with some design improvements to address known problems within the boiler. Operational alternatives would be to reduce unit output and/or accept a lower unit reliability but these are not viable alternatives. Considerations for in-kind replacements versus upgrades are evaluated by subject matter experts on a case-by-case basis.

Technical Aspects

The scope of work includes modifications to the superheat pendent tube sections to alleviate slagging and pluggage issues and modifications to the horizontal reheat section to alleviate erosion issues. Slagging, pluggage and erosion are all causes of boiler tube failures which result in unscheduled unit outages. Tube geometry will be modified to create greater spacing between tubes to mitigate pluggage. Shields and sacrificial bars will be installed to mitigate erosion. In detail the scope is 1) removing bottom loops from front and rear bundles of 594 secondary superheater tubes installing newly designed loops that are 2 feet shorter than the old ones; 2) installing erosion barriers across the top and bottom of the 3 reheat tube bundles (total of 318 linear feet) and across 11 feet of each of the bundle side walls (total 66 linear feet); 3) installing 888, 2.25" x 3'6" tube shields, on the first two rows of tubes; 4) inserting 882 U-tube spacer bars; and 5) removing tubes 1 – 8 on each of 6 division walls and installing caps where the tubes were removed.

Project Estimate Approach

This project is complete so the costs being reported are actual costs and not estimated costs. The scope of work for this project is labor intensive. The cost estimate is based on 75% labor, 15% materials, 5% engineering and project management, 4% general and administrative loads and 1% AFUDC. Proposals received from Babcock & Wilcox Construction Company were the basis of the labor estimate. The timing associated with this rate case filing

establishes a data date before the project was placed in service but the work was executed under fixed price contracts and therefore the forecast at completion, represented by the value to be cleared, reflects the final actual cost of the project.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76116015	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0		0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	237,260		0	0	0	0	0	0	0	0	0	237,260
	370-Outside Services	3,179,156		234,000	0	-677,000	0	0	0	0	0	0	2,736,156
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	8,262		0	0	0	0	0	0	0	0	0	8,262
	391-Jt Proj Bills to PNM-Non-Labor	0		0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0		0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0		0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0		0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0		0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0		0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	3,336		0	0	0	0	0	0	0	0	0	3,336
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	36,644		0	0	0	0	0	0	0	0	0	36,644
	926-A and G Loads	81,165		5,546	0	-16,045	0	0	0	0	0	0	70,666
	928-AFUDC Debt Reg	2,305		4,738	0	-446	0	0	0	0	0	0	6,596
	929-AFUDC - Equity Regular	3,538		6,765	0	-637	0	0	0	0	0	0	9,666
	937-San Juan AR - Other	-1,772,911		-119,773	0	346,522	0	0	0	0	0	0	-1,546,162
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,778,755		131,276	0	-347,606	0	0	0	0	0	0	1,562,424
	825-Clearings	0		-1,910,030	0	347,606	0	0	0	0	0	0	-1,562,424
	Clr Sum	0		-1,910,030	0	347,606	0	0	0	0	0	0	-1,562,424
	Proj Net	1,778,755		-1,778,755	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76116015	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	237,260	0	0	0	0	0	0	0	0	0	0	0	0	237,260
	370-Outside Services	2,736,156	0	0	0	0	0	0	0	0	0	0	0	0	2,736,156
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	8,262	0	0	0	0	0	0	0	0	0	0	0	0	8,262
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	3,336	0	0	0	0	0	0	0	0	0	0	0	0	3,336
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	36,644	0	0	0	0	0	0	0	0	0	0	0	0	36,644
	926-A and G Loads	70,666	0	0	0	0	0	0	0	0	0	0	0	0	70,666
	928-AFUDC Debt Reg	6,596	0	0	0	0	0	0	0	0	0	0	0	0	6,596
	929-AFUDC - Equity Regular	9,666	0	0	0	0	0	0	0	0	0	0	0	0	9,666
	937-San Juan AR - Other	-1,546,162	0	0	0	0	0	0	0	0	0	0	0	0	-1,546,162
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,562,424	0	0	0	0	0	0	0	0	0	0	0	0	1,562,424
	825-Clearings	-1,562,424	0	0	0	0	0	0	0	0	0	0	0	0	-1,562,424
	Clr Sum	-1,562,424	0	0	0	0	0	0	0	0	0	0	0	0	-1,562,424
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76116015	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	237,260	0	0	0	0	0	0	0	0	0	0	0	0	237,260
	370-Outside Services	2,736,156	0	0	0	0	0	0	0	0	0	0	0	0	2,736,156
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	8,262	0	0	0	0	0	0	0	0	0	0	0	0	8,262
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	3,336	0	0	0	0	0	0	0	0	0	0	0	0	3,336
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	36,644	0	0	0	0	0	0	0	0	0	0	0	0	36,644
	926-A and G Loads	70,666	0	0	0	0	0	0	0	0	0	0	0	0	70,666
	928-AFUDC Debt Reg	6,596	0	0	0	0	0	0	0	0	0	0	0	0	6,596
	929-AFUDC - Equity Regular	9,666	0	0	0	0	0	0	0	0	0	0	0	0	9,666
	937-San Juan AR - Other	-1,546,162	0	0	0	0	0	0	0	0	0	0	0	0	-1,546,162
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,562,424	0	0	0	0	0	0	0	0	0	0	0	0	1,562,424
	825-Clearings	-1,562,424	0	0	0	0	0	0	0	0	0	0	0	0	-1,562,424
	Clr Sum	-1,562,424	0	0	0	0	0	0	0	0	0	0	0	0	-1,562,424
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 – 2017

The project is extremely labor intensive because there are 750 individual reheat tubes attached to the header. Each tube must be cut, prepped and welded.

This maintenance activity is required no more than once for the life of the boiler. As the header contains steam at 1005 degrees F and 650 pounds per square inch (PSI), a catastrophic failure or even a significant leak poses a serious risk to any employees who might be in the vicinity as well as a threat to other assets and structures. The header is fabricated from chromium/molybdenum steel alloys designed to perform under the specified operating conditions.

Project Estimate Approach

This project is complete so the costs being reported are actual costs and not estimated costs. This scope of work was not competitively bid as a competitive environment could not be established. This scope of work is coincidental to the Selective Non-Catalytic Reduction (SNCR) installation and Balanced Draft Conversion on San Juan Unit 1. The SNCR/Balanced Draft work was competitively bid. The successful contractor on the SNCR/Balanced Draft project also required a specialty crane to execute that scope of work. The SNCR/Balanced Draft work and Reheat Header Replacement work required a crane to sit in the same location. It is impossible to have two cranes at the same location and at the same time, therefore the only contractor who could be competitive was the SNCR/Balanced Draft contractor.

Crane mobilization is roughly \$500,000 and rental is roughly \$100,000 per week. The contractors estimated labor hours were evaluated against estimated from other boilermaker contractors as well as PNM experience with making similar welds. The fabricated header costs approximately \$1 million.

The project is roughly 20% material, 10% construction equipment, 5% engineering and project management, 5% quality control, 55% labor, 4% general and administrative overheads and 1% AFUDC. The timing associated with this rate case filing establishes a data date before the project was placed in service but the work was executed under fixed price contracts and therefore the forecast at completion, represented by the value to be cleared, reflects the final actual cost of the project.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76116112	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	972		0	0	0	0	0	0	0	0	0	972
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	801,592		0	0	0	0	0	0	0	0	0	801,592
	370-Outside Services	3,885,660		25,500	0	0	0	0	0	0	0	0	3,911,160
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0		0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	816		0	0	0	0	0	0	0	0	0	816
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	66		0	0	0	0	0	0	0	0	0	66
	914-Pension and Benefits Load	277		0	0	0	0	0	0	0	0	0	277
	915-Injuries and Damages Load	24		0	0	0	0	0	0	0	0	0	24
	918-San Juan AR-Labor	-669		0	0	0	0	0	0	0	0	0	-669
	921-Stores / Purchasing Load	31,432		0	0	0	0	0	0	0	0	0	31,432
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	41,994		0	0	0	0	0	0	0	0	0	41,994
	926-A and G Loads	111,254		604	0	0	0	0	0	0	0	0	111,858
	928-AFUDC Debt Reg	30,615		6,484	0	0	0	0	0	0	0	0	37,100
	929-AFUDC - Equity Regular	42,265		9,259	0	0	0	0	0	0	0	0	51,523
	937-San Juan AR - Other	-2,436,374		-13,052	0	0	0	0	0	0	0	0	-2,449,427
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	2,509,923		28,795	0	0	0	0	0	0	0	0	2,538,719
	825-Clearings	0		-2,538,719	0	0	0	0	0	0	0	0	-2,538,719
	Clr Sum	0		-2,538,719	0	0	0	0	0	0	0	0	-2,538,719
	Proj Net	2,509,923		-2,509,923	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76116112	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	972	0	0	0	0	0	0	0	0	0	0	0	0	972
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	801,592	0	0	0	0	0	0	0	0	0	0	0	0	801,592
	370-Outside Services	3,911,160	0	0	0	0	0	0	0	0	0	0	0	0	3,911,160
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	816	0	0	0	0	0	0	0	0	0	0	0	0	816
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	66	0	0	0	0	0	0	0	0	0	0	0	0	66
	914-Pension and Benefits Load	277	0	0	0	0	0	0	0	0	0	0	0	0	277
	915-Injuries and Damages Load	24	0	0	0	0	0	0	0	0	0	0	0	0	24
	918-San Juan AR-Labor	-669	0	0	0	0	0	0	0	0	0	0	0	0	-669
	921-Stores / Purchasing Load	31,432	0	0	0	0	0	0	0	0	0	0	0	0	31,432
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	41,994	0	0	0	0	0	0	0	0	0	0	0	0	41,994
	926-A and G Loads	111,858	0	0	0	0	0	0	0	0	0	0	0	0	111,858
	928-AFUDC Debt Reg	37,100	0	0	0	0	0	0	0	0	0	0	0	0	37,100
	929-AFUDC - Equity Regular	51,523	0	0	0	0	0	0	0	0	0	0	0	0	51,523
	937-San Juan AR - Other	-2,449,427	0	0	0	0	0	0	0	0	0	0	0	0	-2,449,427
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	2,538,719	0	0	0	0	0	0	0	0	0	0	0	0	2,538,719
	825-Clearings	-2,538,719	0	0	0	0	0	0	0	0	0	0	0	0	-2,538,719
	Clr Sum	-2,538,719	0	0	0	0	0	0	0	0	0	0	0	0	-2,538,719
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76116112	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	972	0	0	0	0	0	0	0	0	0	0	0	0	972
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	801,592	0	0	0	0	0	0	0	0	0	0	0	0	801,592
	370-Outside Services	3,911,160	0	0	0	0	0	0	0	0	0	0	0	0	3,911,160
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	816	0	0	0	0	0	0	0	0	0	0	0	0	816
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	66	0	0	0	0	0	0	0	0	0	0	0	0	66
	914-Pension and Benefits Load	277	0	0	0	0	0	0	0	0	0	0	0	0	277
	915-Injuries and Damages Load	24	0	0	0	0	0	0	0	0	0	0	0	0	24
	918-San Juan AR-Labor	-669	0	0	0	0	0	0	0	0	0	0	0	0	-669
	921-Stores / Purchasing Load	31,432	0	0	0	0	0	0	0	0	0	0	0	0	31,432
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	41,994	0	0	0	0	0	0	0	0	0	0	0	0	41,994
	926-A and G Loads	111,858	0	0	0	0	0	0	0	0	0	0	0	0	111,858
	928-AFUDC Debt Reg	37,100	0	0	0	0	0	0	0	0	0	0	0	0	37,100
	929-AFUDC - Equity Regular	51,523	0	0	0	0	0	0	0	0	0	0	0	0	51,523
	937-San Juan AR - Other	-2,449,427	0	0	0	0	0	0	0	0	0	0	0	0	-2,449,427
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	2,538,719	0	0	0	0	0	0	0	0	0	0	0	0	2,538,719
	825-Clearings	-2,538,719	0	0	0	0	0	0	0	0	0	0	0	0	-2,538,719
	Clr Sum	-2,538,719	0	0	0	0	0	0	0	0	0	0	0	0	-2,538,719
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Project No: 76117618 Unit 1 cooling tower MCC's Replacement

Company: 003
Location: 761 San Juan

Project Information

Construction Start Date 1/1/2015 Estimated Completion Date 6/30/2015

List Interim In-Service Dates

0

Project Need Justification

This is one of several projects (see also 76116414, 76116914, 76117715, 76416212, 76117618, 76717913) relating to upgrading/maintaining the circulating water systems that are comprised primarily of condensers and cooling towers. This system condenses steam leaving the turbine and exhausts the waste heat to the atmosphere. Major maintenance on these components can only occur during extended outage periods. Both San Juan Unit 1 and Unit 4 have 50 day planned outages in 2015. The duration of the outages allows maintenance activities which meet the criteria for capitalization to occur. Eddy current testing on both Unit 1 and Unit 4 condensers indicate accelerated instances of tube thinning. This is confirmed by the increasing rate of lost production due to condenser tube leaks. The Unit 1 cooling tower has significant deterioration in the fan deck and hot water basin. The deterioration is severe to the point it creates an unsafe condition for employees. Electrical equipment and the manholes through which cables are routed are also in need or replacement or reconstruction. The electrical loads currently exceed the short circuit rating of the circuit breakers. The auxiliary cooling tower has damaged and plugged drift eliminators which require replacement for the tower to function properly. The electrical equipment for San Juan Unit 1 cooling tower is obsolete. The metal building which houses the electrical equipment has deteriorated to the point of being structurally deficient. The topography of the area where the metal building is located has changed since the original installation due to other construction activities. Storm water and other surface drainage now runs to and pools around the electrical equipment building. Electrical loads exceed the short circuit rating of the circuit breakers and the capacity rating of the load center transformers. This obsolete equipment is out of compliance with current codes in regards to minimizing arc flash incident energy. The scope of this project is the complete replacement of all electrical equipment and the building in which it is housed. Concurrently, variable frequency drives will be installed on each of the cooling tower fan motors to improve the energy efficiency of their operation. The scope of work includes replacement of the 4KV/480V transformers and double-ended motor control centers, replacing the existing metal building with an elevated Power Distribution Center (PDC) enclosure and correcting site grading to channel surface drainage away from the electrical equipment.

Project Alternatives

Operating electrical equipment in excess of its short circuit rating is an unacceptable condition and must be remedied. The alternative to replacing the switchgear is to redesign circuit loading to reduce the available short circuit current. While this is technically feasible it would not solve the other issues of a deteriorated enclosure building, poor site drainage, obsolescence and code compliance relative to arc flash incident energy. The optimal solution, technically and financially, is to replace the existing equipment.

Technical Aspects

The obsolete electrical equipment will be replaced with current industry standard equipment appropriately sized for the electrical loads. Specifically the scope of work includes the following equipment and work items:

1. Demolish the existing 4KV480V transformer and transformer pads.
2. Demolish the existing 480V motor control centers.
3. Demolish the existing electrical equipment building, ventilation system and foundations.
4. Grade the cleared site to design contours.
5. Construction piers for the Power Distribution Center
6. Furnish and install two (2) 4KV/480V power transformers.
7. Furnish and install two (2) double-ended 480V motor control centers.
8. Furnish and install eleven (11) variable frequency drive, harmonic filters and controls.
9. Furnish and install one (1) Power Distribution Center complete with pre-wired electrical equipment and controls, HVAC systems, lighting and grounding.
10. Install grounding grid for all electrical equipment and structures.
11. Furnish and install access stairs for elevated Power Distribution Center.

Project Estimate Approach

This project is complete so the costs being reported are actual costs and not estimated costs. The project is roughly 30% equipment and construction materials, 23% engineering and project management, 40% construction labor, 5% general and administrative overheads and 2% AFUDC. The timing associated with this rate case filing establishes a data date before the project was placed in service but the work was executed under fixed price contracts and therefore the forecast at completion, represented by the value to be cleared, reflects the final actual cost of the project.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76117618	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	31,224		0	0	0	0	0	0	0	0	0	31,224
	120-Overtime-General	1,849		0	0	0	0	0	0	0	0	0	1,849
	350-Material Issues-Major	360,260		0	0	0	0	0	0	0	0	0	360,260
	370-Outside Services	1,829,706		248,554	0	0	0	0	0	0	0	0	2,078,260
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
391-Jt Proj Bills to PNM-Non-Labor		0		0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0		0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
807-Non Refundable Contribution		0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	2,271		0	0	0	0	0	0	0	0	0	2,271
	914-Pension and Benefits Load	9,361		0	0	0	0	0	0	0	0	0	9,361
	915-Injuries and Damages Load	1,217		0	0	0	0	0	0	0	0	0	1,217
	918-San Juan AR-Labor	-22,961		0	0	0	0	0	0	0	0	0	-22,961
	921-Stores / Purchasing Load	14,630		0	0	0	0	0	0	0	0	0	14,630
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	26,913		0	0	0	0	0	0	0	0	0	26,913
	926-A and G Loads	52,765		5,891	0	0	0	0	0	0	0	0	58,656
	928-AFUDC Debt Reg	19,565		3,285	0	0	0	0	0	0	0	0	22,850
	929-AFUDC - Equity Regular	26,668		4,691	0	0	0	0	0	0	0	0	31,358
	937-San Juan AR - Other	-1,142,137		-127,222	0	0	0	0	0	0	0	0	-1,269,360
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,211,331		135,199	0	0	0	0	0	0	0	0	1,346,529
	825-Clearings	0		-1,346,529	0	0	0	0	0	0	0	0	-1,346,529
	Clr Sum	0		-1,346,529	0	0	0	0	0	0	0	0	-1,346,529
Proj Net		1,211,331		-1,211,331	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project 76117618	Year	2016													
Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
110-Straight Time-General	31,224	0	0	0	0	0	0	0	0	0	0	0	0	31,224	
120-Overtime-General	1,849	0	0	0	0	0	0	0	0	0	0	0	0	1,849	
350-Material Issues-Major	360,260	0	0	0	0	0	0	0	0	0	0	0	0	360,260	
370-Outside Services	2,078,260	0	0	0	0	0	0	0	0	0	0	0	0	2,078,260	
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
913-Payroll Taxes Load	2,271	0	0	0	0	0	0	0	0	0	0	0	0	2,271	
914-Pension and Benefits Load	9,361	0	0	0	0	0	0	0	0	0	0	0	0	9,361	
915-Injuries and Damages Load	1,217	0	0	0	0	0	0	0	0	0	0	0	0	1,217	
918-San Juan AR-Labor	-22,961	0	0	0	0	0	0	0	0	0	0	0	0	-22,961	
921-Stores / Purchasing Load	14,630	0	0	0	0	0	0	0	0	0	0	0	0	14,630	
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
925-E and S Loads	26,913	0	0	0	0	0	0	0	0	0	0	0	0	26,913	
926-A and G Loads	58,656	0	0	0	0	0	0	0	0	0	0	0	0	58,656	
928-AFUDC Debt Reg	22,850	0	0	0	0	0	0	0	0	0	0	0	0	22,850	
929-AFUDC - Equity Regular	31,358	0	0	0	0	0	0	0	0	0	0	0	0	31,358	
937-San Juan AR - Other	-1,269,360	0	0	0	0	0	0	0	0	0	0	0	0	-1,269,360	
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cost Sum	1,346,529	0	0	0	0	0	0	0	0	0	0	0	0	1,346,529	
825-Clearings	-1,346,529	0	0	0	0	0	0	0	0	0	0	0	0	-1,346,529	
Clr Sum	-1,346,529	0	0	0	0	0	0	0	0	0	0	0	0	-1,346,529	
Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76117618	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	31,224	0	0	0	0	0	0	0	0	0	0	0	0	31,224
	120-Overtime-General	1,849	0	0	0	0	0	0	0	0	0	0	0	0	1,849
	350-Material Issues-Major	360,260	0	0	0	0	0	0	0	0	0	0	0	0	360,260
	370-Outside Services	2,078,260	0	0	0	0	0	0	0	0	0	0	0	0	2,078,260
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	2,271	0	0	0	0	0	0	0	0	0	0	0	0	2,271
	914-Pension and Benefits Load	9,361	0	0	0	0	0	0	0	0	0	0	0	0	9,361
	915-Injuries and Damages Load	1,217	0	0	0	0	0	0	0	0	0	0	0	0	1,217
	918-San Juan AR-Labor	-22,961	0	0	0	0	0	0	0	0	0	0	0	0	-22,961
	921-Stores / Purchasing Load	14,630	0	0	0	0	0	0	0	0	0	0	0	0	14,630
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	26,913	0	0	0	0	0	0	0	0	0	0	0	0	26,913
	926-A and G Loads	58,656	0	0	0	0	0	0	0	0	0	0	0	0	58,656
	928-AFUDC Debt Reg	22,850	0	0	0	0	0	0	0	0	0	0	0	0	22,850
	929-AFUDC - Equity Regular	31,358	0	0	0	0	0	0	0	0	0	0	0	0	31,358
	937-San Juan AR - Other	-1,269,360	0	0	0	0	0	0	0	0	0	0	0	0	-1,269,360
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,346,529	0	0	0	0	0	0	0	0	0	0	0	0	1,346,529
	825-Clearings	-1,346,529	0	0	0	0	0	0	0	0	0	0	0	0	-1,346,529
	Clr Sum	-1,346,529	0	0	0	0	0	0	0	0	0	0	0	0	-1,346,529
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Project No: 76117915 Unit 1 Economizer Ash Removal

Company: 003
Location: 761 San Juan

Project Information

Construction Start Date

Estimated Completion Date

06/30/15

List Interim In-Service Dates

The Unit 1 project will be in service by April 15, 2015.

Project Need Justification

The boiler economizer ash removal systems were taken out of service on all San Juan boilers several years ago due to perpetual maintenance issues resulting from the technology which was industry standard at the time. Without this equipment, large volumes of ash accumulate in the areas where the equipment was previously located and in the ductwork downstream of this location. The weight of the accumulated ash has resulted in duct and duct hanger failures. Installation of new ash removal equipment is needed to prevent future duct and duct hanger failures. The industry standard for this application is now a dry flite or “drag chain” conveyor. This technology replaces the pneumatic conveying technology that was the former industry standard. This equipment is attached to the economizer ash hoppers. The scope of work includes a three way isolation valves at each hopper, discharge piping at each hopper to a common dry flite conveyor, a single ash transfer tank, ash crusher, wet sluicing transport piping, miscellaneous piping and valves, miscellaneous small motors and other electrical equipment, electrical cables, control cabinet, Programmable Logic Control (PLC) and control wiring. This control system will be integrated with other ash removal controls.

An identical project is scheduled and budgeted for San Juan Unit 4. This equipment is not being installed on San Juan Units 2 and 3 solely because Unit 2 and Unit 3 are shutting down on December 31, 2017.

Project Alternatives

If the condition of ash accumulation below the economizer section of the boiler is to be address, the dry flite conveying technology is the current industry standard for this application. No other conveying technology is considered viable. A business alternative would be to “do nothing” and take the risk of reduced reliability resulting from duct or duct hanger failures. These types of failures have been experienced at San Juan. Due to the short remaining life of Units 2 and 3, the “do nothing” business decision has been made. In order to meet the future reliability targets for Units 1 and 4, it is prudent to minimize the reliability risk associated with ash accumulation driven duct failures by installing this technology. The project provides the added benefit of reducing the O&M cost associated with removing the accumulated ash required to permit maintenance of the economizer section to occur. Removal of accumulated ash is currently a significant cost in preparing for outage maintenance.

Technical Aspects

Ash that collects at this location is heavy large particle ash compared to the light fine particles that collect in both the electrostatic precipitator and the fabric filter. At the time of original construction of the boiler, the industry standard technology for removing ash below the economizer section of the boiler was a pneumatic conveying system. Pneumatic conveying works well for light fine particle ash but was much less effective with heavy large particle

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

ash. Pneumatic economizer ash removal systems were prone to pluggage throughout the system. Once plugged, ash backed up in the hopper and accumulated in the ductwork, producing virtually the same condition as having no ash removal system at all. The dry flite conveyor technology that has

Project Estimate Approach

This project is complete so the costs being reported are actual costs and not estimated costs. Bids were received for the dry flite conveyors from the two leading providers (Allen Sherman Hoff and United Conveyor). A total project estimate was prepared by Burns & McDonnell. The project is roughly 25% process equipment, 15% engineering and project management, 5% quality control, 54% construction labor and commodities, 6% general and administrative overheads and 1% AFUDC. The timing associated with this rate case filing establishes a data date before the project was placed in service but the work was executed under fixed price contracts and therefore the forecast at completion, represented by the value to be cleared, reflects the final actual cost of the project.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76117915	Year	2015										
	Cost_Type	Bal 3/31/15		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	79,928		0	0	0	0	0	0	0	0	0	79,928
	120-Overtime-General	0		0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	497,499		0	0	0	0	0	0	0	0	0	497,499
	370-Outside Services	559,564		644,000	195,000	168,000	0	0	0	0	0	0	1,566,564
	374-Outside Svcs Legal	0		0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0		0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0		0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0		0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0		0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0		0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0		0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0		0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0		0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0		0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0		0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	5,387		0	0	0	0	0	0	0	0	0	5,387
	914-Pension and Benefits Load	22,795		0	0	0	0	0	0	0	0	0	22,795
	915-Injuries and Damages Load	1,942		0	0	0	0	0	0	0	0	0	1,942
	918-San Juan AR-Labor	-55,027		0	0	0	0	0	0	0	0	0	-55,027
	921-Stores / Purchasing Load	4,556		0	0	0	0	0	0	0	0	0	4,556
	922-Minor Material Load	0		0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	17,171		0	0	0	0	0	0	0	0	0	17,171
	926-A and G Loads	26,947		15,263	4,622	3,982	0	0	0	0	0	0	50,813
	928-AFUDC Debt Reg	6,441		2,032	129	369	0	0	0	0	0	0	8,971
	929-AFUDC - Equity Regular	9,406		2,901	184	527	0	0	0	0	0	0	13,017
	937-San Juan AR - Other	-552,868		-329,631	-99,811	-85,991	0	0	0	0	0	0	-1,068,301
	961-Luna A&G PNMR D&V	0		0	0	0	0	0	0	0	0	0	0
	Cost Sum	623,742		334,565	100,123	86,886	0	0	0	0	0	0	1,145,315
	825-Clearings	0		-958,306	0	-187,009	0	0	0	0	0	0	-1,145,315
	Clr Sum	0		-958,306	0	-187,009	0	0	0	0	0	0	-1,145,315
	Proj Net	623,742		-623,742	100,123	-100,123	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76117915	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	79,928	0	0	0	0	0	0	0	0	0	0	0	0	79,928
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	497,499	0	0	0	0	0	0	0	0	0	0	0	0	497,499
	370-Outside Services	1,566,564	0	0	0	0	0	0	0	0	0	0	0	0	1,566,564
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	5,387	0	0	0	0	0	0	0	0	0	0	0	0	5,387
	914-Pension and Benefits Load	22,795	0	0	0	0	0	0	0	0	0	0	0	0	22,795
	915-Injuries and Damages Load	1,942	0	0	0	0	0	0	0	0	0	0	0	0	1,942
	918-San Juan AR-Labor	-55,027	0	0	0	0	0	0	0	0	0	0	0	0	-55,027
	921-Stores / Purchasing Load	4,556	0	0	0	0	0	0	0	0	0	0	0	0	4,556
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	17,171	0	0	0	0	0	0	0	0	0	0	0	0	17,171
	926-A and G Loads	50,813	0	0	0	0	0	0	0	0	0	0	0	0	50,813
	928-AFUDC Debt Reg	8,971	0	0	0	0	0	0	0	0	0	0	0	0	8,971
	929-AFUDC - Equity Regular	13,017	0	0	0	0	0	0	0	0	0	0	0	0	13,017
	937-San Juan AR - Other	-1,068,301	0	0	0	0	0	0	0	0	0	0	0	0	-1,068,301
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,145,315	0	0	0	0	0	0	0	0	0	0	0	0	1,145,315
	825-Clearings	-1,145,315	0	0	0	0	0	0	0	0	0	0	0	0	-1,145,315
	Clr Sum	-1,145,315	0	0	0	0	0	0	0	0	0	0	0	0	-1,145,315
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76117915	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	79,928	0	0	0	0	0	0	0	0	0	0	0	0	79,928
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	497,499	0	0	0	0	0	0	0	0	0	0	0	0	497,499
	370-Outside Services	1,566,564	0	0	0	0	0	0	0	0	0	0	0	0	1,566,564
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	5,387	0	0	0	0	0	0	0	0	0	0	0	0	5,387
	914-Pension and Benefits Load	22,795	0	0	0	0	0	0	0	0	0	0	0	0	22,795
	915-Injuries and Damages Load	1,942	0	0	0	0	0	0	0	0	0	0	0	0	1,942
	918-San Juan AR-Labor	-55,027	0	0	0	0	0	0	0	0	0	0	0	0	-55,027
	921-Stores / Purchasing Load	4,556	0	0	0	0	0	0	0	0	0	0	0	0	4,556
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	17,171	0	0	0	0	0	0	0	0	0	0	0	0	17,171
	926-A and G Loads	50,813	0	0	0	0	0	0	0	0	0	0	0	0	50,813
	928-AFUDC Debt Reg	8,971	0	0	0	0	0	0	0	0	0	0	0	0	8,971
	929-AFUDC - Equity Regular	13,017	0	0	0	0	0	0	0	0	0	0	0	0	13,017
	937-San Juan AR - Other	-1,068,301	0	0	0	0	0	0	0	0	0	0	0	0	-1,068,301
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,145,315	0	0	0	0	0	0	0	0	0	0	0	0	1,145,315
	825-Clearings	-1,145,315	0	0	0	0	0	0	0	0	0	0	0	0	-1,145,315
	Clr Sum	-1,145,315	0	0	0	0	0	0	0	0	0	0	0	0	-1,145,315
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Project No: 76121912 SJ U1 SNCR

Company: 003
Location: 761 San Juan

Project Information

Construction Start Date 11/1/2012 Estimated Completion Date 12/31/2016

List Interim In-Service Dates

0

Project Need Justification

The San Juan SNCR Project encompasses both the installation of SNCR on San Juan Units 1 and 4 as required by the Revised State Implementation Plan (SIP) as well as the conversion of these units to a balanced draft configuration. They are denoted on the capital list as projects "SJ U1 SNCR", SJ U4 SNCR", and "SJGS SNCR costs PNM Share". This project is for the Unit 1 portion.

As these units have aged, and after experiencing numerous start-up cycles, the flue gas pressure boundary has deteriorated. This deterioration allows ash-laden flue gases and coal particles to escape from the boiler, flues, ducts, and other air or flue gas path components. Ash and coal that accumulates outside of the boiler pressure boundary pose various maintenance, health, and safety issues.

The environmental regulators are aware of these issues and the resulting potential compliance issues related to PM emissions under the NAAQS. For this reason, the NMED, as part of an amendment to San Juan's NSR permit, required that San Juan convert to a balanced draft configuration. Balanced draft will help ensure demonstrated compliance with the NAAQS and result in a significant reduction in fugitive emissions which provides a myriad of operational benefits, including a cleaner workplace. This project will substantially reduce the escape of ash, coal particles, and ammonia.

Project Alternatives

Effective September 21, 2011 the United States Environmental Protection Agency ("EPA") adopted the Federal Implementation Plan ("FIP") establishing selective catalytic control ("SCR") technology as Best Available Retrofit Technology ("BART") for San Juan Generating Station ("SJGS") to meet the requirements of EPA's Regional Haze Rule under the Clean Air Act ("CAA"). Among other things, the FIP established a limit on nitrogen oxide ("NOx") emissions of no more than 0.05 lb/MMBtu (pounds per million British Thermal Units) at each unit of SJGS. EPA determined that the NOx emissions limits can only be achieved by installing SCR. EPA required SJGS to meet this limit by September 21, 2016. 76 Fed. Reg. 52388-52389 (Aug. 22, 2011). New Mexico submitted a revised "RSIP" identifying a less expensive technology, Selective Non-Catalytic Reduction ("SNCR"), as BART for NOx emissions. 76 Fed. Reg. at 52394.

Among other things, the RSIP sets out a process and timeline whereby BART compliance would be achieved by the retirement of SJGS Units 2 and 3 by December 31, 2017, with SNCR to be installed on Units 1 and 4 by January 31, 2016.

The RSIP was submitted to EPA on October 7, 2013. The EPA determined that the RSIP was complete on December 17, 2013, and granted final approval on October 9, 2014.

The RSIP for SJGS addresses the Regional Haze rule and provides significant additional environmental benefits at a lower cost than the FIP including reductions

associated with:

- Nitrogen oxides, sulfur dioxide, particulate matter, carbon dioxide and mercury- approximately 50%
- Water Consumption- about 53%
- Coal Ash Generation- about 48%
- Truck Traffic (hauling coal ash back to the mine) and Raw Material Deliveries and
- Visible Plumes (reduces stacks from four to two)

In addition, the RSIP plays a significant role in the state of New Mexico's compliance with the recently finalized Clean Power Plan under the Clean Air Act Section 111(d).

In a September 2011 Title V permit application, after consultation with the NMED concerning San Juan's fugitive emissions, PNM made the commitment to convert to balanced draft when the boilers were upgraded to meet the Regional Haze Federal or State Implementation Plan. In a subsequent NSR permit modification issued by NMED in August 2012 that allowed the installation of either SCR under the federal plan or SNCR under that state plan, NMED required San Juan to install balanced draft.

Technical Aspects

SNCR is a post-combustion control technology for NOx emissions. In very general terms, SNCR uses an amine-based reagent (urea in San Juan's case) which is injected into the boiler and reacts with NOx to reduce it to molecular nitrogen (N2) and water. In order to inject the reagent, the boiler walls must be penetrated and lances must be installed for the delivery of the reagent into the heated boiler. PNM Witness J. Edward Cichanowicz provided a more detailed description of the installation of SNCR at San Juan and the processes that reduce the emission of NOx in NMPRC Case 13-00390-UT. Like many power plants of the same vintage, the San Juan boilers were originally designed with only forced draft ("F.D.") fans. These boilers and associated flues and ducts operate at positive pressure. As these units have aged, and after experiencing numerous start-up cycles, the flue gas pressure boundary has typically deteriorated. This deterioration allows ash-laden flue gases and coal particles to escape from the boiler, flues, ducts and other air or flue gas path components. Ash and coal that accumulates outside of the boiler pressure boundary pose various maintenance, health and safety issues. The environmental regulators are aware of these issues and the resulting potential compliance issues related to PM emissions under the NAAQS. For this reason, the NMED, as part of an amendment to San Juan's NSR permit, required that San Juan convert to a balanced draft configuration. Balanced draft is achieved by installing induced draft ("I.D.") fans to balance the pressure in the boilers, flues and ducts. This greatly lessens the escape of ash, coal particles and ammonia caused by the positive pressures created by the F.D. fans. Due to changes in operational pressures, other modifications, such as boiler stiffening, are also often necessary to convert to a balanced draft configuration. As stated above, balanced draft will help ensure demonstrated compliance with the NAAQS and result in a significant reduction in fugitive emissions which provides myriad operational benefits, including a cleaner workplace. On a related note, the chemical reaction associated with the operation of SNCR results in the generation of ammonia. The balanced draft conversion will mitigate workplace exposure to ammonia fumes caused by the SNCR process. In addition, PNM and the other San Juan owners are taking a long-range view for San Juan. Balanced draft is an essential element in any state-of-the-art coal power plant emission controls.

Project Estimate Approach

This project is substantially complete so the costs being reported are actual costs and not estimated costs. Original estimates were provided by Sargent & Lundy LLC, a leading engineering firm in the utility industry which has executed numerous projects of this nature. These costs are also reasonable as confirmed by Mr. J. Edward Cichanowicz in NMPRC Case No. 13-00390-UT. The timing associated with this rate case filing establishes a data date before the project was placed in service, however, the work was executed under fixed price contracts. Therefore, the forecast at completion, represented by the value to be cleared, reflects the final actual cost of the project.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76121912	Year	2015											
Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total			
110-Straight Time-General	185,010	0	0	0	0	0	0	0	0	0	185,010			
120-Overtime-General	24,376	0	0	0	0	0	0	0	0	0	24,376			
350-Material Issues-Major	1,076,961	0	0	0	0	0	0	0	0	0	1,076,961			
370-Outside Services	36,276,449	3,027,000	2,229,000	9,580,000	5,527,000	3,304,000	562,000	561,000	559,000	228,000	61,853,449			
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0			
377-Outside Services-Temp Labor	339,297	0	0	0	0	0	0	0	0	0	339,297			
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0			
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0			
610-Expenses - General	1,040,736	0	0	0	0	0	0	0	0	0	1,040,736			
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0			
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0			
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0			
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0			
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0			
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0			
913-Payroll Taxes Load	14,092	0	0	0	0	0	0	0	0	0	14,092			
914-Pension and Benefits Load	53,823	0	0	0	0	0	0	0	0	0	53,823			
915-Injuries and Damages Load	6,782	0	0	0	0	0	0	0	0	0	6,782			
918-San Juan AR-Labor	-142,042	0	0	0	0	0	0	0	0	0	-142,042			
921-Stores / Purchasing Load	253,340	0	0	0	0	0	0	0	0	0	253,340			
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0			
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0			
926-A and G Loads	389,428	30,270	22,290	95,800	55,270	33,040	5,620	5,610	5,590	2,280	645,198			
928-AFUDC Debt Reg	194,934	54,298	9,941	17,687	27,627	33,546	36,271	37,229	38,190	38,941	488,665			
929-AFUDC - Equity Regular	282,058	77,527	14,194	25,254	39,446	47,897	51,789	53,156	54,529	55,601	701,452			
937-San Juan AR - Other	-19,688,106	-1,528,635	-1,125,645	-4,837,900	-2,791,135	-1,668,520	-283,810	-283,305	-282,295	-115,140	-32,604,491			
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0			
Cost Sum	20,307,139	1,660,460	1,149,781	4,880,841	2,858,209	1,749,963	371,870	373,690	375,014	209,683	33,936,649			
825-Clearings	0	-18,672,459	0	0	0	0	0	0	0	0	-18,672,459			
Clr Sum	0	-18,672,459	0	0	0	0	0	0	0	0	-18,672,459			
Proj Net	20,307,139	-17,011,999	1,149,781	4,880,841	2,858,209	1,749,963	371,870	373,690	375,014	209,683	15,264,190			

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76121912	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	185,010	0	0	0	0	0	0	0	0	0	0	0	0	185,010
	120-Overtime-General	24,376	0	0	0	0	0	0	0	0	0	0	0	0	24,376
	350-Material Issues-Major	1,076,961	0	0	0	0	0	0	0	0	0	0	0	0	1,076,961
	370-Outside Services	61,853,449	80,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	62,824,449
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	339,297	0	0	0	0	0	0	0	0	0	0	0	0	339,297
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	1,040,736	0	0	0	0	0	0	0	0	0	0	0	0	1,040,736
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	14,092	0	0	0	0	0	0	0	0	0	0	0	0	14,092
	914-Pension and Benefits Load	53,823	0	0	0	0	0	0	0	0	0	0	0	0	53,823
	915-Injuries and Damages Load	6,782	0	0	0	0	0	0	0	0	0	0	0	0	6,782
	918-San Juan AR-Labor	-142,042	0	0	0	0	0	0	0	0	0	0	0	0	-142,042
	921-Stores / Purchasing Load	253,340	0	0	0	0	0	0	0	0	0	0	0	0	253,340
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	645,198	800	810	810	810	810	810	810	810	810	810	810	810	654,908
	928-AFUDC Debt Reg	488,665	26,748	36	36	36	36	36	36	36	36	36	36	36	515,809
	929-AFUDC - Equity Regular	701,452	0	0	0	0	0	0	0	0	0	0	0	0	701,452
	937-San Juan AR - Other	-32,604,491	-40,400	-40,905	-40,905	-40,905	-40,905	-40,905	-40,905	-40,905	-40,905	-40,905	-40,905	-40,905	-33,094,846
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	33,936,649	67,148	40,941	40,941	40,941	40,941	40,941	40,941	40,941	40,941	40,941	40,941	40,941	34,454,148
	825-Clearings	-18,672,459	-15,331,337	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-34,454,147
	Clr Sum	-18,672,459	-15,331,337	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-40,941	-34,454,147
	Proj Net	15,264,190	-15,264,189	0	0	0	0	0	0	0	0	0	0	0	1

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76121912	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	185,010	0	0	0	0	0	0	0	0	0	0	0	0	185,010
	120-Overtime-General	24,376	0	0	0	0	0	0	0	0	0	0	0	0	24,376
	350-Material Issues-Major	1,076,961	0	0	0	0	0	0	0	0	0	0	0	0	1,076,961
	370-Outside Services	62,824,449	0	0	0	0	0	0	0	0	0	0	0	0	62,824,449
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	339,297	0	0	0	0	0	0	0	0	0	0	0	0	339,297
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	1,040,736	0	0	0	0	0	0	0	0	0	0	0	0	1,040,736
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	14,092	0	0	0	0	0	0	0	0	0	0	0	0	14,092
	914-Pension and Benefits Load	53,823	0	0	0	0	0	0	0	0	0	0	0	0	53,823
	915-Injuries and Damages Load	6,782	0	0	0	0	0	0	0	0	0	0	0	0	6,782
	918-San Juan AR-Labor	-142,042	0	0	0	0	0	0	0	0	0	0	0	0	-142,042
	921-Stores / Purchasing Load	253,340	0	0	0	0	0	0	0	0	0	0	0	0	253,340
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	654,908	0	0	0	0	0	0	0	0	0	0	0	0	654,908
	928-AFUDC Debt Reg	515,809	0	0	0	0	0	0	0	0	0	0	0	0	515,809
	929-AFUDC - Equity Regular	701,452	0	0	0	0	0	0	0	0	0	0	0	0	701,452
	937-San Juan AR - Other	-33,094,846	0	0	0	0	0	0	0	0	0	0	0	0	-33,094,846
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	34,454,148	0	0	0	0	0	0	0	0	0	0	0	0	34,454,148
	825-Clearings	-34,454,147	0	0	0	0	0	0	0	0	0	0	0	0	-34,454,147
	Clr Sum	-34,454,147	0	0	0	0	0	0	0	0	0	0	0	0	-34,454,147
Proj Net		1	0	0	0	0	0	0	0	0	0	0	0	0	1

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Project No: 76416115 Unit 4 Flyash System Upgrades

Company: 003
Location: 764 San Juan

Project Information

Construction Start Date 10/3/2015 Estimated Completion Date 12/31/2015

List Interim In-Service Dates

Project Need Justification

Flyash is a coal combustion residual. The coal burned at San Juan produces 20% to 30% of ash, by weight, for each ton of coal burned. Approximately 20% of the ash in a pulverized coal boiler falls to the bottom of the furnace. This product is called "bottom ash." Roughly 80% of the ash is small, light particles which are carried in the exhaust gases and collected in an electrostatic precipitator and/or fabric filter. These small, light ash particles are called "flyash." San Juan Unit 4 has a de-energized electrostatic precipitator and a fabric filter. Both devices has flyash removal systems that evacuate the ash collection hoppers and transfer the ash to a silo from which it is later permanently disposed.

Maintenance of the Unit 4 flyash handling systems has been managed under the expectation of receiving approval to bypass the electrostatic precipitator in 2015. Since the bypass project was not approved, major maintenance to keep the electrostatic precipitator flyash handling system in service is required. This major maintenance meets the criteria for capitalization.

The scope of work includes both in-kind replacement of certain components and installation of additional equipment. Approximately 2500 linear feet of 10" diameter basalt lined pipe is to be replaced with in-kind materials. The existing pipe has reached the point where repetitive failures are occurring. The new pipe, with proper maintenance should have a useful life of 12 to 15 years.

Project Alternatives

Another alternative to this project is to bypass the electrostatic precipitator (ESP) and remove the flyash handling equipment from service. This was not the option chosen by the ownership group. Without the ESP bypass, these major maintenance items are required to sustain unit reliability and environmental compliance and to reduce short term maintenance expense. There are no other technical alternatives.

Technical Aspects

The scope of work include in-kind replacement of the flyash transport line and the ash bin vent filter. The transport line is approximately 2500 feet of 10" basalt lined pipe.

The scope of work includes the following items and work activities:

1. Approximately 2500 linear feet of 10" diameter basalt lined pipe, fittings and appurtenances.
2. Miscellaneous pipe supports and pipe hangers.

Projects with clearings in 2015 and 2016, Budget data for 2015 – 2017

3. Pipe gaskets, flanges and thru-bolts.
4. Ten (10) each 6" airlock feeder manual isolation gate valves.
5. One (1) bin vent filter.
6. Ten (10) each airlock feeder vent hoses.
7. Installation of all of the above components.
8. Demolition of existing airlock feeder vent hoses.
9. Demolition of flyash transport piping to be retired

Isolation valves will be added to the airlock chambers at each of 10 hoppers on the fabric filter ash removal system. Under the current configuration, the fabric filter ash removal system must be removed from service to perform routine maintenance. Adding the airlock isolation valves will permit on-line maintenance and therefore increase system reliability. The reliability of the ash removal system has a direct impact on unit availability. These valves were likely considered during the construction of the fabric filter but the decision was made to leave them out of the project. Experience over the last seven years has proved the need for the valves.

Project Estimate Approach

The cost estimate has been developed from supplier quotations for material and contractor estimates for installation. All items are not under contract at this time. Future procurement activities will lead to firm price contracts for each individual scope of work.

As with all project, vendor quotes and contractor estimates are used as the basis of the cost estimate. For this specific project, basalt lined pipe was quoted by CDP, a leading supplier of basalt products to the utility industry. The bin vent filter was quoted by United Conveyor Corporation. Piping installation was estimated by Day & Zimmerman, the resident maintenance contractor at San Juan. Data from an identical recent installation of airlock isolation valves and airlock hopper vent lines on San Juan Unit 1 was used to estimate the airlock isolation valves and hopper vent lines for Unit 4.

In addition to the information collected from quotations, allowances are made for engineering, project management, general and administrative loads, AFUDC and project contingency.

For this particular project the cost breakdown, by percentage is 35% materials, 55% construction labor, 14% engineering and project management, 4% general and administrative loads and 2% AFUDC.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76416115	Year	2015											
Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total			
110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0			
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0			
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0			
370-Outside Services	0	0	0	0	0	0	369,000	657,000	655,000	283,000	1,964,000			
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0			
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0			
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0			
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0			
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0			
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0			
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0			
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0			
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0			
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0			
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0			
913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0			
914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0			
915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0			
918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0			
921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0			
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0			
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0			
926-A and G Loads	0	0	0	0	0	0	8,745	15,571	15,524	6,707	46,547			
928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0			
929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0			
937-San Juan AR - Other	0	0	0	0	0	0	-134,168	-238,884	-238,157	-102,898	-714,106			
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0			
Cost Sum	0	0	0	0	0	0	243,578	433,687	432,367	186,809	1,296,441			
825-Clearings	0	0	0	0	0	0	0	0	0	-1,296,441	-1,296,441			
Clr Sum	0	0	0	0	0	0	0	0	0	-1,296,441	-1,296,441			
Proj Net	0	0	0	0	0	0	243,578	433,687	432,367	-1,109,632	0			

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76416115	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	1,964,000	0	0	0	0	0	0	0	0	0	0	0	0	1,964,000
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	46,547	0	0	0	0	0	0	0	0	0	0	0	0	46,547
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	-714,106	0	0	0	0	0	0	0	0	0	0	0	0	-714,106
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,296,441	0	0	0	0	0	0	0	0	0	0	0	0	1,296,441
	825-Clearings	-1,296,441	0	0	0	0	0	0	0	0	0	0	0	0	-1,296,441
	Clr Sum	-1,296,441	0	0	0	0	0	0	0	0	0	0	0	0	-1,296,441
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76416115	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	1,964,000	0	0	0	0	0	0	0	0	0	0	0	0	1,964,000
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	46,547	0	0	0	0	0	0	0	0	0	0	0	0	46,547
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	-714,106	0	0	0	0	0	0	0	0	0	0	0	0	-714,106
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,296,441	0	0	0	0	0	0	0	0	0	0	0	0	1,296,441
	825-Clearings	-1,296,441	0	0	0	0	0	0	0	0	0	0	0	0	-1,296,441
	Clr Sum	-1,296,441	0	0	0	0	0	0	0	0	0	0	0	0	-1,296,441
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Company: 003
Location: 764 San Juan

<u>Construction Start Date</u>	9/1/2015	<u>Estimated Completion Date</u>	12/30/2015
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The Unit 4 project will be in service by November 30, 2015.

The boiler economizer ash removal systems were taken out of service on all San Juan boilers several years ago due to perpetual maintenance issues resulting from the technology which was industry standard at the time. Without this equipment, large volumes of ash accumulate in the areas where the equipment was previously located and in the ductwork downstream of this location. The weight of the accumulated ash has resulted in duct and duct hanger failures. Installation of new ash removal equipment is needed to prevent future duct and duct hanger failures. The industry standard for this application is now a dry flite or “drag chain” conveyor. This technology replaces the pneumatic conveying technology that was the former industry standard. This equipment is attached to the economizer ash hoppers. The scope of work includes a three way isolation valves at each hopper, discharge piping at each hopper to a common dry flite conveyor, a single ash transfer tank, ash crusher, wet sluicing transport piping, miscellaneous piping and valves, miscellaneous small motors and other electrical equipment, electrical cables, control cabinet, Programmable Logic Control (PLC) and control wiring. This control system will be integrated with other ash removal controls.

An identical project has been executed on San Juan Unit 1. This equipment is not being installed on San Juan Units 2 and 3 solely because Unit 2 and Unit 3 are shutting down on December 31, 2017.

If the condition of ash accumulation below the economizer section of the boiler is to be address, the dry flite conveying technology is the current industry standard for this application. No other conveying technology is considered viable. A business alternative would be to “do nothing” and take the risk of reduced reliability resulting from duct or duct hanger failures. These types of failures have been experienced at San Juan. Due to the short remaining life of Units 2 and 3, the “do nothing” business decision has been made. In order to meet the future reliability targets for Units 1 and 4, it is prudent to minimize the reliability risk associated with ash accumulation driven duct failures by installing this technology. The project provides the added benefit of reducing the O&M cost associated with removing the accumulated ash required to permit maintenance of the economizer section to occur. Removal of accumulated ash is currently a significant cost in preparing for outage maintenance.

Technical Aspects

Ash that collects at this location is heavy large particle ash compared to the light fine particles that collect in both the electrostatic precipitator and the fabric filter. At the time of original construction of the boiler, the industry standard technology for removing ash below the economizer section of the boiler was a pneumatic conveying system. Pneumatic conveying works well for light fine particle ash but was much less effective with heavy large particle ash. Pneumatic economizer ash removal systems were prone to pluggage throughout the system. Once plugged, ash backed up in the hopper and accumulated in the ductwork, producing virtually the same condition as having no ash removal system at all. The dry flite conveyor technology that has been developed over the past several years has become the industry standard for economizer ash removal system.

Project Estimate Approach

Bids were received for the dry flite conveyors from the two leading providers (Allen Sherman Hoff and United Conveyor). A total project estimate was prepared by Burns & McDonnell. The project is roughly 25% process equipment, 15% engineering and project management, 5% quality control, 54% construction labor and commodities, 6% general and administrative overheads and 1% AFUDC. The timing associated with this rate case filing establishes a data date before the project was placed in service but the work was executed under fixed price contracts and therefore the forecast at completion, represented by the value to be cleared, reflects the final actual cost of the project.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76417115	Year	2015									
	Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	150,250	50,250	237,500	98,500	246,750	493,500	739,500	739,000	0	2,755,250
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	3,561	1,191	5,629	2,334	5,848	11,696	17,526	17,514	0	65,299
	928-AFUDC Debt Reg	0	128	299	546	835	1,134	1,770	2,830	4,105	0	11,647
	929-AFUDC - Equity Regular	0	182	427	779	1,192	1,619	2,528	4,041	5,862	0	16,630
	937-San Juan AR - Other	0	-54,631	-18,271	-86,354	-35,814	-89,718	-179,435	-268,881	-268,699	0	-1,001,803
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	0	99,491	33,896	158,099	67,047	165,633	330,059	495,017	497,782	0	1,847,024
	825-Clearings	0	0	0	0	0	0	0	0	-1,847,024	0	-1,847,024
	Clr Sum	0	0	0	0	0	0	0	0	-1,847,024	0	-1,847,024
	Proj Net	0	99,491	33,896	158,099	67,047	165,633	330,059	495,017	-1,349,241	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76417115	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	2,755,250	0	0	0	0	0	0	0	0	0	0	0	0	2,755,250
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	65,299	0	0	0	0	0	0	0	0	0	0	0	0	65,299
	928-AFUDC Debt Reg	11,647	0	0	0	0	0	0	0	0	0	0	0	0	11,647
	929-AFUDC - Equity Regular	16,630	0	0	0	0	0	0	0	0	0	0	0	0	16,630
	937-San Juan AR - Other	-1,001,803	0	0	0	0	0	0	0	0	0	0	0	0	-1,001,803
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,847,024	0	0	0	0	0	0	0	0	0	0	0	0	1,847,024
	825-Clearings	-1,847,024	0	0	0	0	0	0	0	0	0	0	0	0	-1,847,024
	Clr Sum	-1,847,024	0	0	0	0	0	0	0	0	0	0	0	0	-1,847,024
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76417115	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	2,755,250	0	0	0	0	0	0	0	0	0	0	0	0	2,755,250
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	65,299	0	0	0	0	0	0	0	0	0	0	0	0	65,299
	928-AFUDC Debt Reg	11,647	0	0	0	0	0	0	0	0	0	0	0	0	11,647
	929-AFUDC - Equity Regular	16,630	0	0	0	0	0	0	0	0	0	0	0	0	16,630
	937-San Juan AR - Other	-1,001,803	0	0	0	0	0	0	0	0	0	0	0	0	-1,001,803
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,847,024	0	0	0	0	0	0	0	0	0	0	0	0	1,847,024
	825-Clearings	-1,847,024	0	0	0	0	0	0	0	0	0	0	0	0	-1,847,024
	Clr Sum	-1,847,024	0	0	0	0	0	0	0	0	0	0	0	0	-1,847,024
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Project No: 76421912 SJ U4 SNCR

Company: 003
Location: 764 San Juan

Project Information

Construction Start Date 11/1/2012 Estimated Completion Date 12/31/2016

List Interim In-Service Dates

0

Project Need Justification

The San Juan SNCR Project encompasses both the installation of SNCR on San Juan Units 1 and 4 as required by the Revised State Implementation Plan (SIP) as well as the conversion of these units to a balanced draft configuration. They are denoted on the capital list as projects "SJ U1 SNCR", SJ U4 SNCR", and "SJGS SNCR costs PNM Share". This project is for the Unit 4 portion. As these units have aged, and after experiencing numerous start-up cycles, the flue gas pressure boundary has deteriorated. This deterioration allows ash-laden flue gases and coal particles to escape from the boiler, flues, ducts, and other air or flue gas path components. Ash and coal that accumulates outside of the boiler pressure boundary pose various maintenance, health, and safety issues. The environmental regulators are aware of these issues and the resulting potential compliance issues related to PM emissions under the NAAQS. For this reason, the NMED, as part of an amendment to San Juan's NSR permit, required that San Juan convert to a balanced draft configuration. Balanced draft will help ensure demonstrated compliance with the NAAQS and result in a significant reduction in fugitive emissions which provides a myriad of operational benefits, including a cleaner workplace. This project will substantially reduce the escape of ash, coal particles, and ammonia.

Project Alternative

Effective September 21, 2011 the United States Environmental Protection Agency ("EPA") adopted the Federal Implementation Plan ("FIP") establishing selective catalytic control ("SCR") technology as Best Available Retrofit Technology ("BART") for San Juan Generating Station ("SJGS") to meet the requirements of EPA's Regional Haze Rule under the Clean Air Act ("CAA"). Among other things, the FIP established a limit on nitrogen oxide ("NOx") emissions of no more than 0.05 lb/MMBtu (pounds per million British Thermal Units) at each unit of SJGS. EPA determined that the NOx emissions limits can only be achieved by installing SCR. EPA required SJGS to meet this limit by September 21, 2016. 76 Fed. Reg. 52388-52389 (Aug. 22, 2011).

New Mexico submitted a revised "RSIP" identifying a less expensive technology, Selective Non-Catalytic Reduction ("SNCR"), as BART for NOx emissions. 76 Fed. Reg. at 52394. Among other things, the RSIP sets out a process and timeline whereby BART compliance would be achieved by the retirement of SJGS Units 2 and 3 by December 31, 2017, with SNCR to be installed on Units 1 and 4 by January 31, 2016. The RSIP was submitted to EPA on October 7, 2013. The EPA determined that the RSIP was complete on December 17, 2013, and granted final approval on October 9, 2014.

Projects with clearings in 2015 and 2016, Budget data for 2015 – 2017

The RSIP for SJGS addresses the Regional Haze rule and provides significant additional environmental benefits at a lower cost than the FIP including reductions associated with:

- Nitrogen oxides, sulfur dioxide, particulate matter, carbon dioxide and mercury- approximately 50%
- Water Consumption- about 53%
- Coal Ash Generation- about 48%
- Truck Traffic (hauling coal ash back to the mine) and Raw Material Deliveries and
- Visible Plumes (reduces stacks from four to two)

In addition, the RSIP plays a significant role in the state of New Mexico's compliance with the recently finalized Clean Power Plan under the Clean Air Act Section 111(d).

In a September 2011 Title V permit application, after consultation with the NMED concerning San Juan's fugitive emissions, PNM made the commitment to convert to balanced draft when the boilers were upgraded to meet the Regional Haze Federal or State Implementation Plan. In a subsequent NSR permit modification issued by NMED in August 2012 that allowed the installation of either SCR under the federal plan or SNCR under that state plan, NMED required San Juan to install balanced draft.

Project Estimate Approach

SNCR is a post-combustion control technology for NOx emissions. In very general terms, SNCR uses an amine-based reagent (urea in San Juan's case) which is injected into the boiler and reacts with NOx to reduce it to molecular nitrogen (N2) and water. In order to inject the reagent, the boiler walls must be penetrated and lances must be installed for the delivery of the reagent into the heated boiler. PNM Witness J. Edward Cichanowicz provided a more detailed description of the installation of SNCR at San Juan and the processes that reduce the emission of NOx in NMPRC Case 13-00390-UT. Like many power plants of the same vintage, the San Juan boilers were originally designed with only forced draft ("F.D.") fans. These boilers and associated flues and ducts operate at positive pressure. As these units have aged, and after experiencing numerous start-up cycles, the flue gas pressure boundary has typically deteriorated. This deterioration allows ash-laden flue gases and coal particles to escape from the boiler, flues, ducts and other air or flue gas path components. Ash and coal that accumulates outside of the boiler pressure boundary pose various maintenance, health and safety issues. The environmental regulators are aware of these issues and the resulting potential compliance issues related to PM emissions under the NAAQS. For this reason, the NMED, as part of an amendment to San Juan's NSR permit, required that San Juan convert to a balanced draft configuration. Balanced draft is achieved by installing induced draft ("I.D.") fans to balance the pressure in the boilers, flues and ducts. This greatly lessens the escape of ash, coal particles and ammonia caused by the positive pressures created by the F.D. fans. Due to changes in operational pressures, other modifications, such as boiler stiffening, are also often necessary to convert to a balanced draft configuration. As stated above, balanced draft will help ensure demonstrated compliance with the NAAQS and result in a significant reduction in fugitive emissions which provides myriad operational benefits, including a cleaner workplace. On a related note, the chemical reaction associated with the operation of SNCR results in the generation of ammonia. The balanced draft conversion will mitigate workplace exposure to ammonia fumes caused by the SNCR process. In addition, PNM and the other San Juan owners are taking a long-range view for San Juan. Balanced draft is an essential element in any state-of-the-art coal power plant emission controls.

Cost Year 01

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76421912	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	177,263	0	0	0	0	0	0	0	0	0	0	0	0	177,263
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	1,008,327	0	0	0	0	0	0	0	0	0	0	0	0	1,008,327
	370-Outside Services	57,593,389	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	81,000	58,565,389
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	1,190,566	0	0	0	0	0	0	0	0	0	0	0	0	1,190,566
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	11,948	0	0	0	0	0	0	0	0	0	0	0	0	11,948
	914-Pension and Benefits Load	51,613	0	0	0	0	0	0	0	0	0	0	0	0	51,613
	915-Injuries and Damages Load	5,664	0	0	0	0	0	0	0	0	0	0	0	0	5,664
	918-San Juan AR-Labor	-107,704	0	0	0	0	0	0	0	0	0	0	0	0	-107,704
	921-Stores / Purchasing Load	73,358	0	0	0	0	0	0	0	0	0	0	0	0	73,358
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	599,695	810	810	810	810	810	810	810	810	810	810	810	810	609,415
	928-AFUDC Debt Reg	506,260	18,250	46	46	46	46	46	46	46	46	46	46	46	525,016
	929-AFUDC - Equity Regular	724,952	0	0	0	0	0	0	0	0	0	0	0	0	724,952
	937-San Juan AR - Other	-21,888,186	-29,057	-29,057	-29,057	-29,057	-29,057	-29,057	-29,057	-29,057	-29,057	-29,057	-29,057	-29,057	-22,236,870
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	39,947,146	71,003	52,799	52,799	52,799	52,799	52,799	52,799	52,799	52,799	52,799	52,799	52,799	40,598,938
	825-Clearings	-29,545,198	-10,472,951	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-40,598,938
	Clr Sum	-29,545,198	-10,472,951	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-52,799	-40,598,938
Proj Net		10,401,948	-10,401,948	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76421912	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	177,263	0	0	0	0	0	0	0	0	0	0	0	0	177,263
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	1,008,327	0	0	0	0	0	0	0	0	0	0	0	0	1,008,327
	370-Outside Services	58,565,389	0	0	0	0	0	0	0	0	0	0	0	0	58,565,389
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	1,190,566	0	0	0	0	0	0	0	0	0	0	0	0	1,190,566
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	11,948	0	0	0	0	0	0	0	0	0	0	0	0	11,948
	914-Pension and Benefits Load	51,613	0	0	0	0	0	0	0	0	0	0	0	0	51,613
	915-Injuries and Damages Load	5,664	0	0	0	0	0	0	0	0	0	0	0	0	5,664
	918-San Juan AR-Labor	-107,704	0	0	0	0	0	0	0	0	0	0	0	0	-107,704
	921-Stores / Purchasing Load	73,358	0	0	0	0	0	0	0	0	0	0	0	0	73,358
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	609,415	0	0	0	0	0	0	0	0	0	0	0	0	609,415
	928-AFUDC Debt Reg	525,016	0	0	0	0	0	0	0	0	0	0	0	0	525,016
	929-AFUDC - Equity Regular	724,952	0	0	0	0	0	0	0	0	0	0	0	0	724,952
	937-San Juan AR - Other	-22,236,870	0	0	0	0	0	0	0	0	0	0	0	0	-22,236,870
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	40,598,938	0	0	0	0	0	0	0	0	0	0	0	0	40,598,938
	825-Clearings	-40,598,938	0	0	0	0	0	0	0	0	0	0	0	0	-40,598,938
	Clr Sum	-40,598,938	0	0	0	0	0	0	0	0	0	0	0	0	-40,598,938
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Project No: 76616116 Emergent Work 2016

Company: 003
Location: 766 San Juan

Project Information

Construction Start Date 1/1/2016 Estimated Completion Date 12/30/2016

List Interim In-Service Dates

0

Project Need Justification

In each budget period, certain unplanned maintenance activities are required due to equipment failures. PNM's rules for capitalization allow replacement of certain equipment and components to be classified as capital expenses. Typically the capitalized maintenance applies to either non-redundant or critical spare equipment which has or could have a direct and significant impact on unit availability and reliability.

Some specific examples from recent years include circulating water pump motors, coal tripper belts, expansion joints, raw water pipelines, medium voltage electrical cables, and high energy piping system hangers.

An amount designated for emergent capital work allows projects that are well defined, estimated and scheduled to continue without interruption.

If emergent work is greater than anticipated, other projects are cancelled so that the overall budget is not exceeded.

As emergent work occurs, capital projects with titles specific to the work to be performed are created with the funds being supplied by the emergent work project number. There is an internal tracking of funding "trade-offs."

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Project Alternatives

In virtually every case the only alternative is to accept reduced unit availability or reliability. To sustain continued operation of coal fired generating units, accepting reduced availability (or reduced unit output) is normally unacceptable however, when making decisions on units slated to be decommissioned, accepting a reduced output may be an option if the investment cannot be recovered prior to decommissioning.

Technical Aspects

In virtually every case the work performed is an in-kind replacement of a failed or nearly failed component. For example, if a coal tripper belt is frayed or tears, it is replaced with a belt of identical specifications. Tripper belts are typically a 2X100% configuration so failure of one belt may not have an immediate impact but any maintenance or failure of the redundant belt could result in a complete plant shutdown.

Similarly, circulating water pumps are either 2X50% or 2X60% configuration. Loss of one motor will produce an immediate 40% or 50% loss of unit production.

Expansion joints are each 1X100%. Failure of an expansion joint on a positive pressure unit will require a complete shutdown to sustain environmental compliance.

Electrical cables have varying impacts on unit availability and reliability depending on the loads served by the cables. Loss of electrical cables having negligible impact on unit availability are planned and budgeted. Cable replacement funded from the "Emergent Work" project would have a significant impact to unit availability.

Raw water lines provide the makeup water to the station. Loss or any portion of a raw water line has the potential to cause a complete plant shutdown.

Pipe hangers on high energy piping systems are essential to the safety of employees and the reliability of the unit. Failure of a hanger creates stress on the high energy piping. Failure of a high energy piping system would be a significant safety risk for all employees and would definitely result in a prolonged complete unit outage.

Project Estimate Approach

The amount established for this project is based on historical information and ongoing equipment risk assessments. The amount may be higher in years approaching a major maintenance cycle as compared to a year just after a major maintenance cycle. The amount is also influenced by the necessity and priority of other projects and the availability of capital within a particular year. Managers are expected to manage to an overall capital target and must make trade-offs when emergent work exceeds to amount budgeted.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76616116	Year	2015											
Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total			
110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0			
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0			
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0			
370-Outside Services	0	0	0	0	0	0	0	0	0	0	0			
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0			
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0			
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0			
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0			
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0			
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0			
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0			
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0			
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0			
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0			
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0			
913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0			
914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0			
915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0			
918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0			
921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0			
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0			
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0			
926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0			
928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0			
929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0			
937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0			
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0			
Cost Sum	0	0	0	0	0	0	0	0	0	0	0			
825-Clearings	0	0	0	0	0	0	0	0	0	0	0			
Clr Sum	0	0	0	0	0	0	0	0	0	0	0			
Proj Net	0	0	0	0	0	0	0	0	0	0	0			

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project 76616116	Year	2016													
Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	22,336	22,336	
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
370-Outside Services	0	0	0	0	0	0	0	0	0	1,300,000	1,400,000	1,700,000	1,568,475	5,968,475	
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	1,505	1,505	
914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	6,804	6,804	
915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	1,099	1,099	
918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	-13,119	-13,119	
921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
926-A and G Loads	0	0	0	0	0	0	0	0	0	30,810	33,180	40,290	37,702	141,982	
928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	683	2,103	3,736	5,477	11,999	
929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	-550,010	-592,319	-719,244	-663,817	-2,525,390	
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cost Sum	0	0	0	0	0	0	0	0	0	781,483	842,964	1,024,782	966,462	3,615,691	
825-Clearings	0	0	0	0	0	0	0	0	0	0	0	0	-3,615,691	-3,615,691	
Clr Sum	0	0	0	0	0	0	0	0	0	0	0	0	-3,615,691	-3,615,691	
Proj Net	0	0	0	0	0	0	0	0	0	781,483	842,964	1,024,782	-2,649,229	0	

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76616116	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	22,336	0	0	0	0	0	0	0	0	0	0	0	0	22,336
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	5,968,475	0	0	0	0	0	0	0	0	0	0	0	0	5,968,475
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	1,505	0	0	0	0	0	0	0	0	0	0	0	0	1,505
	914-Pension and Benefits Load	6,804	0	0	0	0	0	0	0	0	0	0	0	0	6,804
	915-Injuries and Damages Load	1,099	0	0	0	0	0	0	0	0	0	0	0	0	1,099
	918-San Juan AR-Labor	-13,119	0	0	0	0	0	0	0	0	0	0	0	0	-13,119
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	141,982	0	0	0	0	0	0	0	0	0	0	0	0	141,982
	928-AFUDC Debt Reg	11,999	0	0	0	0	0	0	0	0	0	0	0	0	11,999
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	-2,525,390	0	0	0	0	0	0	0	0	0	0	0	0	-2,525,390
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	3,615,691	0	0	0	0	0	0	0	0	0	0	0	0	3,615,691
	825-Clearings	-3,615,691	0	0	0	0	0	0	0	0	0	0	0	0	-3,615,691
	Clr Sum	-3,615,691	0	0	0	0	0	0	0	0	0	0	0	0	-3,615,691
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Project No: 76616235 Plant Common Evaporation Pond Heightening

Company: 003
Location: 766 San Juan

Project Information

Construction Start Date 1/1/2016 Estimated Completion Date 11/30/2016

List Interim In-Service Dates

0

Project Need Justification

San Juan Generating Station has five (5) evaporation ponds each approximately fifteen (15) acres in size. These process ponds are water treatment facilities required to comply with Zero Liquid Discharge (ZLD) permit requirements.

The accumulation of solids in the evaporation pond decreases the working volume of the pond. In the current configuration, solids are dredged periodically to restore the pond volume. A large portion of the dredging expense is associated with the mobilization and demobilization of dredging equipment. Increasing the pond volume will reduce the frequency, and therefore the cost, of dredging operations.

At the completion of the Shumway Arroyo Slurry Wall and Water Containment Project, groundwater captured by that system will be pumped to these evaporation ponds. Additional freeboard space is required to contain the added flows. The situation will be mitigated in 2018 when two units are shut down but additional capacity is needed in the interim.

The project is timed to complete prior to the commissioning of the Shumway Arroyo Slurry Wall and Water Containment Project. The timing is also influenced by the fact San Juan has no planned unit outages in 2016. Executing projects such as this which are not outage related helps balance year over year capital spend.

The final elevation of pond embankments is being calculated as part of the engineering phase of the project.

The cost estimate includes engineering, construction labor and equipment, materials, quality control, project management, general and administrative loads and AFUDC.

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this

one with a projected in-service date by February 2017.

Project Alternatives

As additional pond capacity is needed, the alternatives are constructing a new pond or increasing the capacity of the existing ponds.

There is no real estate available for a new evaporation pond. Further a new pond would require a complete groundwater monitoring system. While PNM could acquire land through either an arms' length transaction or through condemnation, the cost of an additional groundwater monitoring system causes this alternative to be much more expensive. The groundwater monitoring systems on the existing ponds will not require modification as a result of increasing the capacity of the ponds.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Technical Aspects

The scope of work includes the design and construction of an extension of the earth embankment and the pond liner systems.

The final dimensions are a deliverable from the engineering portion of the project.

The liner system will be a minimum 70 mil HDPE, complying with current environmental regulations and good engineering practice.

Project Estimate Approach

The cost estimate was prepared by a geotechnical and civil engineering firm which has been involved in numerous projects of similar scope.

As this project is currently in the engineering phase, it is not yet ready for competitive bids. However, when the plans are finished competitive bids for construction will be sought.

As with all heavy civil construction projects, this cost estimate is 65% construction labor and equipment, 20% materials, 10% engineering and project management, 5% quality control, 4% general and administrative overheads and 1% AFUDC.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76616235	Year	2015											
Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total			
110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0			
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0			
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0			
370-Outside Services	0	0	0	0	0	0	0	0	0	0	0			
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0			
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0			
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0			
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0			
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0			
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0			
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0			
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0			
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0			
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0			
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0			
913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0			
914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0			
915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0			
918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0			
921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0			
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0			
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0			
926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0			
928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0			
929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0			
937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0			
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0			
Cost Sum	0	0	0	0	0	0	0	0	0	0	0			
825-Clearings	0	0	0	0	0	0	0	0	0	0	0			
Clr Sum	0	0	0	0	0	0	0	0	0	0	0			
Proj Net	0	0	0	0	0	0	0	0	0	0	0			

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project 76616235	Year	2016												Total
Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
110-Straight Time-General	0	20,857	13,846	13,846	14,192	14,192	14,192	21,378	14,192	14,192	14,192	14,192	0	169,271
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
370-Outside Services	0	70,680	80,534	80,533	80,045	80,044	180,043	169,939	180,039	180,038	180,037	180,037	0	1,461,969
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
913-Payroll Taxes Load	0	1,406	933	933	957	957	957	1,441	957	957	957	957	0	11,412
914-Pension and Benefits Load	0	6,353	4,217	4,217	4,323	4,323	4,323	6,512	4,323	4,323	4,323	4,323	0	51,560
915-Injuries and Damages Load	0	1,026	681	681	698	698	698	1,052	698	698	698	698	0	8,326
918-San Juan AR-Labor	0	-12,251	-8,133	-8,133	-8,336	-8,336	-8,336	-12,557	-8,336	-8,336	-8,336	-8,336	0	-99,426
921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
926-A and G Loads	0	2,169	2,237	2,237	2,233	2,233	4,603	4,534	4,603	4,603	4,603	4,603	0	38,658
928-AFUDC Debt Reg	0	53	158	263	369	475	633	845	1,057	1,269	1,481	1,694	0	8,297
929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
937-San Juan AR - Other	0	-30,108	-34,208	-34,208	-34,005	-34,004	-76,312	-72,108	-76,311	-76,310	-76,310	-76,310	0	-620,194
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost Sum	0	60,185	60,265	60,369	60,476	60,582	120,801	121,036	121,222	121,434	121,645	121,858	0	1,029,873
825-Clearings	0	0	0	0	0	0	0	0	0	0	0	-1,029,875	0	-1,029,875
Clr Sum	0	0	0	0	0	0	0	0	0	0	0	-1,029,875	0	-1,029,875
Proj Net	0	60,185	60,265	60,369	60,476	60,582	120,801	121,036	121,222	121,434	121,645	-908,017	0	-2

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76616235	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	169,271	0	0	0	0	0	0	0	0	0	0	0	0	169,271
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	1,461,969	0	0	0	0	0	0	0	0	0	0	0	0	1,461,969
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	11,412	0	0	0	0	0	0	0	0	0	0	0	0	11,412
	914-Pension and Benefits Load	51,560	0	0	0	0	0	0	0	0	0	0	0	0	51,560
	915-Injuries and Damages Load	8,326	0	0	0	0	0	0	0	0	0	0	0	0	8,326
	918-San Juan AR-Labor	-99,426	0	0	0	0	0	0	0	0	0	0	0	0	-99,426
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	38,658	0	0	0	0	0	0	0	0	0	0	0	0	38,658
	928-AFUDC Debt Reg	8,297	0	0	0	0	0	0	0	0	0	0	0	0	8,297
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	-620,194	0	0	0	0	0	0	0	0	0	0	0	0	-620,194
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,029,873	0	0	0	0	0	0	0	0	0	0	0	0	1,029,873
	825-Clearings	-1,029,875	0	0	0	0	0	0	0	0	0	0	0	0	-1,029,875
	Clr Sum	-1,029,875	0	0	0	0	0	0	0	0	0	0	0	0	-1,029,875
	Proj Net	-2	0	0	0	0	0	0	0	0	0	0	0	0	-2

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Project No: 76616317 Common Coal Handling

Company: 003
Location: 766 San Juan

Project Information

Construction Start Date 8/3/2015 Estimated Completion Date 9/30/2016

List Interim In-Service Dates

Project Need Justification

The coal handling assets at San Juan Generating Station have several obsolesce and code related issues. The current configuration prohibits compliance with OSHA fugitive dust standards. This project addresses obsolescence and fugitive dust issues from the C&D reclaim area through all coal handling facilities up to the tripper room.

Project Alternatives

Both obsolescence and code related issues must be addressed. There are various technologies available as solutions to both issues. As part of the project development, the optimal technologies to address dust suppression and collection as well as replace obsolete equipment will be determined.

Technical Aspects

In general, the scope will include replacement of certain electrical components, replacing and upgrading belt cleaning systems, redesigning and replacing transfer chutes, relocating and upgrading belt magnetic iron removal systems and designing and installing dust collection systems. Maintenance doors and access galleries will be constructed as necessary to support future maintenance of the new equipment.

Project Estimate Approach

The cost estimate has been developed using a combination of vendor budgetary estimates, contractor estimates and input from multiple consultants who have been engaged in assessing the magnitude of compliance issues. Much of the information for the current cost estimate comes from proposals received in 2014 to execute a similar project. The 2014 project was cancelled due to scope and budget issues but the information was useful in preparing the estimate for the current project. The 2014 project was a fixed price contract which was bid by three material handling firms. The proposed contract was a furnish and install contract.

The cost estimate for the current project uses the information from 2014 as well as updated quotations from equipment suppliers. The project cost estimate breaks down, on a percentage basis as 40% equipment and materials, 40% construction labor, tools and equipment, 10% engineering, 4% project management, 4% general and administrative loads and 2% AFUDC.

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76616317	Year	2015											
Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total			
110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0			
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0			
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0			
370-Outside Services	0	0	0	0	0	0	0	0	0	0	0			
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0			
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0			
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0			
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0			
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0			
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0			
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0			
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0			
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0			
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0			
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0			
913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0			
914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0			
915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0			
918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0			
921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0			
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0			
925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0			
926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0			
928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0			
929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0			
937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0			
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0			
Cost Sum	0	0	0	0	0	0	0	0	0	0	0			
825-Clearings	0	0	0	0	0	0	0	0	0	0	0			
Clr Sum	0	0	0	0	0	0	0	0	0	0	0			
Proj Net	0	0	0	0	0	0	0	0	0	0	0			

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76616317	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	0	146,750	146,750	195,400	243,750	243,750	481,000	481,000	481,000	481,000	0	0	0	2,900,400
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	3,478	3,478	4,631	5,777	5,777	11,400	11,400	11,400	11,400	0	0	0	68,741
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	0	-62,088	-62,088	-82,671	-103,127	-103,127	-203,504	-203,504	-203,504	-203,504	0	0	0	-1,227,117
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	0	88,140	88,140	117,360	146,400	146,400	288,896	288,896	288,896	288,896	0	0	0	1,742,024
	825-Clearings	0	0	0	0	0	0	0	0	0	-1,742,024	0	0	0	-1,742,024
	Clr Sum	0	0	0	0	0	0	0	0	0	-1,742,024	0	0	0	-1,742,024
	Proj Net	0	88,140	88,140	117,360	146,400	146,400	288,896	288,896	288,896	-1,453,128	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76616317	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	2,900,400	0	0	0	0	0	0	0	0	0	0	0	0	2,900,400
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	914-Pension and Benefits Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	915-Injuries and Damages Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	68,741	0	0	0	0	0	0	0	0	0	0	0	0	68,741
	928-AFUDC Debt Reg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	929-AFUDC - Equity Regular	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	937-San Juan AR - Other	-1,227,117	0	0	0	0	0	0	0	0	0	0	0	0	-1,227,117
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,742,024	0	0	0	0	0	0	0	0	0	0	0	0	1,742,024
	825-Clearings	-1,742,024	0	0	0	0	0	0	0	0	0	0	0	0	-1,742,024
	Clr Sum	-1,742,024	0	0	0	0	0	0	0	0	0	0	0	0	-1,742,024
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Project No: 76617109 SJ common Lake Station Switchge

Company: 003
Location: 766 San Juan

Project Information

Construction Start Date 8/3/2015 Estimated Completion Date 7/30/2015

List Interim In-Service Dates

Project Need Justification

This project addresses equipment obsolescence issues and issues associated with safeguarding employees against hazardous electric energy during maintenance. Replacement of critical equipment is necessary to sustain unit reliability.

The existing equipment is 1960s vintage technology. It provides power for electric motors which drive the pumps supplying water to San Juan Station. The station cannot operate without a water supply. While there is redundancy in both the pumps and the electrical gear, the system is designed in a manner that does not permit maintenance on the electrical equipment without a complete system shutdown. Due to this and the virtually non-existent opportunity to take the system out of service, maintenance on the electrical equipment has been inadequate. The electrical equipment is in poor condition and due to its age, replacement parts are difficult to locate. This project will redesign the electrical system such that it can be segregated for maintenance without reducing the reliability of the water supply system.

Since 1960, electrical codes have changes specifically in the area of safeguards required to protect against arc flash incident energy. The proposed equipment will comply with current code requirements.

The scope of the project includes replacing the existing 6900V electrical switchgear with similar equipment which complies with current codes and is supported by the industry. In addition, variable frequency drives (VFDs) will be installed to increase the energy efficiency of the driven equipment (pumps). The new equipment is larger and produces more heat than the existing equipment so a larger enclosure and additional HVAC equipment is included in the project scope.

The estimated cost of the project includes engineering, equipment, structures, construction labor, construction consumables, project management, general and administrative loads and AFUDC.

Project Alternatives

As this is an obsolescence issue, there are no viable alternatives other than replace the existing equipment with more modern, industry supported equipment. The selected vendor was Burns & McDonnell, who developed the conceptual scope for the project and who has executed many projects of similar nature. Burns & McDonnell has performed the engineering and estimating for other projects of similar scope for PNM. Other vendors were initially considered but Burns & McDonnell were selected as the most appropriate considering their experience and quality of work from prior projects working

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017 with them.

Technical Aspects

The scope of work includes replacing the existing 6900V electrical switchgear with "in kind" equipment. The new equipment will correct current electric code issues within the existing equipment. As the footprint of the new equipment is larger, modifications to the electric equipment building are required.

The bill of material for the new equipment includes two 6900V switchgear modules, maintenance switches, DC battery system (for tripping voltage and control) and an enclosure to house all new equipment.

Project Estimate Approach

The cost estimate for the project was developed by a third party engineering company (Burns & McDonnell) who developed the conceptual scope for the project and who has executed many projects of similar nature. Burns & McDonnell has performed the engineering and estimating for other projects of similar scope for PNM. The breakdown of the estimated cost is 30% equipment and construction materials, 23% engineering and project management, 40% construction labor, 5% general and administrative overheads and 2% AFUDC. This project is still in the engineering phase. A scope of work for construction services will be issued for competitive bids.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76617109	Year	2015											
Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total			
110-Straight Time-General	33,408	0	0	0	0	0	0	0	0	0	33,408			
120-Overtime-General	1,181	0	0	0	0	0	0	0	0	0	1,181			
350-Material Issues-Major	1,247,455	0	0	0	0	0	0	0	0	0	1,247,455			
370-Outside Services	598,670	0	499,000	499,000	493,000	491,000	0	0	0	0	2,580,670			
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0			
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0			
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0			
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0			
610-Expenses - General	3,145	0	0	0	0	0	0	0	0	0	3,145			
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0			
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0			
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0			
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0			
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0			
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0			
913-Payroll Taxes Load	2,359	0	0	0	0	0	0	0	0	0	2,359			
914-Pension and Benefits Load	10,835	0	0	0	0	0	0	0	0	0	10,835			
915-Injuries and Damages Load	928	0	0	0	0	0	0	0	0	0	928			
918-San Juan AR-Labor	-26,160	0	0	0	0	0	0	0	0	0	-26,160			
921-Stores / Purchasing Load	12,880	0	0	0	0	0	0	0	0	0	12,880			
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0			
925-E and S Loads	5,860	0	0	0	0	0	0	0	0	0	5,860			
926-A and G Loads	44,767	0	11,826	11,826	11,684	11,637	0	0	0	0	91,741			
928-AFUDC Debt Reg	51,093	0	0	0	0	0	0	0	0	0	51,093			
929-AFUDC - Equity Regular	69,793	0	0	0	0	0	0	0	0	0	69,793			
937-San Juan AR - Other	-1,034,139	0	-211,119	-211,119	-208,581	-207,735	0	0	0	0	-1,872,693			
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0			
Cost Sum	1,022,077	0	299,707	299,707	296,103	294,902	0	0	0	0	2,212,496			
825-Clearings	0	0	0	0	0	-2,212,496	0	0	0	0	-2,212,496			
Clr Sum	0	0	0	0	0	-2,212,496	0	0	0	0	-2,212,496			
Proj Net	1,022,077	0	299,707	299,707	296,103	-1,917,594	0	0	0	0	0			

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76617109	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	33,408	0	0	0	0	0	0	0	0	0	0	0	0	33,408
	120-Overtime-General	1,181	0	0	0	0	0	0	0	0	0	0	0	0	1,181
	350-Material Issues-Major	1,247,455	0	0	0	0	0	0	0	0	0	0	0	0	1,247,455
	370-Outside Services	2,580,670	0	0	0	0	0	0	0	0	0	0	0	0	2,580,670
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	3,145	0	0	0	0	0	0	0	0	0	0	0	0	3,145
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	2,359	0	0	0	0	0	0	0	0	0	0	0	0	2,359
	914-Pension and Benefits Load	10,835	0	0	0	0	0	0	0	0	0	0	0	0	10,835
	915-Injuries and Damages Load	928	0	0	0	0	0	0	0	0	0	0	0	0	928
	918-San Juan AR-Labor	-26,160	0	0	0	0	0	0	0	0	0	0	0	0	-26,160
	921-Stores / Purchasing Load	12,880	0	0	0	0	0	0	0	0	0	0	0	0	12,880
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	5,860	0	0	0	0	0	0	0	0	0	0	0	0	5,860
	926-A and G Loads	91,741	0	0	0	0	0	0	0	0	0	0	0	0	91,741
	928-AFUDC Debt Reg	51,093	0	0	0	0	0	0	0	0	0	0	0	0	51,093
	929-AFUDC - Equity Regular	69,793	0	0	0	0	0	0	0	0	0	0	0	0	69,793
	937-San Juan AR - Other	-1,872,693	0	0	0	0	0	0	0	0	0	0	0	0	-1,872,693
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	2,212,496	0	0	0	0	0	0	0	0	0	0	0	0	2,212,496
	825-Clearings	-2,212,496	0	0	0	0	0	0	0	0	0	0	0	0	-2,212,496
	Clr Sum	-2,212,496	0	0	0	0	0	0	0	0	0	0	0	0	-2,212,496
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76617109	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	33,408	0	0	0	0	0	0	0	0	0	0	0	0	33,408
	120-Overtime-General	1,181	0	0	0	0	0	0	0	0	0	0	0	0	1,181
	350-Material Issues-Major	1,247,455	0	0	0	0	0	0	0	0	0	0	0	0	1,247,455
	370-Outside Services	2,580,670	0	0	0	0	0	0	0	0	0	0	0	0	2,580,670
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	3,145	0	0	0	0	0	0	0	0	0	0	0	0	3,145
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	2,359	0	0	0	0	0	0	0	0	0	0	0	0	2,359
	914-Pension and Benefits Load	10,835	0	0	0	0	0	0	0	0	0	0	0	0	10,835
	915-Injuries and Damages Load	928	0	0	0	0	0	0	0	0	0	0	0	0	928
	918-San Juan AR-Labor	-26,160	0	0	0	0	0	0	0	0	0	0	0	0	-26,160
	921-Stores / Purchasing Load	12,880	0	0	0	0	0	0	0	0	0	0	0	0	12,880
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	5,860	0	0	0	0	0	0	0	0	0	0	0	0	5,860
	926-A and G Loads	91,741	0	0	0	0	0	0	0	0	0	0	0	0	91,741
	928-AFUDC Debt Reg	51,093	0	0	0	0	0	0	0	0	0	0	0	0	51,093
	929-AFUDC - Equity Regular	69,793	0	0	0	0	0	0	0	0	0	0	0	0	69,793
	937-San Juan AR - Other	-1,872,693	0	0	0	0	0	0	0	0	0	0	0	0	-1,872,693
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	2,212,496	0	0	0	0	0	0	0	0	0	0	0	0	2,212,496
	825-Clearings	-2,212,496	0	0	0	0	0	0	0	0	0	0	0	0	-2,212,496
	Clr Sum	-2,212,496	0	0	0	0	0	0	0	0	0	0	0	0	-2,212,496
	Proj Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Project No: 76617332 Plant Common Shumway Arroyo Slurry Wall and Water Containment

Company: 003
Location: 766 San Juan

Project Information

Construction Start Date 1/1/2015 Estimated Completion Date 9/30/2015

List Interim In-Service Dates

0

Project Need Justification

A Consent Decree has been approved and entered by the U.S. District Court for the District of New Mexico which settles a lawsuit between PNM and the Sierra Club. Under the terms of the Consent Decree, PNM is required to implement improvements to recover ground water that flows under the San Juan Generating Station property. PNM is required to spend a minimum of \$6 million on ground water related projects.

This project is included in the test period projected balances for CWIP related to generation, transmission, distribution, and general and intangible plant as of September 30, 2016 that are projected to be in service within five months after the end of the test period.

Pursuant to NMSA 1978, § 62-6-14(E), a utility is allowed to request to include in rate base CWIP for projects that are projected to be in service the lesser of five months after the end of the test period or 24 months after the end of the base period. PNM is requesting the inclusion of CWIP balances for projects such as this one with a projected in-service date by February 2017.

Project Alternatives

There are no alternatives. All aspects of the project are subject to the terms of the Consent Decree approved and entered by the Court. The Consent Decree requires site-specific design criteria and construction standards which were developed in conjunction with PNM technical experts and PNM's contracted geotechnical and civil engineering firms.

Technical Aspects

Per the requirements of the Consent Decree, the Shumway Arroyo Slurry Wall project will generally consist of a subsurface barrier wall, groundwater recovery trench, pump back system and a storm water bypass facility. Water impounded behind the wall is pumped to the plant's evaporation ponds.

The conceptual design for the barrier wall is a soil-bentonite wall approximately 800 feet long and will extend up to 43 feet below the ground surface. The groundwater recovery trench will be of similar size and will be located 30 feet upstream of the barrier wall. The final route for the pump back system

pipeline has not yet been determined but the conceptual design includes an 8 inch pipe extending between 7,300 feet and 8,800 feet in length. A booster station will also be required along with electric service. The conceptual design for the storm water bypass facility includes box culverts, riprap aprons, concrete aprons and a concrete-lined spillway.

Project Estimate Approach

The cost estimate was prepared by a geotechnical and civil engineering firm whose experts have been involved in numerous projects of similar scope worldwide. The geotechnical investigation, design and construction estimates comprise approximately \$4,500,000. The remaining costs contributing to the total project cost includes land acquisition, outside legal fees, permitting, surveying, road construction and PNM labor.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76617332	Year	2015									
	Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	159,715	0	0	0	0	0	0	0	0	0	159,715
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	291,607	0	0	0	0	0	0	0	0	0	291,607
	370-Outside Services	101,366	22,000	27,000	27,000	27,000	55,500	94,500	45,500	26,000	16,000	441,866
	374-Outside Svcs Legal	43,670	0	0	0	0	0	0	0	0	0	43,670
	377-Outside Services-Temp Labor	48,578	0	0	0	0	0	0	0	0	0	48,578
391-Jt Proj Bills to PNM-Non-Labor		0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	2,364	0	0	0	0	0	0	0	0	0	2,364
	805-Land and Land Rights	86,845	0	0	0	0	0	0	0	0	0	86,845
807-Non Refundable Contribution		0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	10,977	0	0	0	0	0	0	0	0	0	10,977
	914-Pension and Benefits Load	50,354	0	0	0	0	0	0	0	0	0	50,354
	915-Injuries and Damages Load	4,457	0	0	0	0	0	0	0	0	0	4,457
	918-San Juan AR-Labor	-117,844	0	0	0	0	0	0	0	0	0	-117,844
	921-Stores / Purchasing Load	2,966	0	0	0	0	0	0	0	0	0	2,966
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	4,773	0	0	0	0	0	0	0	0	0	4,773
	926-A and G Loads	17,499	521	640	640	640	1,315	2,240	1,078	616	379	25,569
	928-AFUDC Debt Reg	18,343	1,165	1,210	1,260	1,309	1,381	1,506	1,624	1,689	1,733	31,221
	929-AFUDC - Equity Regular	24,846	1,664	1,728	1,799	1,870	1,972	2,151	2,319	2,412	2,474	43,234
	937-San Juan AR - Other	-304,942	-9,308	-11,423	-11,423	-11,423	-23,481	-39,982	-19,250	-11,000	-6,769	-449,002
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	445,576	16,042	19,155	19,275	19,396	36,688	60,415	31,271	19,718	13,816	681,352
	825-Clearings	0	0	0	0	0	0	0	0	0	0	0
	Clr Sum	0	0	0	0	0	0	0	0	0	0	0
Proj Net		445,576	16,042	19,155	19,275	19,396	36,688	60,415	31,271	19,718	13,816	681,352

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	76617332	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	159,715	0	0	0	0	0	0	0	0	0	0	0	0	159,715
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	291,607	0	0	0	0	0	0	0	0	0	0	0	0	291,607
	370-Outside Services	441,866	0	0	0	0	0	0	1,215,000	1,215,000	1,215,000	1,215,000	0	0	5,301,866
	374-Outside Svcs Legal	43,670	0	0	0	0	0	0	0	0	0	0	0	0	43,670
	377-Outside Services-Temp Labor	48,578	0	0	0	0	0	0	0	0	0	0	0	0	48,578
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	2,364	0	0	0	0	0	0	0	0	0	0	0	0	2,364
	805-Land and Land Rights	86,845	0	0	0	0	0	0	0	0	0	0	0	0	86,845
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	10,977	0	0	0	0	0	0	0	0	0	0	0	0	10,977
	914-Pension and Benefits Load	50,354	0	0	0	0	0	0	0	0	0	0	0	0	50,354
	915-Injuries and Damages Load	4,457	0	0	0	0	0	0	0	0	0	0	0	0	4,457
	918-San Juan AR-Labor	-117,844	0	0	0	0	0	0	0	0	0	0	0	0	-117,844
	921-Stores / Purchasing Load	2,966	0	0	0	0	0	0	0	0	0	0	0	0	2,966
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	4,773	0	0	0	0	0	0	0	0	0	0	0	0	4,773
	926-A and G Loads	25,569	0	0	0	0	0	0	28,796	28,796	28,796	28,796	0	0	140,753
	928-AFUDC Debt Reg	31,221	1,192	1,194	1,197	1,199	1,201	1,203	1,843	3,124	4,406	5,691	0	0	53,471
	929-AFUDC - Equity Regular	43,234	0	0	0	0	0	0	0	0	0	0	0	0	43,234
	937-San Juan AR - Other	-449,002	0	0	0	0	0	0	-514,048	-514,048	-514,048	-514,048	0	0	-2,505,194
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	681,352	1,192	1,194	1,197	1,199	1,201	1,203	731,591	732,872	734,154	735,439	0	0	3,622,594
	825-Clearings	0	0	0	0	0	0	0	0	0	0	-3,622,591	0	0	-3,622,591
	Clr Sum	0	0	0	0	0	0	0	0	0	0	-3,622,591	0	0	-3,622,591
	Proj Net	681,352	1,192	1,194	1,197	1,199	1,201	1,203	731,591	732,872	734,154	-2,887,152	0	0	3

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76617332	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	159,715	0	0	0	0	0	0	0	0	0	0	0	0	159,715
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	291,607	0	0	0	0	0	0	0	0	0	0	0	0	291,607
	370-Outside Services	5,301,866	0	0	0	0	0	0	0	0	0	0	0	0	5,301,866
	374-Outside Svcs Legal	43,670	0	0	0	0	0	0	0	0	0	0	0	0	43,670
	377-Outside Services-Temp Labor	48,578	0	0	0	0	0	0	0	0	0	0	0	0	48,578
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	2,364	0	0	0	0	0	0	0	0	0	0	0	0	2,364
	805-Land and Land Rights	86,845	0	0	0	0	0	0	0	0	0	0	0	0	86,845
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	10,977	0	0	0	0	0	0	0	0	0	0	0	0	10,977
	914-Pension and Benefits Load	50,354	0	0	0	0	0	0	0	0	0	0	0	0	50,354
	915-Injuries and Damages Load	4,457	0	0	0	0	0	0	0	0	0	0	0	0	4,457
	918-San Juan AR-Labor	-117,844	0	0	0	0	0	0	0	0	0	0	0	0	-117,844
	921-Stores / Purchasing Load	2,966	0	0	0	0	0	0	0	0	0	0	0	0	2,966
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	4,773	0	0	0	0	0	0	0	0	0	0	0	0	4,773
	926-A and G Loads	140,753	0	0	0	0	0	0	0	0	0	0	0	0	140,753
	928-AFUDC Debt Reg	53,471	0	0	0	0	0	0	0	0	0	0	0	0	53,471
	929-AFUDC - Equity Regular	43,234	0	0	0	0	0	0	0	0	0	0	0	0	43,234
	937-San Juan AR - Other	-2,505,194	0	0	0	0	0	0	0	0	0	0	0	0	-2,505,194
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	3,622,594	0	0	0	0	0	0	0	0	0	0	0	0	3,622,594
	825-Clearings	-3,622,591	0	0	0	0	0	0	0	0	0	0	0	0	-3,622,591
	Clr Sum	-3,622,591	0	0	0	0	0	0	0	0	0	0	0	0	-3,622,591
Proj Net		3	0	0	0	0	0	0	0	0	0	0	0	0	3

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Project No: 76617724 Plant Common North Side Wastewater Product Line Replacement

Company: 003
Location: 766 San Juan

Project Information

Construction Start Date Estimated Completion Date 07/31/16

List Interim In-Service Dates

These projects will be in service on or before December 31, 2016

Project Need Justification

The existing line, known as North Side Wastewater Product Line, from evaporation pond #3 to brine concentrator #5 is routed under the limestone storage pile. While reclaiming limestone from the storage pile, the line has been hit several times, sometimes damaged and sometimes resulting in an uncontrolled discharge of process waters. Replacement and relocation is required to insure system reliability and to reduce the risk of an uncontrolled liquid discharge.

This project is being executed in a year when there are no planned unit outages. Executing projects of this nature in non-outage years helps balance year over year capital spend and also the workload of project managers.

The scope of work includes installing approximately 700 feet of 16" HDPE pipe. HDPE material is the appropriate material selection for handling process waters from the process pond to the brine concentrator. The piping will follow a new alignment that is not underneath the limestone pile. Approximately 420 feet of the pipe will be encased in concrete. The entire length of piping will be installed below grade.

Project Alternatives

Replacement is needed due to damage to the existing line. The rerouting and concrete encasement are improvements over the original design. The expected life of the new installation will coincide with the expiration of the San Juan Participation Agreement.

The chemistry of the process water drives the material selection. HDPE is the most cost-effective material for this application. A higher cost option would be stainless steel but was determined to not be necessary for this project.

Technical Aspects

In kind replacement of 16" water line - approximately 700 feet. Some minor pipe routing changes may be made to facilitate installation and future maintenance. Portions of the line underneath high traffic areas will be encased in concrete.

Projects with clearings in 2015 and 2016, Budget data for 2015 – 2017

Project Estimate Approach

The cost estimate was prepared by a civil engineering firm which has been involved in numerous projects of similar scope.

The cost estimate was further refined after competitive bids were received in September 2014. There were three bidders including the recommended bidder, AUI, Inc. of Albuquerque, NM.

As with all heavy civil construction projects, this cost estimate is 65% construction labor and equipment, 20% materials, 10% engineering and project management, 5% quality control, 4% general and administrative overheads and 1% AFUDC.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	76617724	Year	2015											
Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total			
110-Straight Time-General	4,954	0	0	0	0	0	0	0	0	0	4,954			
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0			
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0			
370-Outside Services	96,291	0	0	0	0	0	0	0	0	0	96,291			
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0			
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0			
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0			
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0			
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0			
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0			
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0			
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0			
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0			
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0			
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0			
913-Payroll Taxes Load	334	0	0	0	0	0	0	0	0	0	334			
914-Pension and Benefits Load	1,413	0	0	0	0	0	0	0	0	0	1,413			
915-Injuries and Damages Load	120	0	0	0	0	0	0	0	0	0	120			
918-San Juan AR-Labor	-3,354	0	0	0	0	0	0	0	0	0	-3,354			
921-Stores / Purchasing Load	955	0	0	0	0	0	0	0	0	0	955			
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0			
925-E and S Loads	1,001	0	0	0	0	0	0	0	0	0	1,001			
926-A and G Loads	2,400	0	0	0	0	0	0	0	0	0	2,400			
928-AFUDC Debt Reg	702	0	0	0	0	0	0	0	0	0	702			
929-AFUDC - Equity Regular	1,029	0	0	0	0	0	0	0	0	0	1,029			
937-San Juan AR - Other	-44,246	0	0	0	0	0	0	0	0	0	-44,246			
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0			
Cost Sum	61,597	0	0	0	0	0	0	0	0	0	61,597			
825-Clearings	0	0	0	0	0	0	0	0	0	0	0			
Clr Sum	0	0	0	0	0	0	0	0	0	0	0			
Proj Net	61,597	0	0	0	0	0	0	0	0	0	61,597			

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project 76617724	Year	2016												
Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
110-Straight Time-General	4,954	0	0	0	0	0	0	0	0	0	0	0	0	4,954
120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
370-Outside Services	96,291	0	0	96,500	96,500	579,000	579,000	579,000	0	0	0	0	0	2,026,291
374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
913-Payroll Taxes Load	334	0	0	0	0	0	0	0	0	0	0	0	0	334
914-Pension and Benefits Load	1,413	0	0	0	0	0	0	0	0	0	0	0	0	1,413
915-Injuries and Damages Load	120	0	0	0	0	0	0	0	0	0	0	0	0	120
918-San Juan AR-Labor	-3,354	0	0	0	0	0	0	0	0	0	0	0	0	-3,354
921-Stores / Purchasing Load	955	0	0	0	0	0	0	0	0	0	0	0	0	955
922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
925-E and S Loads	1,001	0	0	0	0	0	0	0	0	0	0	0	0	1,001
926-A and G Loads	2,400	0	0	2,287	2,287	13,722	13,722	13,722	0	0	0	0	0	48,140
928-AFUDC Debt Reg	702	0	0	0	0	0	0	0	0	0	0	0	0	702
929-AFUDC - Equity Regular	1,029	0	0	0	0	0	0	0	0	0	0	0	0	1,029
937-San Juan AR - Other	-44,246	0	0	-40,828	-40,828	-244,966	-244,966	-244,966	0	0	0	0	0	-860,800
961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cost Sum	61,597	0	0	57,959	57,959	347,756	347,756	347,756	0	0	0	0	0	1,220,783
825-Clearings	0	0	0	0	0	0	0	-1,220,784	0	0	0	0	0	-1,220,784
Clr Sum	0	0	0	0	0	0	0	-1,220,784	0	0	0	0	0	-1,220,784
Proj Net	61,597	0	0	57,959	57,959	347,756	347,756	-873,028	0	0	0	0	0	-1

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	76617724	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	4,954	0	0	0	0	0	0	0	0	0	0	0	0	4,954
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	2,026,291	0	0	0	0	0	0	0	0	0	0	0	0	2,026,291
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	334	0	0	0	0	0	0	0	0	0	0	0	0	334
	914-Pension and Benefits Load	1,413	0	0	0	0	0	0	0	0	0	0	0	0	1,413
	915-Injuries and Damages Load	120	0	0	0	0	0	0	0	0	0	0	0	0	120
	918-San Juan AR-Labor	-3,354	0	0	0	0	0	0	0	0	0	0	0	0	-3,354
	921-Stores / Purchasing Load	955	0	0	0	0	0	0	0	0	0	0	0	0	955
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	1,001	0	0	0	0	0	0	0	0	0	0	0	0	1,001
	926-A and G Loads	48,140	0	0	0	0	0	0	0	0	0	0	0	0	48,140
	928-AFUDC Debt Reg	702	0	0	0	0	0	0	0	0	0	0	0	0	702
	929-AFUDC - Equity Regular	1,029	0	0	0	0	0	0	0	0	0	0	0	0	1,029
	937-San Juan AR - Other	-860,800	0	0	0	0	0	0	0	0	0	0	0	0	-860,800
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	1,220,783	0	0	0	0	0	0	0	0	0	0	0	0	1,220,783
	825-Clearings	-1,220,784	0	0	0	0	0	0	0	0	0	0	0	0	-1,220,784
	Clr Sum	-1,220,784	0	0	0	0	0	0	0	0	0	0	0	0	-1,220,784
	Proj Net	-1	0	0	0	0	0	0	0	0	0	0	0	0	-1

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Project No: 77021913 SJGS SNCR costs PNM Share

Company: 003
Location: 770 San Juan

Project Information

Construction Start Date 11/1/2012 Estimated Completion Date 03/31/2015

List Interim In-Service Dates

Project Need Justification

The San Juan SNCR Project encompasses both the installation of SNCR on San Juan Units 1 and 4 as required by the Revised State Implementation Plan (SIP) as well as the conversion of these units to a balanced draft configuration. They are denoted on the capital list as projects "SJ U1 SNCR", SJ U4 SNCR", and "SJGS SNCR costs PNM Share".

As these units have aged, and after experiencing numerous start-up cycles, the flue gas pressure boundary has deteriorated. This deterioration allows ash-laden flue gases and coal particles to escape from the boiler, flues, ducts, and other air or flue gas path components. Ash and coal that accumulates outside of the boiler pressure boundary pose various maintenance, health, and safety issues.

The environmental regulators are aware of these issues and the resulting potential compliance issues related to PM emissions under the NAAQS. For this reason, the NMED, as part of an amendment to San Juan's NSR permit, required that San Juan convert to a balanced draft configuration.

Balanced draft will help ensure demonstrated compliance with the NAAQS and result in a significant reduction in fugitive emissions which provides a myriad of operational benefits, including a cleaner workplace. This project will substantially reduce the escape of ash, coal particles, and ammonia.

The SJGS SNCR costs PNM Share project captured costs directly associated with planning the SNCR and balanced draft technology project. These costs were accumulated in account 183000, Preliminary Surveys. PNM's share of these costs were transferred to capital.

Project Alternatives

Effective September 21, 2011 the United States Environmental Protection Agency ("EPA") adopted the Federal Implementation Plan ("FIP") establishing selective catalytic control ("SCR") technology as Best Available Retrofit Technology ("BART") for San Juan Generating Station ("SJGS") to meet the requirements of EPA's Regional Haze Rule under the Clean Air Act ("CAA"). Among other things, the FIP established a limit on nitrogen oxide ("NOx") emissions of no more than 0.05 lb. /MMBtu (pounds per million British Thermal Units) at each unit of SJGS. EPA determined that the NOx emissions limits can only be achieved by installing SCR. EPA required SJGS to meet this limit by September 21, 2016. 76 Fed. Reg. 52388-52389 (Aug. 22, 2011). New Mexico submitted a revised "RSIP" identifying a less expensive technology, Selective Non-Catalytic Reduction ("SNCR"), as BART for NOx emissions. 76 Fed. Reg. at 52394.

Among other things, the RSIP sets out a process and timeline whereby BART compliance would be achieved by the retirement of SJGS Units 2 and 3 by December 1, 2017, with SNCR to be installed on Units 1 and 4 by January 31, 2016.

clearings in 2015 and 2016, Budget data for 2015 – 2017

The RSIP was submitted to EPA on October 7, 2013. The EPA determined that the RSIP was complete on December 17, 2013, and granted final approval on October 9, 2014.

The RSIP for SJGS addresses the Regional Haze rule and provides significant additional environmental benefits at a lower cost than the FIP including reductions associated with:

- Nitrogen oxides, sulfur dioxide, particulate matter, carbon dioxide and mercury- approximately 50%
- Water Consumption- about 53%
- Coal Ash Generation- about 48%
- Truck Traffic (hauling coal ash back to the mine) and Raw Material Deliveries and
- Visible Plumes (reduces stacks from four to two)

In addition, the RSIP plays a significant role in the state of New Mexico's compliance with the recently finalized Clean Power Plan under the Clean Air Act Section 111(d).

In a September 2011 Title V permit application, after consultation with the NMED concerning San Juan's fugitive emissions, PNM made the commitment to convert to balanced draft when the boilers were upgraded to meet the Regional Haze Federal or State Implementation Plan. In a subsequent NSR permit modification issued by NMED in August 2012 that allowed the installation of either SCR under the federal plan or SNCR under that state plan, NMED required San Juan to install balanced draft.

Technical Aspects

SNCR is a post-combustion control technology for NOx emissions. In very general terms, SNCR uses an amine-based reagent (urea in San Juan's case) which is injected into the boiler and reacts with NOx to reduce it to molecular nitrogen (N2) and water. In order to inject the reagent, the boiler walls must be penetrated and lances must be installed for the delivery of the reagent into the heated boiler. PNM Witness J. Edward Cichanowicz provided a more detailed description of the installation of SNCR at San Juan and the processes that reduce the emission of NOx in NMPRC Case 13-00390-UT. Like many power plants of the same vintage, the San Juan boilers were originally designed with only forced draft ("F.D.") fans. These boilers and associated flues and ducts operate at positive pressure. As these units have aged, and after experiencing numerous start-up cycles, the flue gas pressure boundary has typically deteriorated. This deterioration allows ash-laden flue gases and coal particles to escape from the boiler, flues, ducts and other air or flue gas path components. Ash and coal that accumulates outside of the boiler pressure boundary pose various maintenance, health and safety issues. The environmental regulators are aware of these issues and the resulting potential compliance issues related to PM emissions under the NAAQS. For this reason, the NMED, as part of an amendment to San Juan's NSR permit, required that San Juan convert to a balanced draft configuration. Balanced draft is achieved by installing induced draft ("I.D.") fans to balance the pressure in the boilers, flues and ducts. This greatly lessens the escape of ash, coal particles and ammonia caused by the positive pressures created by the F.D. fans. Due to changes in operational pressures, other modifications, such as boiler stiffening, are also often necessary to convert to a balanced draft configuration. As stated above, balanced draft will help ensure demonstrated compliance with the NAAQS and result in a significant reduction in fugitive emissions which provides myriad operational benefits, including a cleaner workplace. On a related note, the chemical reaction associated with the operation of SNCR results in the generation of ammonia. The balanced draft conversion will mitigate workplace exposure to ammonia fumes caused by the SNCR process. In addition, PNM and the other San Juan owners are taking a long-range view for San Juan. Balanced draft is an essential element in any state-of-the-art coal power plant emission controls.

Project Estimate Approach

Original estimates were provided by Sargent & Lundy LLC, a leading engineering firm in the utility industry which has executed numerous projects of this nature. These costs are also reasonable as confirmed by Mr. J. Edward Cichanowicz in NMPRC Case No. 13-00390-UT. All equipment for the project is being provided under firm price contracts which have been fully executed. A proposal for construction services to install all equipment has been fully negotiated and is in the process of being executed by PNM and its contracting partner, Graycor Industrial Constructors. The value of the contract is \$27.3 million. Equipment contracts have a combined value of roughly \$25 million. The balance of the cost estimate includes engineering, construction management, project management, insurance, and general and administrative loads.

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 01

Project	77021913	Year	2015									
	Cost_Type	Bal 3/31/15	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	166,530	0	0	0	0	0	0	0	0	0	166,530
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	893,513	0	0	0	0	0	0	0	0	0	893,513
	370-Outside Services	1,411,430	0	0	0	0	0	0	0	0	0	1,411,430
	374-Outside Svcs Legal	89,881	0	0	0	0	0	0	0	0	0	89,881
	377-Outside Services-Temp Labor	515	0	0	0	0	0	0	0	0	0	515
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	35,364	0	0	0	0	0	0	0	0	0	35,364
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	10,858	0	0	0	0	0	0	0	0	0	10,858
	914-Pension and Benefits Load	53,255	0	0	0	0	0	0	0	0	0	53,255
	915-Injuries and Damages Load	4,462	0	0	0	0	0	0	0	0	0	4,462
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	14,486	0	0	0	0	0	0	0	0	0	14,486
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	25,987	0	0	0	0	0	0	0	0	0	25,987
	928-AFUDC Debt Reg	117,791	7,693	7,741	7,789	7,838	7,887	7,936	7,986	8,036	8,086	188,784
	929-AFUDC - Equity Regular	161,273	10,984	11,053	11,122	11,191	11,261	11,332	11,403	11,474	11,546	262,638
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	2,985,344	18,677	18,793	18,911	19,029	19,148	19,268	19,389	19,510	19,632	3,157,702
	825-Clearings	0	0	0	0	0	0	0	0	0	-3,157,702	-3,157,702
	Clr Sum	0	0	0	0	0	0	0	0	0	-3,157,702	-3,157,702
	Proj Net	2,985,344	18,677	18,793	18,911	19,029	19,148	19,268	19,389	19,510	-3,138,070	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	77021913	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	166,530	0	0	0	0	0	0	0	0	0	0	0	0	166,530
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	893,513	0	0	0	0	0	0	0	0	0	0	0	0	893,513
	370-Outside Services	1,411,430	0	0	0	0	0	0	0	0	0	0	0	0	1,411,430
	374-Outside Svcs Legal	89,881	0	0	0	0	0	0	0	0	0	0	0	0	89,881
	377-Outside Services-Temp Labor	515	0	0	0	0	0	0	0	0	0	0	0	0	515
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	35,364	0	0	0	0	0	0	0	0	0	0	0	0	35,364
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	10,858	0	0	0	0	0	0	0	0	0	0	0	0	10,858
	914-Pension and Benefits Load	53,255	0	0	0	0	0	0	0	0	0	0	0	0	53,255
	915-Injuries and Damages Load	4,462	0	0	0	0	0	0	0	0	0	0	0	0	4,462
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	14,486	0	0	0	0	0	0	0	0	0	0	0	0	14,486
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	25,987	0	0	0	0	0	0	0	0	0	0	0	0	25,987
	928-AFUDC Debt Reg	188,784	0	0	0	0	0	0	0	0	0	0	0	0	188,784
	929-AFUDC - Equity Regular	262,638	0	0	0	0	0	0	0	0	0	0	0	0	262,638
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	3,157,702	0	0	0	0	0	0	0	0	0	0	0	0	3,157,702
	825-Clearings	-3,157,702	0	0	0	0	0	0	0	0	0	0	0	0	-3,157,702
	Clr Sum	-3,157,702	0	0	0	0	0	0	0	0	0	0	0	0	-3,157,702
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	77021913	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	166,530	0	0	0	0	0	0	0	0	0	0	0	0	166,530
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	893,513	0	0	0	0	0	0	0	0	0	0	0	0	893,513
	370-Outside Services	1,411,430	0	0	0	0	0	0	0	0	0	0	0	0	1,411,430
	374-Outside Svcs Legal	89,881	0	0	0	0	0	0	0	0	0	0	0	0	89,881
	377-Outside Services-Temp Labor	515	0	0	0	0	0	0	0	0	0	0	0	0	515
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	35,364	0	0	0	0	0	0	0	0	0	0	0	0	35,364
	805-Land and Land Rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	10,858	0	0	0	0	0	0	0	0	0	0	0	0	10,858
	914-Pension and Benefits Load	53,255	0	0	0	0	0	0	0	0	0	0	0	0	53,255
	915-Injuries and Damages Load	4,462	0	0	0	0	0	0	0	0	0	0	0	0	4,462
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	14,486	0	0	0	0	0	0	0	0	0	0	0	0	14,486
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	25,987	0	0	0	0	0	0	0	0	0	0	0	0	25,987
	928-AFUDC Debt Reg	188,784	0	0	0	0	0	0	0	0	0	0	0	0	188,784
	929-AFUDC - Equity Regular	262,638	0	0	0	0	0	0	0	0	0	0	0	0	262,638
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	3,157,702	0	0	0	0	0	0	0	0	0	0	0	0	3,157,702
	825-Clearings	-3,157,702	0	0	0	0	0	0	0	0	0	0	0	0	-3,157,702
	Clr Sum	-3,157,702	0	0	0	0	0	0	0	0	0	0	0	0	-3,157,702
Proj Net		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Solar

Company: 003
Location: 755 Solar

Construction Start Date	1/1/2015	Estimated Completion Date	12/31/2015
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This new solar construction project was approved by the NMPRC in November 2014. PNM needs to add renewable resources to meet its required Renewable Portfolio Standards (RPS). The Renewable Energy Credits (RECs) from these facilities are required to meet the projected RPS quantity requirements. Additionally, the added 40MW of solar capacity adds systems benefits by lowering system fuel costs and system fuel cost volatility. The 40MW will be spread across 4 solar sites that will be disbursed in PNM's service territory and Path 48 area for system performance and diversity (serving PNM metro service area, generally from Belen to Santa Fe). The approved funds will be used to purchase the constructed solar facilities from two selected suppliers (all labor and materials will be the responsibility of the suppliers)..

PNM issued an RFP for renewable energy resources or Renewable Energy Credits (RECs) to meet its 2016 RPS requirements. Various options for complying with the RPS were identified from the bids received, including solar, wind, biomass, and Renewable Energy Credit-only alternatives. The Company's analysis and financial models indicated this 40 MW solar project was the best option for meeting required portfolio requirements. The 40MW facility will be the least cost solar resource on PNM's system in terms of \$/kW and \$/MWh levelized cost.

The 40MW, single axis solar trackers will be split between 4 sites in PNM's distribution territory with a targeted size of 10MW for each site. The trackers will connect directly to PNM distribution lines to avoid timely and costly interconnection to high-voltage transmission lines. The relatively small size and localized nature of the installations make it unnecessary to incur costs for the construction of back-up generation facilities (as is typically required for large solar installations). The selected solar modules are polycrystalline as opposed to thin-film technology based on their lower costs as reflected in the suppliers' bids. PNM also has experience with polycrystalline modules at its Prosperity site.

The estimate for this project was developed through an RFP process employed by PNM to meet its 2016 RPS requirement. The request specified that bids may include bundled energy (energy purchases and RECs), stand-alone RECs, and for both Purchase Power Agreements and turnkey projects in which the contractor would construct the project and PNM would acquire ownership. A two-phased process was employed to evaluate the 45 bids that were received

Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

for solar energy, wind energy, and “other” energy. PNM determined that a solar turnkey project would be most cost effective in Phase I and then worked with two supplier teams to finalize the project estimates (each constructing 20MW of capacity) that will result in the least cost solar resource on PNM’s system. All labor and materials costs will be the responsibility of the suppliers.

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Cost Year 01

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 02

Project	75518015	Year	2016												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	19,167	0	0	0	0	0	0	0	0	0	0	0	0	19,167
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	35,695	0	0	0	0	0	0	0	0	0	0	0	0	35,695
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	1,152,537	0	0	0	0	0	0	0	0	0	0	0	0	1,152,537
	805-Land and Land Rights	752,958	0	0	0	0	0	0	0	0	0	0	0	0	752,958
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	75,611,142	0	0	0	0	0	0	0	0	0	0	0	0	75,611,142
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	1,284	0	0	0	0	0	0	0	0	0	0	0	0	1,284
	914-Pension and Benefits Load	5,803	0	0	0	0	0	0	0	0	0	0	0	0	5,803
	915-Injuries and Damages Load	937	0	0	0	0	0	0	0	0	0	0	0	0	937
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	136	0	0	0	0	0	0	0	0	0	0	0	0	136
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	928-AFUDC Debt Reg	708,568	0	0	0	0	0	0	0	0	0	0	0	0	708,568
	929-AFUDC - Equity Regular	1,011,821	0	0	0	0	0	0	0	0	0	0	0	0	1,011,821
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	79,300,048	0	0	0	0	0	0	0	0	0	0	0	0	79,300,048
	825-Clearings	-79,299,998	0	0	0	0	0	0	0	0	0	0	0	0	-79,299,998
	Clr Sum	-79,299,998	0	0	0	0	0	0	0	0	0	0	0	0	-79,299,998
	Proj Net	50	0	0	0	0	0	0	0	0	0	0	0	0	50

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Projects with clearings in 2015 and 2016, Budget data for 2015 - 2017

Cost Year 03

Project	75518015	Year	2017												
	Cost_Type	BegBal	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
	110-Straight Time-General	19,167	0	0	0	0	0	0	0	0	0	0	0	0	19,167
	120-Overtime-General	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	350-Material Issues-Major	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	370-Outside Services	35,695	0	0	0	0	0	0	0	0	0	0	0	0	35,695
	374-Outside Svcs Legal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	377-Outside Services-Temp Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	391-Jt Proj Bills to PNM-Non-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	530-Employee Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	610-Expenses - General	1,152,537	0	0	0	0	0	0	0	0	0	0	0	0	1,152,537
	805-Land and Land Rights	752,958	0	0	0	0	0	0	0	0	0	0	0	0	752,958
	807-Non Refundable Contribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	829-Construction Adjustment	75,611,142	0	0	0	0	0	0	0	0	0	0	0	0	75,611,142
	426-Capitalized Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	908-Luna AR - Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	909-Luna AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	913-Payroll Taxes Load	1,284	0	0	0	0	0	0	0	0	0	0	0	0	1,284
	914-Pension and Benefits Load	5,803	0	0	0	0	0	0	0	0	0	0	0	0	5,803
	915-Injuries and Damages Load	937	0	0	0	0	0	0	0	0	0	0	0	0	937
	918-San Juan AR-Labor	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	921-Stores / Purchasing Load	136	0	0	0	0	0	0	0	0	0	0	0	0	136
	922-Minor Material Load	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	925-E and S Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	926-A and G Loads	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	928-AFUDC Debt Reg	708,568	0	0	0	0	0	0	0	0	0	0	0	0	708,568
	929-AFUDC - Equity Regular	1,011,821	0	0	0	0	0	0	0	0	0	0	0	0	1,011,821
	937-San Juan AR - Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	961-Luna A&G PNMR D&V	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cost Sum	79,300,048	0	0	0	0	0	0	0	0	0	0	0	0	79,300,048
	825-Clearings	-79,299,998	0	0	0	0	0	0	0	0	0	0	0	0	-79,299,998
	Clr Sum	-79,299,998	0	0	0	0	0	0	0	0	0	0	0	0	-79,299,998
Proj Net		50	0	0	0	0	0	0	0	0	0	0	0	0	50

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