BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF PUBLIC SERVICE COMPANY OF NEW MEXICO'S CONSOLIDATED APPLICATION FOR APPROVALS FOR THE ABANDONMENT, FINANCING, AND RESOURCE REPLACEMENT FOR SAN JUAN GENERATING STATION PURSUANT TO THE ENERGY TRANSITION ACT	)	19-_____-UT

DIRECT TESTIMONY

OF

ROGER W. NAGEL

July 1, 2019

NMPRC CASE NO. 19-____-UT
INDEX TO THE DIRECT TESTIMONY OF
ROGER W. NAGEL

WITNESS FOR
PUBLIC SERVICE COMPANY OF NEW MEXICO

DIRECT TESTIMONY
OF ROGER W. NAGEL
NMPRC CASE NO. 19-_____-UT

I. INTRODUCTION AND PURPOSE

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

A. My name is Roger W. Nagel. I am a Vice President for the HDR Engineering Inc. ("HDR") Power Generation Practice. My business address is 315 E. Robinson Street, Suite 400, Orlando, Florida 32801.

Q. ON WHOSE BEHALF IS YOUR TESTIMONY BEING SUBMITTED?

A. My testimony is submitted in this proceeding before the New Mexico Public Regulation Commission ("NMPRC" or "Commission") on behalf of Public Service Company of New Mexico ("PNM" or "Company").

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL QUALIFICATIONS.

A. I have over 27 years of experience in the power generation industry with 7 years working as an engineering, procurement and construction ("EPC") contractor on the development and execution of natural gas, biomass, coal, and waste-fired generating units, both nationally and internationally; 3 years working for an original equipment manufacturer supplying equipment to coal and natural gas fueled facilities; and 17 years with HDR serving as an Owner's Engineer and power generation consultant engaging with coal, natural gas, biomass, biogas, solar, wind, various forms of energy storage including batteries, compressed air energy storage, and pumped hydro energy storage, waste-to-energy, geothermal,

and other power generation technologies. During this time with HDR, I have served as an Owner's Engineering Project Manager, Project Development Section Manager, Power Generation Consulting Lead, and most recently Power Generation Practice Leader since September 2017. I graduated with distinction from Purdue University in May, 1992, with a bachelor's degree in Mechanical Engineering. I am a Registered Professional Engineer in the State of Michigan. My experience and education are more fully described in PNM Exhibit RWN-1.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. My testimony:

1. Describes HDR's relevant capabilities and experience
2. Describes HDR's role and involvement in PNM's 2023 Generation RFP ("Replacement Resource RFP") process, including the supplemental Energy Storage RFP process
3. Describes the goals of the RFP process
4. Provides an overview of the RFP process
5. Provides an overview of the new generation resource selection process
6. States my opinion as to the fairness of the RFP process

Q. WHAT WAS THE PRIMARY RESULT OF HDR'S INVOLVEMENT IN THE RFP PROCESS?

A. Through the implementation of the RFPs and subsequent Phase One bid evaluation processes, HDR, in conjunction with the bid evaluation team, developed a shortlist

of bids to be considered for more in-depth system portfolio modeling to determine the reliable economic plan portfolio. The shortlist resulting from both the Replacement Resource RFP and the supplemental Energy Storage RFP contained 51 bids to proceed into the Phase Two evaluation with some of the bids including alternative offerings for varying project capacities. PNM Table RWN-1 provides a summary of the types of projects shortlisted as a result of the Phase One evaluation.

PNM Table RWN-1. Shortlist Content Summary

Technology	Quantity of Projects (some involve multiple size offerings)	Project Structure	Total Potential Capacity (MW/MWh)
Solar	9	8 PPA / 1 EPC	1,195 MW
Wind	5	PPA	1,500 MW
Battery	10	6 PPA / 4 EPC	784 MW / 2,935 MWH
Frame Combustion Turbine	4	EPC	800 MW
Aeroderivative Turbine	5	EPC	420 MW
Reciprocating Engines	3	2 EPC / 1 PPA	500 MW
Combined Solar / Battery	13	PPA	1,400 MW
Combined Wind /Battery	1	PPA	480 MW
Combined Solar/Wind	1	PPA	150 MW

Q. HAS YOUR FIRM PERFORMED SIMILAR RFP SERVICES AND RESPONSIBILITIES FOR OTHER UTILITIES IN THE PAST?

A. Yes. HDR is very active in integrated resource planning and RFP support for regulated utilities. Representative recent experience includes the following:

- NorthWestern Energy – South Dakota 2019 Capacity RFP
- NorthWestern Energy – Montana 2018 Capacity RFI
- NorthWestern Energy – Montana 2017 Capacity RFP

- Alliant Energy – Iowa Marshalltown Solar RFP
- Alliant Energy – Wisconsin 2018 Wind RFP
- Alliant Energy – Wisconsin Rock River Solar PPA RFP
- Alliant Energy – Wisconsin 2014 Non-Intermittent RFP
- Detroit Edison
- Louisville Gas & Electric|Kentucky Utilities

Furthermore, HDR has provided new generation resource technology characteristics to be used for Integrated Resource Plan ("IRP") system modeling purposes for utility clients including, but not limited to NVEnergy, Puget Sound Energy, Portland General Electric, Consumers Energy, and Holland Board of Public Works.

Additional background regarding HDR's capabilities and experience in the Power Generation industry is included in PNM Exhibit RWN-2.

Q. PLEASE DESCRIBE THE PROCESS BY WHICH PNM CAME TO CONTRACT WITH YOUR FIRM FOR OWNER'S ENGINEERING SUPPORT SERVICES FOR THE REPLACEMENT RESOURCES RFP PROCESS.

A. HDR responded to PNM's RFP for Integrated Resource Plan Owners Engineer dated March 15, 2017, for the IRP Non SJGS Alternative RFP Project and was selected via PNM's competitive bid process.

Q. PLEASE DESCRIBE IN MORE DETAIL THE SCOPE OF SERVICES THAT HDR PERFORMED UNDER THE CONTRACT WITH PNM.

A. HDR maintained a robust and active role throughout the implementation of PNM's replacement resource RFP process and the supplemental Energy Storage RFP process as an external and independent resource to PNM. PNM Exhibit RWN-3 is a summary of the HDR scope of services outlining specific tasks and deliverables throughout the RFP process. In summary, HDR was responsible for:

- Support of RFP development including development of a high level bid strategy, instructions to bidders, proposal forms, and bid evaluation methodology to facilitate a fair and equivalent bid evaluation process
- Preparation of technical specifications for the PNM issued RFP including field investigations to characterize the existing sites offered for EPC bids
- Support of a pre-bid conference and pre-bid site visits
- Participation in the review and development of the commercial RFP documentation
- Development and maintenance of an RFP process schedule
- Participation in the bid screening, bid clarifications, financial analysis, and technical analysis of bids
- Independent evaluation and ranking of bids received from the RFP process with subsequent compilation of evaluation inputs from the bid evaluation team
- Participation in bid evaluation meetings, contract negotiations, and commercial agreement structuring

- Development of an energy storage technology assessment and support of a public meeting
- Preparation of a geotechnical specification
- Participation in due diligence site visits to shortlisted bidder projects and facilities
- Preparation of NMPRC and other regulatory required testimony
- Leading the "best-in-class" evaluation of proposed technology alternatives

Q. PLEASE EXPLAIN WHY A SUPPLEMENTAL RFP WAS ISSUED AFTER BIDS WERE RECEIVED FROM THE REPLACEMENT RESOURCES RFP.

A. A supplemental RFP, the Energy Storage RFP, was issued in April of 2019 to obtain additional bids for utility-owned energy storage resources. The April 2019 RFP was issued in response to the enactment of the Energy Transition Act in March 2019 which includes specific requirements for energy storage systems, including, among other considerations, that the energy storage must provide the "public utility with the discretion, subject to applicable laws and rules, to operate, maintain and control energy storage systems so as to ensure reliable and efficient service to customers[.]" As originally presented, the non-utility-owned storage bids, which were in the form of proposed PPAs, imposed operational restrictions that appeared inconsistent with certain of the Energy Transition Act provisions relating to energy storage. Utility-owned storage would afford greater flexibility with respect to the operation, maintenance and control of energy storage in

conformity with the Energy Transition Act provisions relating to energy storage. However, the PPA energy storage bids remained under active consideration. A number of the bids for proposed utility-owned storage projects submitted in response to the All Resource RFP were disqualified from consideration because the bidders did not have the requisite license from the New Mexico Construction Industries Division. Therefore, PNM issued the April 2019 RFP to develop utility-owned bids that would meet the foregoing provisions of the Energy Transition Act relating to energy storage and to appropriately evaluate the full value of options of utility ownership versus the battery PPA options. PNM Witness Kemp from Enovation Partners, LLC provides a detailed discussion on the need for this full value consideration.

Q. PLEASE DESCRIBE THE GOALS ESTABLISHED FOR THIS RFP PROCESS AND THE BIDDING STRATEGY USED.

A. The primary goals of the RFP process were to establish a fair and unbiased bid and bid evaluation process under an "All-Source" bid structure to identify sufficient resources to satisfy PNM's forecasted capacity and energy demand, plus reserves, identified in PNM's 2017 Integrated Resource Plan considering the need for a nominal 456 MW of replacement generating resources for the San Juan Generating Station. The objective of the RFP process was to identify the replacement resources based upon current market information and bids that provide the needed capacity, energy, and system reliability for PNM's customers,

while continuing to expand PNM's renewable and carbon-free footprint. All generation was to be available and delivered to PNM load within WECC Path 48.

Q. PLEASE EXPLAIN THE ROLE OF HDR AS THE OWNER'S ENGINEER IN THIS PROCUREMENT PROCESS.

A. HDR's participation in the PNM procurement sourcing effort included providing industry experience, market-based knowledge and insights, and a perspective of similar power projects, contracting strategies, and bid evaluation processes and considerations. With respect to the bid evaluation process, as the Owner's Engineer, HDR independently evaluated the bids and prepared summaries of the bid evaluation results and bid rankings for review by the bid evaluation team. The results were shared and reviewed with the bid evaluation team with any adjustments or modifications incorporated at that time to result in bid evaluation results that incorporated input from the bid evaluation team participants. Our participation was structured as an independent resource providing bid evaluation analysis and results to the PNM team in support of their overall evaluation and final assessment of the competing bids.

Q. PLEASE IDENTIFY THE MEMBERS OF THE RFP BID EVALUATION TEAM.

A. The bid evaluation team consisted of representatives of HDR as the Owner's Engineer, Astrape Consulting, LLC ("Astrape") as the electric system modeling consultant, and the following groups from within PNM: Generation, Wholesale

Power Marketing, Environmental Services, Corporate Risk Management, Insurance, Tax, Resource Planning, Treasury, Law Department, Accounting, NERC Compliance, Audit Services, Regulatory and Case Management, FERC Compliance, Financial Planning & Risk Management, Generation Services, Sourcing, Utility Margin, and Transmission Planning.

Q. PLEASE EXPLAIN YOUR COMPANY'S ROLE IN DESIGNING AND ISSUING THE RFP FOR THE REPLACEMENT RESOURCES AND THE SUPPLEMENTAL ENERGY STORAGE RFP.

A. HDR prepared the majority of the RFP documentation including the instructions to bidders, proposal forms, and technical specifications, while PNM prepared the initial commercial term sheets. All of HDR's documents were prepared and provided to the PNM team for review and comment prior to issuance. PNM issued the documentation via the PowerAdvocate sourcing platform. Our role was to establish a fair and unbiased RFP process and documentation that was consistent with other utility industry RFP processes.

Q. PLEASE EXPLAIN THE RFP PROCESS AND THE MARKET RESPONSES RECEIVED IN RESPONSE TO THE RFP PROCESS.

A. The RFP process was structured as an "All-Resource" RFP allowing bids utilizing any generation technology, with the exception of coal-fired generation, or combination of generating technologies and allowing bids under various ownership structures including power purchase agreements ("PPA"), build-

transfer ("BT") arrangements, asset purchase agreements ("APA"), and engineering, procurement, and construction ("EPC") contracts. Minimum requirements for facility operation and capacity were established for some technology configurations to facilitate integration into PNM's system.

PNM received 345 bids in response to the initial Replacement Resources RFP including wind, solar, energy storage, and natural gas fueled technologies. Subsequently, an additional 45 bids were received in response to the supplemental Energy Storage RFP. The bids received are summarized in PNM Table RWN-2.

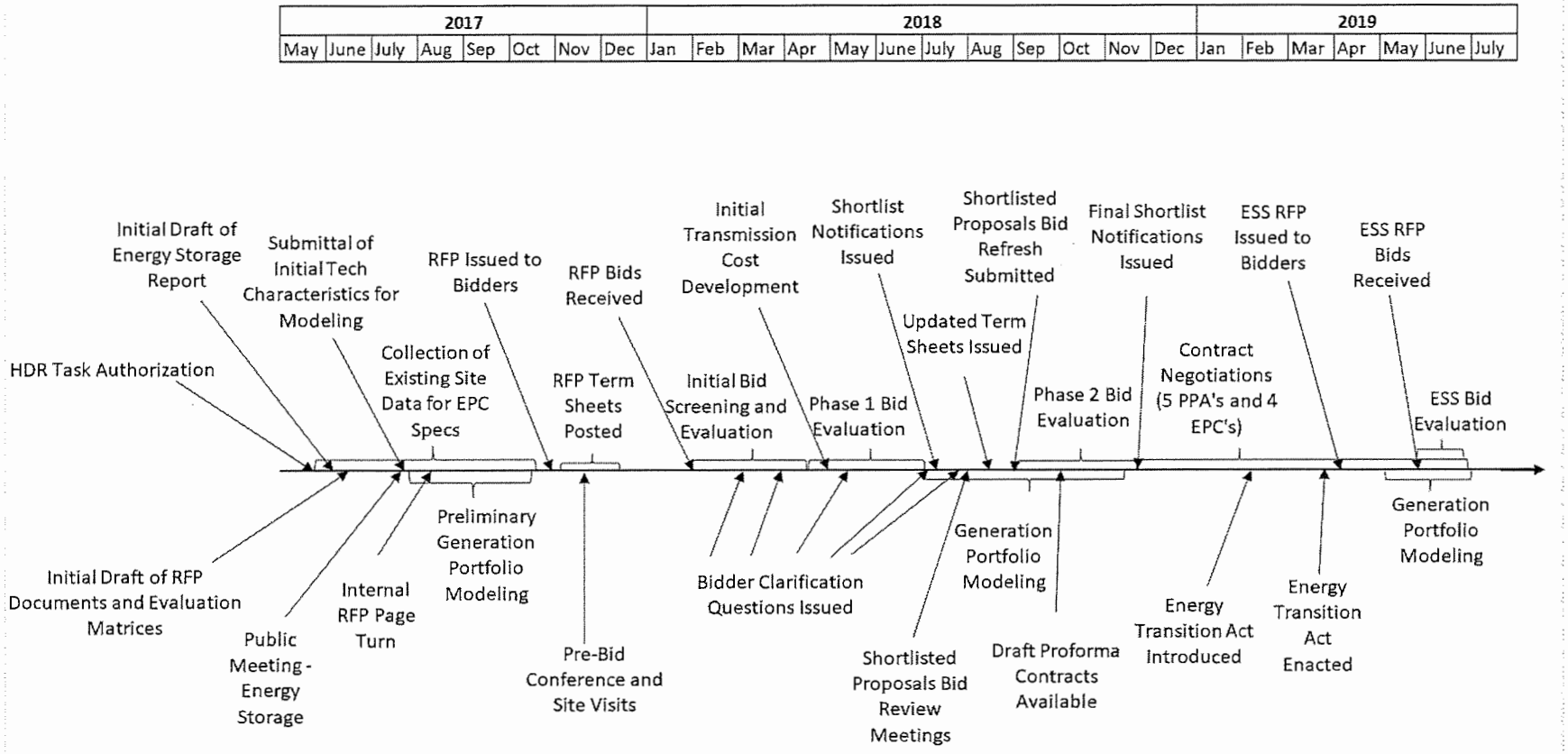
PNM TABLE RWN-2
SUMMARY OF BID RESPONSES

Technology	Quantity of Bidders	Power Purchase Agreement		Build-Transfer		EPC Contract	
		Quantity of Bid Options	Potential Capacity (MW/MWh)	Quantity of Bid Options	Potential Capacity (MW/MWh)	Quantity of Bid Options	Potential Capacity (MW/MWh)
Solar	16	74	2293 MW	7	593 MW	6	227 MW
Wind	7	16	2099 MW	4	840 MW	-	-
Battery	11	50	834 MW / 3,336 MWh	-	-	17	560 MW / 1,949 MWh
Flywheel Energy Storage	1	-	-	-	-	6	100 MW / 400 MWh
Frame Combustion Turbine	5	3	355 MW	4	804 MW	6	1,233 MW
Aeroderivative Turbine	2	-	-	-	-	7	461 MW
Reciprocating Engines	6	9	987 MW	1	220 MW	7	621 MW
Mixed Gas Resources	2	2	190 MW	-	-	1	279 MW
Combined Gas / Battery	5	9	557 MW (Gas) 170 MWh (Battery)	3	220 MW (Gas) 5 MWh (Battery)	5	318 MW (Gas) 17.2 MWh (Battery)
Combined Cycle	1	-	-	1	439 MW	-	-
Combined Solar / Battery	18	84	2,009 MW (Solar) 4,423 MWh (Battery)	9	545 MW (Solar) 844 MWh (Battery)	5	164 MW (Solar) 360 MWh (Battery)
Combined Solar / Flywheel	1	-	-	-	-	6	200 MW (Solar) 320 MWh (Battery)
Combined Wind/Battery	1	1	479 MW (Wind) 400 MWh (Battery	-	-	-	-
Combined Solar/Wind	1	2	150 MW	-	-	-	-
Total Bids	**345**	**250**		**29**		**66**	
Supplemental Energy Storage RFP Responses							
Battery Energy Storage	4	-	-	5	150 MW / 600 MWh	40	850 MW / 3,400 MWh
Total Bids	**390**	**250**		**34**		**106**	

Q. PLEASE PROVIDE AN OVERVIEW OF THE SEQUENCE OF ACTIVITIES AND THE OVERALL TIMELINE ASSOCIATED WITH THE RFP PROCESS.

A. A timeline outlining the sequence of milestone activities associated with the RFP process is included as PNM Figure RWN-1.

PNM Figure RWN-1. RFP Process Timeline



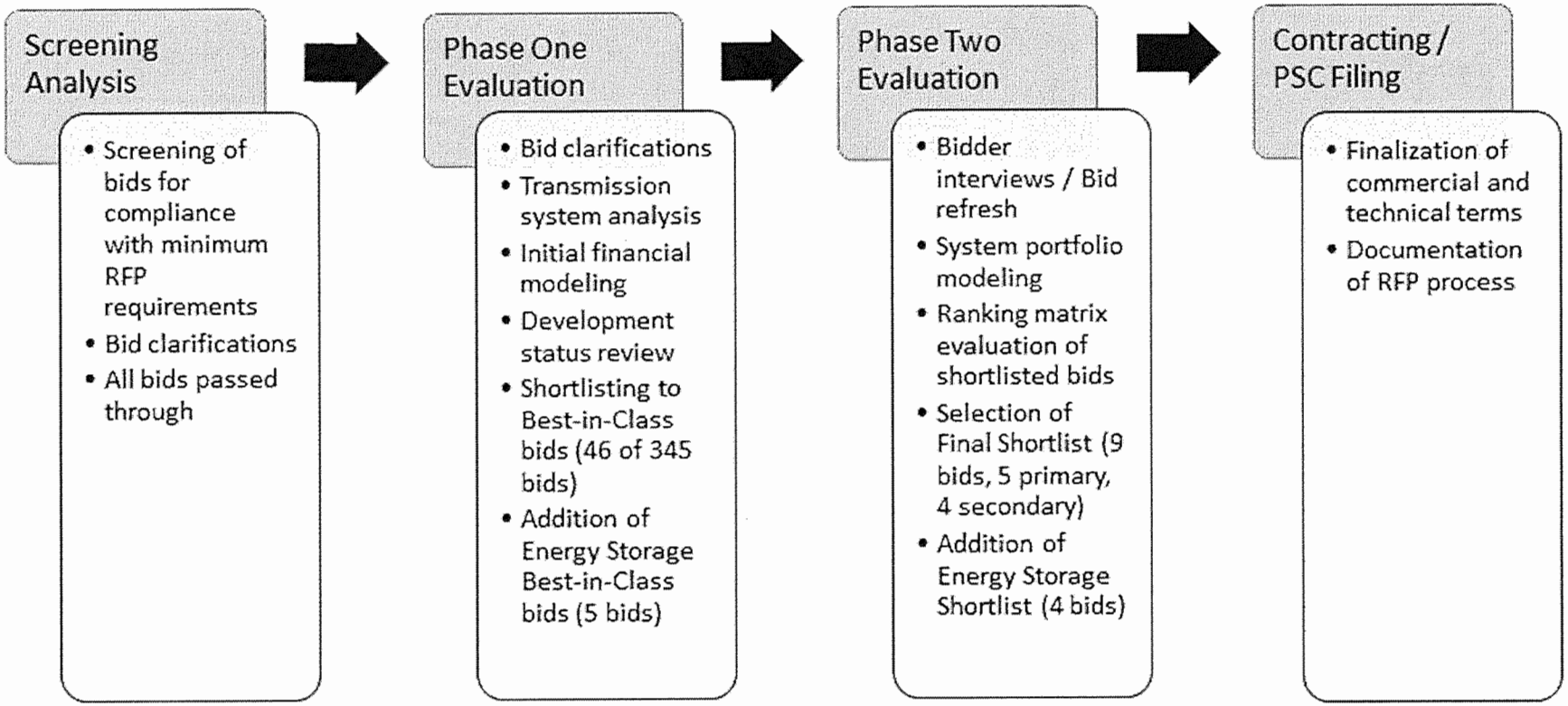
Q. PLEASE EXPLAIN THE BID EVALUATION AND SELECTION PROCESS.

A. Prior to the receipt of bids, HDR drafted the bid evaluation methodology that would be utilized to evaluate the bids on a consistent and comparable basis and collected input from the bid evaluation team. The bid evaluation was split into three phases:

- Initial Screening: initial screening of bids for compliance with the minimum requirements of the RFP.
- Phase One Evaluation: detailed evaluation of screened bids to shortlisting of bids to the best-in-class within the technologies proposed; bids evaluated individually for both quality and likelihood of achieving successful commercial operation using both price and non-price criteria.
- Phase Two Evaluation: further detailed evaluation of shortlisted bids including analysis of combinations of bids to support a preferred alternative or combination of alternatives.

A flow diagram of the bid evaluation process is presented in PNM Figure RWN-2.

PNM Figure RWN-2. RFP Bid Evaluation Process Flow



Q. PLEASE EXPLAIN HDR'S INITIAL SCREENING PROCESS IN MORE DETAIL.

A. HDR's initial bid screening process was structured to screen RFP responses for fatal flaws and for factors that did not comply with the intent of the RFP. Upon receipt and initial evaluation of the bids, the bid evaluation team decided to carry all of the bids into the Phase One bid evaluation to allow for the opportunity to obtain further clarification of the bid offerings, to make the evaluation as thorough and complete as possible and to more fully understand the potential value of each project to PNM and the stakeholders.

Q. PLEASE IDENTIFY WHAT METRICS OR EVALUATION FACTORS WERE REVIEWED DURING THE BID EVALUATION PROCESS.

A. As part of the Initial Screening and Phase One evaluation, the evaluation team initiated a side-by-side comparative analysis of the bids that assessed several factors including, but not limited to, the following bidder and bid characteristics:

- Performance
- Development Status
- Environmental and Permitting Status
- Land Acquisition Status
- Credit Quality
- Safety Metrics
- Construction Contractor License Applicability
- Bid Quality / Completeness

- Point of Delivery
- Transmission Losses/Fees
- Achievable In-Service Dates
- Total Delivered Cost

Q. PLEASE DESCRIBE THE OBJECTIVES AND METHODOLOGY USED IN THE PHASE ONE EVALUATION PROCESS.

A. The Phase One bid evaluation process was structured to establish a shortlist of bids based upon the previously noted evaluation factors. The Phase One evaluation was focused on selecting the best-in-class bids for each generation technology to allow more in-depth analysis and system modeling of these projects during the Phase Two evaluation process. The Phase One process involved, but was not limited to the following activities:

- Bid clarifications
- Assessment of electrical interconnection and transmission system network upgrade costs
- Assessment of operations and maintenance costs
- Determination of delivered fuel costs
- Development of Owner's costs
- Computation of revenue requirements for capital cost recovery
- Accounting for transmission wheeling fees and losses
- Development of total delivered cost of electricity

- Evaluation of redlines to terms and conditions
- Evaluation of bidder experience

Additional detail regarding these bid evaluation activities are discussed below and can be found in HDR's Bid Evaluation Process Overview Report included in PNM Exhibit RWN-4.

Q. WHAT IS MEANT BY A "BEST-IN-CLASS" BID?

A. As previously noted, the purpose of the Phase One evaluation was to develop a shortlist of best-in-class bids for each generation technology. For this purpose, "best-in-class" is defined as bids providing both the lowest total evaluated delivered cost of energy and presenting the lowest risk to the timely and successful execution of the project. Project characteristics and risks associated with technology, permitting, land acquisition, and transmission interconnection and network upgrades were considered for this best-in-class characterization. As previously indicated, the shortlist included 51 best-in-class bids representing solar, wind, energy storage, frame combustion turbine, aeroderivative combustion turbine, reciprocating engines, combined solar/battery, combined wind/battery, and combined solar/wind technologies. These bids were then carried into the Phase Two evaluation for detailed system modeling by Astrape and PNM's resource planning team.

Q. PLEASE EXPLAIN THE BID CLARIFICATION PROCESS IMPLEMENTED DURING THE EVALUATION OF BIDS.

A. To get a thorough understanding of the characteristics of the bid(s) offered and to promote a comparable bid evaluation process, the bid evaluation team implemented a thorough bid clarification process during the Phase One and Phase Two evaluations. Specific bid clarifications were requested from individual bidders focusing on numerous topics, including, but not limited to electrical interconnection and network upgrades, application of federal tax credits and tariffs, technology characteristics, pricing structure details, project schedule challenges, performance expectations, and status of environmental permitting and land acquisition.

Q. PLEASE DESCRIBE THE METHODOLOGY FOR ASSESSMENT OF ELECTRICAL INTERCONNECTION AND TRANSMISSION SYSTEM MODIFICATIONS FOR THE BIDS OFFERED.

A. Bidders were asked to include costs in their proposal for electrical transmission interconnection, system network upgrades required to support the export of generated electricity from each site, transmission system losses, and any required wheeling fees. This information was reviewed for completeness. However, due to the fact that many bidders had not yet entered into the generator interconnection queue on PNM's system, detailed estimates were generally not available for analysis from most bidders. Some bidders had a final interconnection agreement or had transmission system studies with estimated

costs for necessary upgrades. Similarly, some of those interconnecting to PNM's transmission system via a third-party transmission provider had accounted for the appropriate wheeling fees while others had not.

PNM solicited follow-up information and supporting data through the Power Advocate question and answer process to gain additional information from the bidders to validate supplied transmission cost information.

To provide an assessment of electrical interconnection and infrastructure upgrade viability and costs, the PNM Transmission Planning team reviewed the characteristics of each bid and provided information regarding the scope, timeline, and estimated cost for necessary electrical interconnection and transmission system upgrades to support the export of electricity from each project. Any costs not accounted for in the bidders' bids were treated as a PNM capital cost and were incorporated into the estimates of the total delivered costs considered in the bid evaluation. The status of each bidder's electrical interconnection application and expected schedule for implementation of necessary upgrades was considered in the viability of each project. PNM Witness Jeff Mechenbier further addresses the evaluations performed by PNM's Transmission Planning Department with respect to the responses to the RFP.

Q. PLEASE DESCRIBE THE METHODOLOGY FOR ESTABLISHING OPERATIONS AND MAINTENANCE COST ESTIMATES FOR THE BIDS.

A. Operations and maintenance costs for each of the PPA bids were included in the proposed PPA pricing. Operations and maintenance costs for EPC and BT bids were estimated by HDR based upon information in the bidders' bids for long-term maintenance agreements, prior quotations received by HDR, or otherwise estimated based upon HDR's database of cost information; estimates of staffing and associated wage rates were provided by the PNM team; and consumables, consumption rates, and unit costs were estimated based upon HDR's prior experience and database of information. For renewable projects, this information was supplemented by operations and maintenance costs as reported in National Renewable Energy Laboratory (NREL), Sandia National Labs, and other industry related documentation.

Q. PLEASE EXPLAIN HOW THE DELIVERED COST OF FUEL FOR THE NATURAL GAS FUELED BIDS WAS DETERMINED.

A. Commodity costs for natural gas were as provided by PNM's resource planning team to be consistent with the IRP development and the system modeling activities. Costs for gas transmission were provided by PNM's Wholesale Power Marketing team. Total natural gas costs included the commodity cost at the source with adders for fuel surcharges, transport charges, and taxes as well as

costs for any required gas lateral or additional infrastructure costs to obtain gas pricing specific to individual project sites.

Q. PLEASE DESCRIBE HOW THE OWNER'S COSTS ASSOCIATED WITH EACH OF THE BIDS WERE ESTABLISHED.

A. Owner's costs for development, management, and oversight of the execution of the projects were estimated by the bid evaluation team. These costs for EPC projects included costs for permitting, project management and operations personnel, information technology, land acquisition, Owner's engineering, startup fuel and consumables, permanent plant equipment and furnishings, maintenance agreement mobilization costs, an initial stock of spare parts, a credit for energy sold during the commissioning tests, legal and regulatory costs, general and administrative costs, an allowance for funds used during construction, and contingency. The scope and magnitude of these costs allocated to PNM for PPA and BT projects were significantly reduced as the bidder would be responsible for many of these activities. Owner's costs for PPA projects were estimated at approximately 1 percent of the estimated project cost, BT projects were estimated at approximately 2 to 2.5 percent, and EPC projects were estimated at approximately 8 to 12 percent of the EPC project cost.

Q. PLEASE EXPLAIN HOW COSTS FOR RECOVERY OF PNM'S CAPITAL INVESTMENTS WERE DETERMINED IN THE BID EVALUATION PROCESS.

A. Capital cost recovery for EPC and BT offerings as well as scope (e.g. transmission network upgrades) not included in the PPA offers was determined utilizing PNM's financial modeling parameters from their revenue requirements models. HDR developed an annual capital recovery fixed charge rate for all capital costs, including New Mexico Gross Receipts Taxes allocated to PNM. While values were calculated considering the application of Production Tax Credits and Investment Tax Credits, these values were not utilized in the initial evaluation for EPC or BT offerings as PNM advised that they would not be able to recognize the benefits of these tax credits.

Q. PLEASE EXPLAIN HOW ANY RENEWABLE GENERATION TAX CREDITS AND TARIFFS ARE CONSIDERED IN THE EVALUATION PROCESS.

A. The Production Tax Credit for wind energy and the Investment Tax Credit for solar projects, allow renewable energy providers to reduce the cost of energy on their bids due to government tax subsidies. In contrast, import and other tariffs have been placed on certain materials such as solar panels and steel that can drive increased costs for the projects. Individual bidders were responsible for incorporating or considering how renewable tax credits as well as applicable tariffs would impact their proposals. This included defining the timeline for proposed projects that would allow for the tax benefits to be captured and incorporation of costs, if applicable, to address solar, steel, or other tariffs applicable to their project.

Q. HOW WERE COSTS FOR ELECTRICAL TRANSMISSION FEES AND TRANSMISSION LINE LOSSES TO PNM'S LOAD CENTER CONSIDERED IN THE EVALUATION?

A. If not included in the bidder's proposed pricing, electrical transmission wheeling fees were determined for projects outside of PNM's territory in accordance with Open Access Transmission Tariff ("OATT") guidelines as defined by PNM's transmission planning team. For projects beyond counties surrounding Albuquerque, including Bernalillo, Valencia, Torrance, McKinley, Sandoval, Santa Fe, Lincoln, and Cibola counties, an allocation consistent with expectations from PNM's transmission planning team for electrical losses from the facility to PNM's load center in Albuquerque were considered.

Q. PLEASE EXPLAIN HOW COMPARABLE TOTAL DELIVERED COST OF ELECTRICITY WAS DETERMINED FOR THE COMPARISON OF TECHNOLOGY BIDS.

A. Using all of the above discussed cost factors, HDR estimated a total delivered cost of energy from each project such that an equivalent comparison of bids could be presented. The total delivered cost information was presented as a levelized cost of energy per delivered megawatt-hour over the term of the proposed contract for renewable (solar, wind, and energy storage offers). For natural gas fired offers, total delivered costs were developed on a first-year cost basis with escalation to be applied for fuel and variable operations and maintenance costs. The first year costs considered future year major maintenance activities. This approach

provided a fair comparison of like technologies to assist in the selection of best-in-class bids for each technology that were subsequently more fully evaluated in the Phase Two system modeling activities accounting for noted escalation, as required, over the life of the project.

Q. PLEASE DESCRIBE HOW BIDDER EXCEPTIONS TO THE PROPOSED PROJECT TERMS AND CONDITIONS WERE CONSIDERED IN THE EVALUATION PROCESS.

A. A side-by-side comparison of the exceptions and comments offered on the proposed terms and conditions was prepared to identify major discrepancies or cost factors between bids. Many of these exceptions revolved around renewable project curtailment, liquidated damages, developer security provisions, and performance guarantees. This information was considered in the qualitative ranking and selection of shortlisted bids during the Phase Two evaluation.

Q. PLEASE DESCRIBE HOW BIDDER EXPERIENCE WITH THE TECHNOLOGY(IES) PROPOSED WAS CONSIDERED IN THE BID EVALUATION PROCESS.

A. For renewable and energy storage bids, a side-by-side comparison of each bidder's experience with the type of project(s) proposed was prepared and considered in the bid selection process. This information was considered in the qualitative ranking and selection of shortlisted bids during the Phase Two evaluation.

Q. FOR THE SUPPLEMENTAL ENERGY STORAGE RFP, PLEASE EXPLAIN WHY THE SHORTLISTED PROJECTS WERE SMALLER IN CAPACITY THAN THOSE REQUESTED IN THE RFP.

A. To minimize technology risk associated with battery energy storage technologies, the bid evaluation team determined that it would be prudent to limit the application of any single energy storage technology at any site to no more than 40 MW. For this reason, energy storage offers from both the Replacement Resource RFP and the supplemental Energy Storage RFP were revisited, modified, and adjusted in capacity, if necessary, to comply with this limitation. PNM Witness Kemp will provide additional background regarding this decision.

Q. PLEASE DESCRIBE THE SHORTLIST OF BIDS THAT RESULTED FROM THE PHASE ONE EVALUATION PROCESS.

A. Due to the fact that more detailed analysis and selection of the final generation portfolio was highly dependent upon system modeling activities to be performed in the Phase Two evaluation, the shortlist maintained the most favorable bids in each generation technology category while also maintaining offers in each technology category with sufficient capacity (when available) to deliver the full replacement need for the San Juan Generating Station. The shortlist was also intended to maintain maximum resource flexibility with respect to implementation schedules, applicability of Investment Tax Credits (ITCs) and Production Tax Credits (PTCs), and to incorporate and allow for future increased integration of renewable energy resources.

The intent of considering the above in the selection of the shortlisted bidders was to provide sufficient information to allow Astrape and PNM's resource planning team to perform and evaluate a wide range of generation portfolios in an effort to develop the Replacement Resources for PNM going forward while maintaining system reliability objectives.

Q. PLEASE EXPLAIN THE PHASE TWO BID EVALUATION PROCESS.

A. The Phase Two bid evaluation process was focused upon evaluating alternative generation portfolios utilizing the selected shortlist bids and project characteristics to obtain the replacement resources that satisfied the PNM system capacity, energy, and reliability objectives. On this basis, for the initial Replacement Resource RFP, the shortlisted RFP bidders were invited to meet with the bid evaluation team to further discuss the details of their bids and to allow the PNM team to gather necessary data for further evaluation. At this time the bidders were requested to provide additional clarifications as well as a bid refresh based upon a firm project in-service date of December 31, 2021, and considering a complete commercial agreement template provided by PNM.

Information gathered from the bid refresh request was summarized and utilized for system modeling activities performed by the PNM resource planning staff as well as Astrape. Further details of this modeling process will be summarized by witnesses from Astrape and PNM.

Q. HOW WAS THE FINAL SHORTLIST DERIVED?

A. The final shortlist resulting from the initial Replacement Resource RFP and the supplemental Energy Storage RFP, consisting of thirteen bids, was derived as a result of the detailed system modeling and system optimization performed by Astrape and PNM's Resource Planning team in conjunction with a weighted bid ranking matrix compiled by HDR for the initial Replacement Resource RFP and reviewed with the bid evaluation team. The bid ranking matrix was utilized to rank both qualitative and quantitative measures of the bids included in the Phase One shortlist on a consistent basis. The final shortlist included the bids summarized in PNM Table RWN-3. In some cases, this final shortlist involved refinements in the originally proposed project capacities and/or locations that resulted from the Phase Two bid evaluation, the system optimization process, and the efforts to minimize battery technology risk as previously noted.

PNM Table RWN-3. Final Shortlist Content Summary

Location	Project Structure	Capacity	Strengths	Challenges
Primary Bids				
Rio Arriba County	Solar PPA	50 MW Solar / 20 MW (80 MWH) BESS	- Favorable solar pricing for capacity of facility - Involvement of Jicarilla Apache Nation and use of land	- Limited team development experience - Electrical interconnection via JANPA
McKinley County	Solar + Storage PPA	300 MW Solar / 40 MW (160 MWH) BESS	- Favorable pricing - Private land with lease option - Entered DISIS in July, 2018 - POI is on the project site	- Limited battery storage experience - Largest solar facility is 200 MW
San Juan County	Natural Gas EPC	280 MW	- Flexible natural gas technology - Favorable evaluated delivered cost - Existing interconnection	- Fuel sourcing to site
Torrance County[a]	Wind PPA	140 MW	- Favorable evaluated delivered cost of energy for Wind - Significant development experience - 100% site control - Executed LGIA	- Best pricing would be for a 2020 COD - Completion of BB2 transmission line
Bernalillo County	BESS EPC	30 MW / 60 MWH	- Located near PNM load center - Significant battery technology experience - modularized - Local contractor experience – 100% New Mexico construction labor	
Bernalillo County	BESS EPC	40 MW / 80 MWH	- Located near PNM load center - Significant battery technology experience - modularized - Local contractor experience – 100% New Mexico construction labor	- Technology park location
San Juan County	Solar EPC	20 MW	- Favorable solar pricing for capacity of facility - Local contractor experience – 100% New Mexico construction labor	- Plant configuration to utilize existing land availability

a. This bid selected for its contribution to satisfying PNM's Renewable Portfolio Standard commitments.

PNM Table RWN-3. Final Shortlist Content Summary

Location	Project Structure	Capacity	Strengths	Challenges
Alternative Bids				
Bernalillo County	Solar + Storage PPA	100 MW Solar / 20 MW (80 MWH) BESS	- Favorable evaluated delivered cost - Avoiding federal land and not subject to NEPA - Significant development experience - Long-term ownership role	- Critical path is Western Spirit transmission line and ROW needs
Lincoln / Torrance County	Wind PPA	200 MW	- Significant development experience - Long-term ownership role	- Critical path is Western Spirit transmission line and ROW needs
Rio Arriba County	Solar + Storage PPA	150 MW Solar / 40 MW (160 MWH) BESS	- Favorable solar pricing - Involvement of Jicarilla Apache Nation and use of land - Engagement of New Mexico State University in study work - Submitted into DISIS in July, 2018	- Long-term ownership unknown as development would be sold - Limited solar experience - Electrical interconnection via JANPA
San Juan County	Natural Gas EPC	180 to 360 MW	- Flexible natural gas technology - Favorable evaluated delivered cost - Existing interconnection	- Fuel sourcing to site
Bernalillo County	BESS EPC	40 MW / 80 MWH	- Located near PNM load center - Significant battery technology experience - modularized - Local contractor experience – 100% New Mexico construction labor	- More significant electrical interconnection and network upgrade modifications required
San Juan County	BESS EPC	40 MW / 80 MWH	- Significant battery technology experience - modularized - Local contractor experience – 100% New Mexico construction labor	- Distance to load center

Q. PLEASE DESCRIBE ANY FACTORS THAT INFLUENCED THE BID EVALUATION RESULTS IN THE MIDST OF THE EVALUATION PROCESS.

A. There were some alterations made during the bid evaluation process that did result in adjustments from the early evaluation results to the final results. These factors can be described as follows:

1) Upon selection of the Phase One shortlist of projects, updated commercial term sheets with defined expectations were provided for the bidders' consideration for a bid refresh that was submitted on August 31, 2018.

2) The cost of delivered fuel was updated during the evaluation process to remain consistent with the basis of PNM's ongoing IRP process and updating of assumptions.

3) Upon selection of the Phase One shortlist of projects, a more detailed model of battery utilization or battery use case was developed through the generation portfolio modeling. This dispatch profile was forwarded to the shortlisted bidders for consideration in their August 31, 2018 bid refresh.

4) EPC projects at the San Juan Generating Station site were originally assumed to utilize existing facility infrastructure to the greatest extent possible. The final evaluation basis structured any EPC project with very limited interface to existing San Juan infrastructure.

5) Early cost of generation calculations treated capital cost recovery for Owner's costs and electrical interconnection and transmission upgrade costs for renewable projects as if they were part of the renewable project

with advantages of federal tax credits. This was subsequently adjusted to be calculated in accordance with PNM's revenue requirements methodology without the benefit of federal tax credits.

6) Owner's contingency, included in the Owner's Costs on the EPC projects was increased during the bid evaluation process to more accurately account for the level of development of the projects being considered.

7) Natural gas fired installations located at the San Juan Generating Station site were evaluated both with and without selective catalytic reduction systems for NOx emissions control. Evaluated costs were developed for each.

8) Implementation of the Energy Transition Act after completion of the project shortlist development resulting in the issuance of the supplemental Energy Storage RFP.

Q. PLEASE EXPLAIN HOW THE VALIDITY OF THE EVALUATION RESULTS WAS MAINTAINED GIVEN THE INFLUENCING FACTORS NOTED ABOVE.

A. Throughout the process, as changes or factors influenced the evaluation, the selection of bids was reviewed and again validated to maintain the integrity of the process. This validation was performed on not only the total delivered cost of energy and bid rankings as delivered from the Phase One evaluation, but also the overall portfolio modeling performed by Astrape and PNM.

Q. DO YOU BELIEVE THAT THE TERMS AND CONDITIONS SET FORTH IN THE RFP WERE REASONABLE?

A. Yes. From HDR's experience, the terms and conditions were typical of such RFPs. At PNM's preference, some aspects were initially left open for the bidders to provide in their bids associated with factors such as liquidated damage values, limits of liability, contract security provisions, and others. Upon receipt of the bids and throughout the bid clarification process, these terms and conditions were assessed by HDR relative to typical market considerations and negotiated amongst the bidders which resulted in commercial provisions that we believe are consistent with the range of current market expectations and offerings.

Q. HAVE YOU INCLUDED COPIES OF THE ALL RESOURCES RFP AND THE SUPPLEMENTAL ENERGY STORAGE RFP AS EXHIBITS TO YOUR TESTIMONY?

A. For the ready reference of the Commission and the parties, I have attached copies of the bidders' instructions sections from both of the RFPs as PNM Exhibit RWN-5 (All Resources RFP) and RWN-6 (Supplemental Energy Storage RFP).

Q. PLEASE EXPLAIN YOUR COMPANY'S PARTICIPATION IN THE SELECTION PROCESS AND THE NEGOTIATIONS WITH SHORT-LISTED BIDDERS.

A. HDR served as an independent resource to review, summarize, and evaluate bid information in a consistent and controlled manner to facilitate PNM modeling and

decision making, as well as to provide support for the later phases of the evaluation and negotiation. Astrape performed generation system portfolio modeling to evaluate the overall system reliability and costs for varying generation portfolios.

Our role was structured as a participant and resource to PNM in the selection and negotiation process associated with the technical, evaluated capital cost, evaluated cost of electric generation, long term service agreement, and commercial aspects of the short-listed bidders' bids. HDR's participation in these areas was conducted independently with subsequent collaboration between HDR and PNM resulting in a single, conformed bid evaluation that supported PNM's final negotiation activities.

Q. DID YOU HAVE A ROLE IN THE FINAL SELECTION OF THE SUPPLIER OF THE GENERATION RESOURCES?

A. In conjunction with Astrape and the remainder of the bid evaluation team, HDR was an active participant in the final selection of the PPA provider and EPC contractor candidates by serving in evaluation support and independent advisor roles. Our activities supported the definition of seven primary and six alternative short-listed, market competitive bids such that PNM could subsequently select and pursue final negotiations. HDR's role in the final selection was also to assist PNM in the conformance of the agreement(s) with the final selected bidder(s).

Q. DO YOU BELIEVE THE PROCUREMENT PROCESS AND PROCEDURES SPECIFIED WERE REASONABLE AND COMPETITIVELY FAIR?

A. Yes. The overall RFP and procurement approach was robust and consistent with market based bidding of all-source projects. The RFP process resulted in a strong list of viable and competitive bids that offered options and competitive opportunities for well-defined and low cost generating resource alternatives.

II. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

GCG#525649

Resume of Roger W. Nagel

PNM Exhibit RWN-1

Is contained in the following 1 page.

Roger Nagel, PE

Vice President/Power Generation Practice Leader

EDUCATION
Bachelor of Science, Mechanical Engineering, Purdue University, 1992

REGISTRATIONS
ISI Envision Sustainability Professional, United States National Registration

Professional Engineer, Michigan, United States, No. 6201043339

INDUSTRY TENURE
27 years

Roger has 27 years of experience in the design and development of renewable and fossil energy facilities and currently serves as HDR's Power Generation Practice Lead. He has supported the development and construction of domestic and international projects as an EPC Contractor, Owner's Engineer, Consultant, and as an Original Equipment Manufacturer. His experience includes feasibility studies, technology assessments, energy efficiency and demand-side management characterization, lifecycle financial analyses, resource planning, thermal cycle design and optimization, system design, equipment specification, and technical equipment contract administration.

RELEVANT EXPERIENCE

Highlights of his experience include:

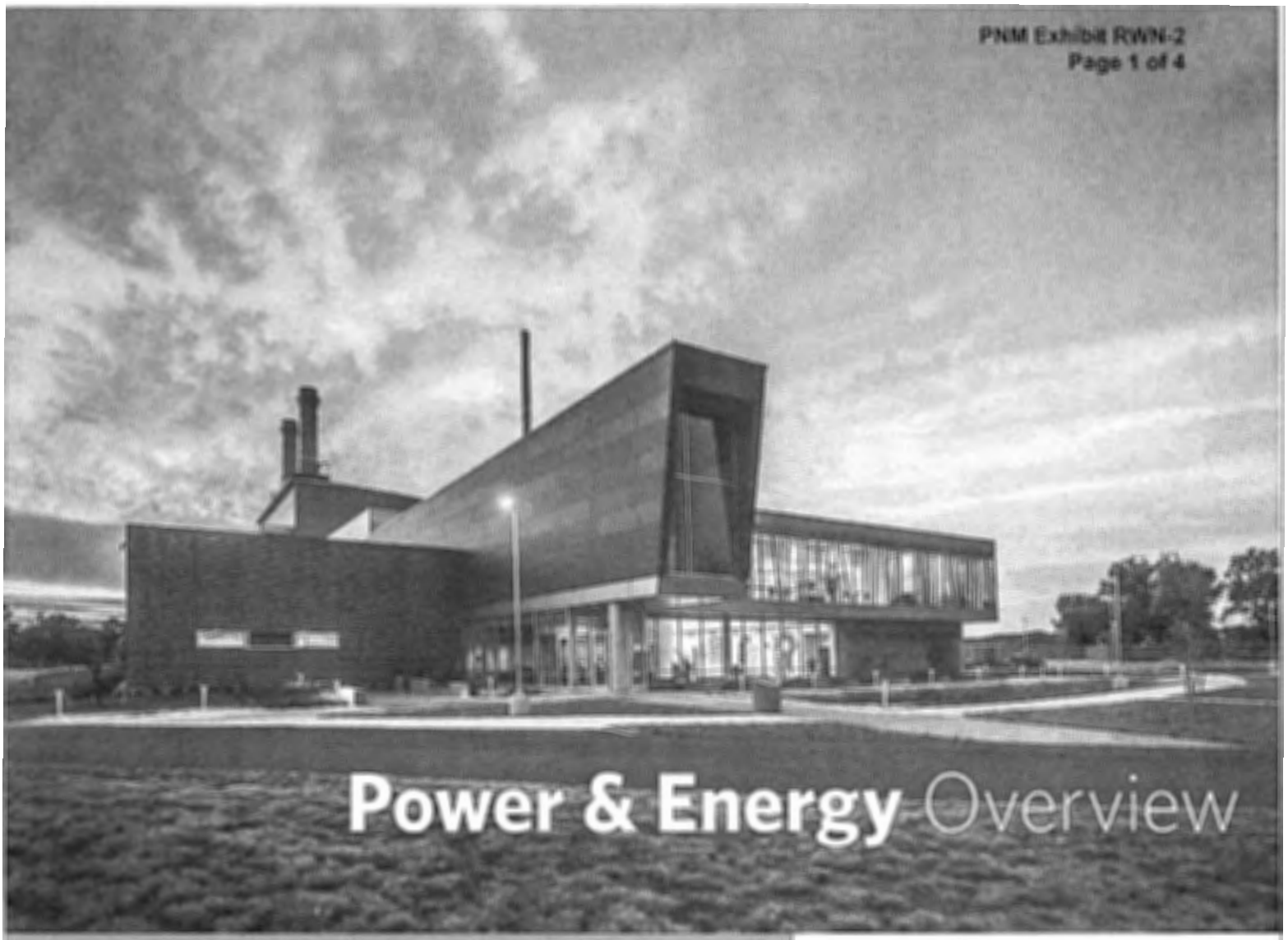
- Development of numerous technical reports focusing on energy options and siting evaluations, including technology assessments and design activities for projects in the United States, South America, China, Europe and the Middle East.
- Project Consultant for benchmarking and evaluation of existing power facilities, assessing efficiency, cost effectiveness, and ownership and management alternatives including Financial as well as Sustainable Return on Investment analysis.
- Consulting services for integrated resource planning, request for proposal (RFP) processes, and projects involving renewable energy, energy storage, and fossil fueled energy resources.
- Extensive experience with technology assessments including thermal cycle development and optimization, lifecycle financial evaluations and technology feasibility.
- Power Generation Consulting Lead - focused on Owner's Engineering and resource planning services to the power industry. Responsibilities included managing consulting development and oversight for renewable, coal and gas generation and renovation projects. Multiple projects involved frontend development, market and contracting strategy analysis, project budget cost and schedule development, design review, major equipment selection, EPC bid review, contractor selection and contract negotiations, as well as technology option analyses and regulatory support.

Roger has supported strategic consulting to Alliant Energy, NorthWestern Energy, ENGIE, Colorado Springs Utilities, and LADWP and has been responsible for managing and organizing execution strategies that meet project and corporate objectives. Projects range from technology assessments to contracts for third party developments, proxy analyses and development support for strategic contracting and execution plans for new renewable and fossil-fired projects at greenfield and brownfield sites.

HDR Power Overview

PNM Exhibit RWN-2

Is contained in the following 4 pages.



Power & Energy Overview

For over 100 years, [illegible] **powers the world**

[illegible] **you can count on us.**

Areas of Expertise:

- Owner's Engineer | Independent Engineer
- Distributed Energy Resources
- CHP | Cogeneration | Trigeneration
- Renewables
- Energy Storage
- Reciprocating engines
- Combustion turbines | Combined cycle
- Sustainability | SROI
- Resiliency | Microgrids
- District Energy
- Economics | Risk analysis
- Asset management
- Industrial and institutional energy systems
- Coal combustion residuals management
- Plant modifications | Plant decommissioning

HDR

What We Do PROJECT HIGHLIGHTS

When a power plant emulates a park, it adds new light to a community.

Holland Energy Park

Holland Board of Public Works
Holland, Michigan, USA

Holland Board of Public Works celebrated the opening of its $240 million Holland Energy Park in a ribbon-cutting ceremony that also celebrated its Envision Platinum rating from the Institute of Sustainable Infrastructure, the highest project rating possible. HDR served as owner's engineer on the project and brought in many other disciplines including economists, architects and members of the sustainability and resiliency teams. The new combined-cycle natural gas power plant reduces carbon emissions by 50 percent and virtually eliminates solid particle pollutants. It also doubles the fuel efficiency of Holland's former power generation.

An advanced technology, highly efficient, natural gas-fired plant that will power 550,000 homes.

West Riverside Energy Center

Alliant Energy WPL
Beloit, WI, USA

One of the largest projects in the state of Wisconsin, this new 700 MW generating facility will produce enough power for more than 550,000 homes. An integrated solar field is included as part of the project. As owner's engineer, HDR has supported the siting studies and conceptual design, regulatory approval process, development and bid evaluation support, environmental permitting, the electrical interconnection study and implementation and execution oversight. The facility will emit less than half the carbon dioxide, about two-thirds less nitrogen, and 99% less sulfur and mercury than traditional coal-fired facilities.

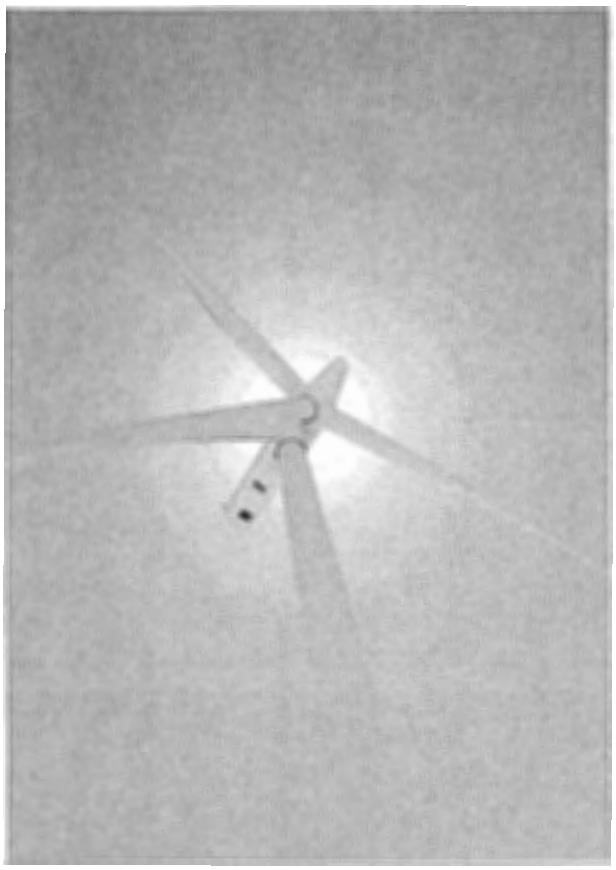
A solar array engineered with cost and time in mind.

Lawa'i Solar Power Plant and Battery Storage System

AES Distributed Energy
Kauai, Hawaii

This 28.2MW DC photovoltaic power plant and 100MWh, 5-hour battery energy storage system project will be the largest, close-coupled, solar and DC battery storage plant on the island of Kauai and will serve approximately 11% of the entire Kauai Island Utility Cooperative load (KIUC). The project will bring the Hawaiian islands closer to their goal of 100% renewable energy by the year 2045.

AES Distributed Energy chose HDR to design the solar power plant, provide construction support and act as an overall program manager for successful execution of the project. The project will utilize a tracker system with high efficiency and high performance PV modules, an optimizer to maximize the PV production, and inverters close-coupled to the battery storage with DC-DC couplers. The system will convert to 69kV through a new 69kV-12.47kV substation and intertie to KIUC.



Where We Stand THE FACTS

100+

Years of experience helping clients design, build & operate power plants

ENR Rankings

No. 7
Top 500 Design Firms

No. 10
Top 25 in Fossil Fuel

No. 2
Top 10 in Hydro Plants

No. 11
Top 20 in Power

No. 7
Top 25 in Transmission & Distribution

No. 4
Top 10 in Solar Power

How We Do It OUR SERVICES

Site Development Design
- Site layout and land requirements
- Stormwater
- Geotechnical evaluation
- Solid waste disposal
- Water requirements

Resource Planning
- Integrated Resource Plan development
- Generation technology characterization
- District energy development
- Campus master planning
- RFP management for new generation resources
- Asset management consulting
- Flexible resource assessmen
- Transmission Planning

Independent Engineering
- Project review / due diligence
- Acquisition due diligence
- Construction monitoring and certification
- Performance test review and validation
- Operations monitoring

Energy Resiliency
- Microgrid structures and controls
- Distributed energy implementation
- Generation and cogeneration technologies
- Renewable and energy storage integration
- Power delivery and flood resiliency

Permitting/Regulatory
- Plant decommissioning
- Air | Water | Wastewater | Stormwater
- Spill prevention control and countermeasure (SPCC)
- Fuel sourcing
- Electrical interconnect and power flow studies
- Coal combustion residual (CCR) management
- Construction permits
- Local approvals

Engineering Design
- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Instrumentation & Controls
- Chemical
- Environmental

Industrial | Institutional Energy Systems
- Fuel conversion
- Cogeneration | CHP

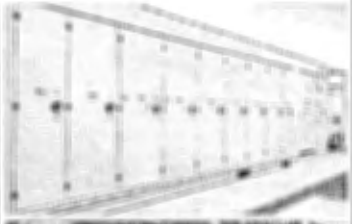
Construction Services
- Design-build integrated delivery
- Field engineers
- Lender's representative
- Construction management
- Controls & scheduling

Water and Wastewater
- Water treatment
- Site utilities
- Industrial supply
- Wastewater discharge

Site Assessment
- Phase I/ Phase II environmental site assessments
- Environmental assessment (EA)/ environmental impact statement (EIS)
- Wetlands
- Cultural/historical resources
- Feasibility studies
- Infrastructure evaluation

Science and Technology
- Data center energy solutions
- Critical facility assessments and development

Energy Sustainability
- Sustainable energy portfolio development
- Envision
- Sustainable Return on Investment (SROI)



Together, anything is possible.

HDR

HDR Scope of Services

PNM Exhibit RWN-3

Is contained in the following 6 pages.

Summary of HDR Scope of Services

Development of High Level Bid Strategy Document

In support of investigating non-SJGS generation alternatives, HDR will initially meet with PNM staff in a project kickoff meeting to best understand and define the requirements of the Request for Proposal (RFP) process. Specifically, the RFP timing, parties involved, sequence of activities and reviews, and communication protocols will be discussed. In addition, the required characteristics of the needed generation resource will be established. Factors to be considered and discussed will include:

- Eligible power supplies (capacity, dispatchability, availability, etc.)
- Ancillary service requirements
- Eligible project structures
- Power delivery requirements
- Interconnection requirements
- Fuel sourcing requirements
- Environmental thresholds
- Bidder credit requirements
- Accounting and tax considerations
- Bid evaluation methodologies

Based upon an understanding of the above factors, HDR will prepare a Bid Strategy Document in the form of a draft RFP Instructions to Bidders that will be utilized to guide and direct ongoing specification and RFP development activities. The bid strategy will outline and define a means to impartially offer a bidding opportunity to all generating resources such that they can be properly evaluated against the SJGS alternative.

Preparation of Industry Indicative Pricing on Commercially Available Technologies

For the sake of this proposal, HDR assumes that the primary focus of the Industry Indicative Pricing will be technologies ranging from 5 MW to 150 MW. Technologies to be considered are assumed to include the following:

- Simple cycle combustion turbine
- Natural gas combined cycle
- Reciprocating internal combustion engines (RICE)
- Solar PV
- Solar thermal
- Wind
- Battery energy storage
- Pumped hydro energy storage
- Compressed air energy storage
- Geothermal
- Biogas fueled RICE

Specific installation sizes and configurations of the above technologies will be agreed with the PNM team. HDR has assumed that up to 20 technology configurations will be evaluated.

HDR will characterize the indicative pricing components for the above selected technologies. Data from a representative equipment manufacturer for each size and technology will be utilized as a basis of the indicative pricing information.

Energy Storage Technology Assessment and Public Meeting

HDR will prepare a report outlining the characteristics and costs of commercially available battery energy storage, compressed air energy storage, liquid air energy storage, and hybrid EGT technologies. The report will address the following for up to 12 different technologies:

- The need for and value of energy storage
- Overview of energy storage development in the U.S.
- Characteristics of each energy storage technology including,
    - Technology overview
    - Maturity of technology
    - Installed cost estimates
    - Suitable applications
    - Round trip efficiencies, technology life, energy density, charge rates, degradation rates, etc.

HDR will also prepare a powerpoint presentation and will participate in a public meeting in Albuquerque, NM to present the characteristics of the energy storage technologies. Two HDR personnel will participate in the public meeting.

RFP Process Schedule Development

HDR will prepare a project schedule outlining the key activities throughout the RFP process from RFP development through contract negotiation with a selected vendor. The project schedule will be developed in Microsoft Project and will be drafted, submitted for PNM review, and updated for PNM comments. Ongoing maintenance of the project schedule throughout the execution of the project has not been included.

Preparation of Technical Specifications for PNM Issued RFP for non SJGS Alternatives

Upon definition of the Bid Strategy, HDR will prepare the technical specifications for non SJGS alternatives to be included in PNM's RFP document. Technology-specific technical specifications will be prepared as part of this package for combustion turbine, reciprocating engine, battery storage system, and solar photovoltaic applications. The technical specifications will also incorporate detailed site characteristics for each of the sites offered by PNM for requested EPC contract applications.

In addition, the RFP documents will be developed to describe and define the overall resource-need, any site characteristics for sites offered by PNM for development, and primary design criteria and standards to be utilized as a basis of design. The RFP will include those items defined during the project kickoff meeting, namely:

- Eligible power supplies (capacity, dispatchability, availability, etc.)
- Ancillary service capabilities
- Eligible project structures
- Power delivery requirements
- Interconnection requirements
- Fuel sourcing requirements

- Environmental thresholds
- Minimum technical design requirements/standards

Furthermore, HDR has assumed that additional support will be required for the development of the RFP and associated Bid Forms in accordance with the following Division of Responsibility. HDR will support and coordinate these document development activities in conjunction with inputs from the PNM team and understand that the content of the RFP document may vary from what is outlined below. To the extent that the RFP documentation strays significantly from that outlined below, HDR would appreciate the opportunity to discuss the associated level of effort with the PNM team.

RFP Section	PNM Responsibility	HDR Responsibility
RFP Process Management	Lead	Support
Overview of the RFP Process	Review and Comment	Lead
Eligible Proposal Requirements	Review and Comment	Lead
Technical Specifications	Review and Comment	Lead
Proposal Submission Procedures	Review and Comment	Lead
Proposal Content Requirements	Review and Comment	Lead
Bid Evaluation Methodology	Review and Comment	Lead
Appendices		
- **Non-Disclosure Agreement**	Lead	No Action
- **Model PPA Term Sheet**	Lead	Review and Comment
- **Model Asset Purchase Term Sheet**	Lead	Review and Comment
- **Required Bid Forms**		
- **Bid Certification Forms**	Review and Comment	Lead
- **Bidder Profile**	Review and Comment	Lead
- **Pricing Forms (including annual O&M and variable cost to operate)**	Review and Comment	Lead
- **Performance Data (capacity, heat rate, degradation)**	Review and Comment	Lead
- **Unit Reliability**	Review and Comment	Lead
- **Interconnection Plan/Costs**	Review and Comment	Lead
- **Delivery Arrangements**	Review and Comment	Lead
- **Technical Project Description and Narrative Information**	Review and Comment	Lead
- **Fuel Information and Sourcing Plan**	Review and Comment	Lead
- **Emissions Rates**	Review and Comment	Lead
- **Chemical Usage**	Review and Comment	Lead
- **Water Usage**	Review and Comment	Lead
- **Permitting Plan/Status**	Review and Comment	Lead
- **Land Use, Zoning, and Permits**	Review and Comment	Lead
- **Construction Arrangements**	Review and Comment	Lead
- **Notice of Intent to Respond**	Review and Comment	Lead
- **Credit Guidance**	Review and Comment	Lead
- **Detailed Scoring Methodology**	Review and Comment	Lead

HDR has not assumed that a bidder identification / qualification process would be required for the RFP and that this RFP would be published via open public notification. If either of these assumptions is incorrect, HDR can provide a scope and cost modification to best comply with the process requirements.

During the RFP development, HDR will propose an evaluation methodology to be utilized to evaluate the bids. Such methodology will be reviewed with the PNM team and finalized.

Upon submittal of the draft RFP documents to PNM, HDR will participate in a meeting with the PNM team to review the associated content and discuss necessary modifications and adjustments to finalize the document.

Final technical specifications and RFP documents will then be prepared and submitted to PNM for final acceptance and approval.

Upon issuance of the RFP documents for bid, HDR will support a pre-bid conference in PNM's offices as well as pre-bid site visits to all of the potential EPC project sites to familiarize the bidders with the site characteristics.

Site Visits to Collect Existing PNM Site Characteristics

The base proposal assumes that all existing PNM site characteristics would be provided by PNM staff for incorporation into the technical specifications. Should this data not become readily available, HDR will perform a site visit to up to four project sites to meet with PNM staff, investigate site systems and conditions, and collect the necessary data to pass on to the EPC Bidders via the technical specifications.

Evaluation of Proposals Received

Upon receipt of bids, HDR will prepare an initial bid screening assessment. The bid screening will be utilized to evaluate each proposal for completeness and consistency with the requirements specified in the RFP as well as developing a comparative assessment of bid characteristics, costs, performance, guarantees, and an initial economic analysis to develop a first year delivered cost for each proposal. To further clarify the characteristics of each proposal, HDR will prepare clarification questions for each bidder and incorporate the responses into the bid screening analysis. A spreadsheet summarizing the findings of the bid screening effort will be prepared and presented to PNM as final documentation and as justification to continue or discontinue a more detailed assessment of the screened projects. HDR will participate in two bid screening review meetings in PNM's offices to review the initial findings and to discuss shortlisting the bids as well as the path forward for the more detailed evaluation. For those proposals screened out of the process, a justification document will be prepared outlining the reasons for exclusion.

In support of the bid screening and evaluation, HDR will prepare estimates of Owner's Costs, transmission interconnect costs, natural gas lateral/delivered cost estimates, operations and maintenance costs, and other scope-equalizing cost factors to support equalizing of the various proposal types and structures. HDR will also participate in meetings with PNM staff to develop and incorporate proposal-specific cost and characteristic considerations into the bid evaluation process.

Upon conclusion of the bid screening assessment and definition of potentially viable proposals, HDR will initiate a detailed bid evaluation process. The bid evaluation process will involve the development of a more detailed comparison of the screened proposals that will focus on the compliance of each bid to the desired project characteristics and will summarize the project pricing, performance, exceptions to the commercial terms, development status, interconnection viability, and overall project structure.

HDR will also prepare a list of additional clarification items to be addressed by each screened bidder, will compile these items with those from the PNM team, and will prepare to address these with each of the bidders. It is assumed that a subsequent meeting will be scheduled with each bidder to review the proposals and address any open questions. It is assumed that these meetings will be scheduled on sequential days, to the extent practical, such that HDR personnel can accomplish this in one trip.

Subsequent to this meeting and upon receiving the necessary clarifications from the bidders, HDR will update the bid evaluation comparison. HDR will also prepare a financial model using PNM's current revenue requirements model to compare the lifecycle costs of the screened bids. Adjustments for pricing, scope, delivery of power, and other factors will be incorporated as appropriate for each bidder.

Upon completion of these activities, HDR will prepare draft and final summary documentation outlining the bids received, the evaluation methodology utilized, and the resultant bids that could viably be considered for the energy resource need.

Additional activities included:

- Summary of bidder redlines to the commercial term sheets (previously assumed to be led by PNM)
- Modification and re-structuring of the term sheets for Solar, Wind, Gas PPA, Gas EPC, Battery, and combined Solar and Battery offerings (previously assumed to be led by PNM)
- Review of Power Purchase Agreements
- Ongoing support of final bid selection and review of guarantees and PPA terms and conditions

Contract Negotiation Support

For projects selected out of the 2023 Generation RFP process, HDR will support negotiation meetings and technical specification conformance. HDR has assumed that PNM's legal and procurement teams will lead the commercial negotiations with the successful bidders with HDR supporting discussions regarding integration of the technical, guarantee, warranty, and penalty aspects of the commercial terms. Additionally, HDR will support drafting and review of Agreement language, participation in multiple internal contract review discussions, and conformance of the technical specifications for selected EPC options.

Preparation of a Geotechnical Specification for the San Juan Project Site

For potential projects to be located at the San Juan site, HDR will prepare a geotechnical specification detailing the depth of exploration, spacing of boreholes, boring and rock coring methods, sampling methodologies, sample handling and identification, cataloging, groundwater readings and backfilling, laboratory testing, acceptable testing methodology, and methods of soil resistivity analysis among other project specific requirements. The specification will include a borehole plan and also provide direction to the Contractor regarding the requirements of their final deliverable, the geotechnical report. Bid evaluation of geotechnical contractors and further interpretation of the contractor's geotechnical report are currently not included in the pricing proposed.

Preparation of NMPRC and Other Regulatory Required Testimony

HDR proposes to support PNM with the preparation of testimony for New Mexico Public Regulation Commission (NMPRC) and other required regulatory approvals. In support of these activities, HDR has assumed the following activities:

- Attendance of Mr. Roger Nagel at an initial meeting in PNM's offices to discuss the required testimony.

- An allotment of hours for testimony development support.
- Attendance of Mr. Roger Nagel at one single-day general working meeting in PNM's offices.
- An allotment of hours for development of interrogatory responses and miscellaneous other duties needed for successful CCN filing.

Activities not included in this scope of services include in-person, expert witness testimony, and any other duties beyond those noted above as may be required.

Process Overview Report

PNM Exhibit RWN-4

Is contained in the following 30 pages.

Bid Evaluation Process Overview

Replacement Resource RFP

Public Service Company of New Mexico

New Mexico
June 29, 2019

Contents

Tables

This page is intentionally left blank.

Executive Summary

Public Service Company of New Mexico ("PNM") a wholly owned subsidiary of PNM Resources, Inc., issued a request for proposals ("RFP") entitled PNM 2023 Generation RFP ("Replacement Resource RFP") on October 30, 2017. The purpose of the Replacement Resource RFP was to acquire sufficient resources to meet PNM's forecasted capacity and electric demand, plus reserves, identified in PNM's 2017 - 2036 Integrated Resource Plan ("2017 IRP") under the assumption that the San Juan Generating Station ("SJGS") does not continue to operate past 2022.

A supplemental Energy Storage RFP ("BESS RFP") was issued in April, 2019 to further investigate the potential benefits of utility-owned battery energy storage alternatives.

This document summarizes the RFP process, the proposals received, the bid evaluation process, and the basis for selection of the preferred proposals. In response to the Replacement Resource RFP, the PNM bid evaluation team received 345 bid variants from 37 bidders that included Engineer, Procure, and Construct (EPC) bids, Power Purchase Agreement (PPA) bids, and Build-Transfer (BT) bids for solar, wind, energy storage, and natural gas-fired generation resources. An additional 45 bids were received from 4 bidders under the supplemental BESS RFP including EPC and BT bids.

After completing a three-phase bid evaluation process consisting of an "Initial Screening" for satisfaction of minimum bid requirements, a Phase One evaluation resulting in a shortlist of 51 projects, and a more detailed Phase Two evaluation involving PNM generation portfolio modeling, a final list of preferred options consisting of seven (7) primary bids and six (6) alternative bids were selected. These bids are summarized in Table ES-1.

Table ES-1. Preferred Bid Option Summary

Bidder	Project Location	Project Structure	Capacity
Primary Bids			
Bidder #30	Rio Arriba County	Solar PPA	50 MW Solar / 20 MW (80 MWH) BESS
Bidder #13	McKinley County	Solar + Storage PPA	300 MW Solar / 40 MW (160 MWH) BESS
Bidder #4	San Juan County	Natural Gas EPC	280 MW
Bidder #10[a]	Torrance County	Wind PPA	140 MW
Bidder #9	Bernalillo County	BESS EPC	30 MW / 60 MWH
Bidder #9	Bernalillo County	BESS EPC	40 MW / 80 MWH
Bidder #9	San Juan County	Solar EPC	20 MW
Alternative Bids			
Bidder #12	Bernalillo County	Solar + Storage PPA	100 MW Solar / 20 MW (80 MWH) BESS
Bidder #27	Lincoln/Torrance County	Wind PPA	200 MW
Bidder #9	Rio Arriba County	Solar + Storage PPA	150 MW Solar / 40 MW (160 MWH) BESS
Bidder #3	San Juan County	Natural Gas EPC	180 to 360 MW
Bidder #9	Bernalillo County	BESS EPC	40 MW / 80 MWH
Bidder #9	San Juan County	BESS EPC	40 MW / 80 MWH

a. This bid selected for its contribution to satisfying PNM's Renewable Portfolio Standard commitments.

1 Introduction

Public Service Company of New Mexico ("PNM") a wholly owned subsidiary of PNM Resources, Inc., issued a request for proposals ("RFP") entitled PNM 2023 Generation RFP ("Replacement Resource RFP") on October 30, 2017. The purpose of the Replacement Resource RFP was to acquire sufficient resources to meet PNM's forecasted capacity and electric demand, plus reserves, identified in PNM's 2017 - 2036 Integrated Resource Plan ("2017 IRP") under the assumption that the San Juan Generating Station ("SJGS") does not continue to operate past 2022.

A supplemental Energy Storage RFP ("BESS RFP") was issued on April 2, 2019 to further investigate the potential benefits of utility-owned battery energy storage alternatives. This RFP was issued in response to the enactment of the Energy Transition Act ("ETA") in March 2019 which includes specific requirements for energy storage systems, including, among other considerations, that the energy storage must provide the "public utility with the discretion, subject to applicable laws and rules, to operate, maintain and control energy storage systems so as to ensure reliable and efficient service to customers[.]" As originally presented, the non-utility-owned storage bids, which were in the form of proposed PPAs, imposed operational restrictions that appeared inconsistent with certain of the ETA provisions relating to energy storage. Utility-owned storage would afford greater flexibility with respect to the operation, maintenance and control of energy storage in conformity with the ETA provisions relating to energy storage. However, the PPA energy storage bids remained under active consideration. A number of the bids for proposed utility-owned storage projects submitted in response to the Replacement Resource RFP were disqualified from consideration because the bidders did not have the requisite license from the New Mexico Construction Industries Division. Therefore, PNM issued the April 2019 RFP to possibly develop more utility-owned bids that would meet the foregoing provisions of the ETA relating to energy storage and to appropriately evaluate the full value of options of utility ownership versus the battery PPA options.

The purpose of this document is to summarize the proposals received in response to the above RFPs, the bid evaluation methodology, activities performed during the RFP bid evaluation, and the basis for selection of the preferred proposals.

PNM sought proposals for up to 456 MW (nameplate) of supply resources to be delivered to PNM load within Western Electricity Coordinating Council (WECC) Path 48. The Replacement Resource RFP was issued as an "all-source" request inviting proposals for generating resources consistent with the 2017 IRP as well as additional renewable and energy storage resources beyond those identified in the 2017 IRP's non-SJGS alternative.

Eligible proposal structures included:

- Engineering, procurement, and construction ("EPC") contracts on existing PNM sites;
- Asset Purchase Agreements ("APA");
- Power Purchase Agreements ("PPA") with or without a purchase option (20 year minimum term) located on a bidder's site; and

- Build-Transfer ("BT") projects located on a bidder's site.

The BESS RFP invited proposals for utility owned battery energy storage resources.

Eligible proposal structures included:

- Engineering, procurement, and construction ("EPC") contracts on existing PNM sites; and
- Build-Transfer ("BT") projects located on a bidder's site.

PNM considered existing and new generation resources with the intent to develop the reliable economic generation portfolio that could satisfy system needs, maintain necessary system reliability requirements, satisfy and exceed the New Mexico Public Regulation Commission Rule 572 renewable portfolio standards, and maximize value for PNM's customers.

2 RFP Issuance

PNM issued the Replacement Resource RFP and the BESS RFP via the PowerAdvocate Sourcing Platform (PowerAdvocate) on October 30, 2017 and April 2, 2019, respectively. PowerAdvocate was utilized by PNM to manage the communications and document exchange with RFP bidders throughout the RFP process. All potential bidders were required to register on PowerAdvocate and the RFP documentation was made available for download within PowerAdvocate to eligible bidders. In the RFP documentation, PNM provided Instructions to Bidders, bid response forms, template contract term sheets, and minimum technical specifications.

3 Bid Period and Receipt

The Replacement Resource RFP bid period extended from October 30, 2017 through the bid due date of January 30, 2018 while the BESS RFP bid period extended from April 2, 2019 to May 24, 2019.

For the benefit of potential bidders, PNM held a pre-bid conference and webinar on November 14, 2017 that summarized the Replacement Resource RFP requirements. A pre-bid conference for the BESS RFP was held on April 9, 2019. The meetings were held in PNM's offices at 414 Silver Ave. SW in Albuquerque, NM. Subsequently, site visits were held for the Replacement Resource RFP on November 15 and 16, 2017 to familiarize potential EPC bidders with the sites available for EPC project developments. These sites included the La Luz Energy Center, Rio Bravo Generating Station, Reeves Generating Station, the San Juan Generating Station, and areas around the Rio Puerco Substation,

During the bid periods, bidders had the opportunity to submit questions to PNM via PowerAdvocate. Questions were accepted for the Replacement Resource RFP through January 8, 2018 with all responses provided by the PNM team by January 12, 2018. PNM received 209 pre-bid questions and posted all non-confidential questions and answers through PowerAdvocate, which were accessible to all potential bidders. For the

BESS RFP, 22 questions were accepted through May 7, 2019 with corresponding responses provided.

Bids were required to be submitted to PowerAdvocate by 4:00 p.m. MST on January 30, 2018 for the Replacement Resource RFP and by 2:00 p.m. MST on May 24, 2019 for the BESS RFP. In response to the Replacement Resource RFP, PNM received bids from 37 different bidders, across 49 potential project sites. Many bidders offered multiple variants of their proposals including different in-service dates, pricing structures, capacities, and commercial structures (PPA, BT, or EPC). In total, 345 bid variants were received for evaluation. These bids were supplemented by an additional 45 bid variants from 4 bidders in response to the BESS RFP for a total quantity of 390 bid responses.

Table 3-1 provides a summary of the types of bids received including technology, proposal structure, and total potential capacity. Note that the potential capacity indicated in Table 3-1 considers only the largest capacity offering for the noted generation technology for each project site proposed.

Table 3.0-1. Summary of Proposal Responses

Technology		Power Purchase Agreement		Build Transfer		EIM Contract	
	Quantity of Bidders	Quantity of Bid Options	Potential Capacity (MW/MWh)	Quantity of Bid Options	Potential Capacity (MW/MWh)	Quantity of Bid Options	Potential Capacity (MW/MWh)
Replacement Resource Generation RFP Responses							
Solar	16	74	2293 MW	7	593 MW	6	227 MW
Wind	7	16	2099 MW	4	840 MW	-	-
Battery	11	50	834 MW / 3,336 MWh	-	-	17	560 MW / 1,949 MWh
Flywheel Energy Storage	1	-	-	-	-	6	100 MW / 400 MWh
Frame Combustion Turbine	5	3	355 MW	4	804 MW	6	1,233 MW
Aeroderivative Turbine	2	-	-	-	-	7	461 MW
Reciprocating Engines	6	9	987 MW	1	220 MW	7	621 MW
Mixed Gas Resources	2	2	190 MW	-	-	1	279 MW
Combined Gas / Battery	5	9	557 MW (Gas) 170 MWh (Battery)	3	220 MW (Gas) 5 MWh (Battery)	5	318 MW (Gas) 17.2 MWh (Battery)
Combined Cycle	1	-	-	1	439 MW	-	-
Combined Solar / Battery	18	84	2,009 MW (Solar) 4,423 MWh (Battery)	9	545 MW (Solar) 844 MWh (Battery)	5	164 MW (Solar) 360 MWh (Battery)
Combined Solar / Flywheel	1	-	-	-	-	6	200 MW (Solar) 320 MWh (Battery)
Combined Wind/Battery	1	1	479 MW (Wind) 400 MWh (Battery	-	-	-	-
Combined Solar/Wind	1	2	150 MW	-	-	-	-
Total Bids	345	250		29		66	
Supplemental Energy Storage RFP Responses							
Battery	4			5	150 MW / 600 MWh	40	850 MW / 3,400 MWh
Total Bids	390	250		34		106	

4 Bid Evaluation Process Summary

The bid evaluation team for the RFP process included representatives from PNM, HDR Engineering, Inc. (HDR) and Astrape Consulting, LLC ("Astrape"). PNM representatives provided direction, input, review, and concurrence through all aspects of the bid evaluation from appropriate subject matter experts.

HDR served as a third-party evaluator to review, summarize, and evaluate proposal information in a consistent and controlled manner to facilitate PNM modeling and decision making, as well as to provide support for the later phases of the evaluation and negotiation. Astrape performed generation system portfolio modeling to evaluate the overall system reliability and cost of service for varying generation portfolios.

Prior to the receipt of proposals, the bid evaluation team developed a bid evaluation methodology that would be utilized to evaluate the proposals on a consistent and comparable basis.

The bid evaluation was split into three phases:

- Initial Screening: initial screening of bids for compliance with the minimum requirements of the RFP.
- Phase One Evaluation: detailed evaluation of screened bids to shortlisting of bids to the best-in-class within the technologies proposed; bids evaluated individually for both quality and likelihood of achieving successful commercial operation using both price and non-price criteria.
- Phase Two Evaluation: further detailed evaluation of shortlisted bids including analysis of combinations of bids to support a preferred alternative or combination of alternatives.

4.1 Initial Screening

The Initial Screening phase of the bid evaluation assessed compliance with the requirements and intent of the RFPs including an assessment of minimum requirements, completeness, and fatal flaws. The evaluation team compared the proposals to the minimum bid requirements identified in the RFP to identify proposals that did not meet the requirements or that lacked necessary information.

After the bids were reviewed for bid completeness, questions and clarifications were assembled for each bidder, as applicable, and were submitted via PowerAdvocate. PNM clarified that it would take into consideration whether bidders would promote and encourage use of New Mexico workers to the extent practicable. Questions were formulated specific to individual bidders, however general topics of clarifications included:

- Pricing, scope, and schedule for required electrical interconnection and network upgrades
- Project schedule including in-service or transfer dates
- Cost sharing options of transmission and network upgrades

- Impact of recent Solar Tariffs on Solar PV proposals
- Production Tax Credit (PTC) and Investment Tax Credit (ITC) qualifications and requirements
- Performance guarantees
- Proposal validity term (required to be at least 120 days)
- Land acquisition status
- Requests for missing proposal documentation

For the Replacement Resource RFP, the first round of clarifying questions was submitted to bidders on March 1, 2018 with a second round subsequently issued on March 29, 2019 after responses were received from the first round. For the BESS RFP, clarifying questions were submitted on May 29, 2019. As part of the Initial Screening, the evaluation team initiated a side-by-side comparative analysis of the proposals that assessed several factors including, but not limited to, the following bidder and proposal characteristics:

- Performance
- Development Status
- Environmental and Permitting Status
- Land Acquisition Status
- Credit Quality
- Safety Metrics
- Construction Contractor License Applicability
- Proposal Quality / Completeness
- Point of Delivery
- Transmission Losses/Fees
- Achievable In-Service Dates
- Total Delivered Cost

At the completion of the Initial Screening phase of the evaluation, the evaluation team decided to carry all proposals into the Phase One evaluation to more fully evaluate the characteristics and economics of each proposal. This decision was made in an effort to make the evaluation as thorough and complete as possible and to more fully understand the potential value of each project to PNM and the stakeholders. On this basis, at the end of the Initial Screening phase, the evaluation team retained all proposal options regardless of whether they satisfied the minimum requirements of the RFP. For the Replacement Resource RFP, the initial screening phase extended from initial receipt of bids on January 30, 2018 through mid-April, 2018.

4.2 Phase One Evaluation

The Phase One evaluation focused upon characterizing the RFP responses for comparison purposes as well as for system modeling purposes. The factors considered for comparison purposes throughout the evaluation process included, but were not limited to performance, development status, land acquisition status, credit quality, safety metrics, transmission line losses and/or fees, achievable in-service dates, and total delivered cost. In addition to the above, factors considered in the shortlisting process included an assessment of the bidder's experience with these types of projects, commercial experience of the technology, review of comments to the terms and conditions, and general quality of the proposal.

As the project characteristics were defined, HDR prepared project characteristic summaries for system modeling purposes to be used by PNM's resource planning personnel as well as Astrape's system modeling staff. The characteristics included, but were not limited to performance, efficiency, emissions, cost, operational flexibility, annual generation/capacity factors, and availability as appropriate for each type of bid.

During the Phase One evaluation, as part of the continuing proposal evaluation process, further clarifying questions were formulated specific to individual bidders to address any gaps or required clarifications to equalize and accurately characterize the proposals. For the Replacement Resource RFP, the third and fourth rounds of clarifying questions were submitted to these bidders in May 2018 and July 2018, respectively. In total, up to six rounds of questions were issued to specific bidders prior to the shortlist selection. For the BESS RFP, all questions were issued and addressed within June 2019.

In comparison to the Initial Screening, Phase One of the bid evaluation involved a refinement of the Initial Screening comparative analysis and incorporated a more in-depth review, evaluation, and comparison of the bids. Amongst other items, specific attention was focused on the analysis of electrical interconnection and transmission upgrade costs as will be further discussed herein. Information and evaluation findings were developed to facilitate the establishment of a shortlist of bids. In addition to the evaluation factors considered during the Initial Screening, an assessment and side-by-side comparison of each bidder's redlines to the draft Terms and Conditions as well as their experience with the generation technology(ies) proposed, was performed.

A more detailed discussion of the evaluation and bid analysis methodologies is included in Section 5.0 of this document.

4.2.1 Shortlist Selection

To establish a shortlist of bids, the bid evaluation team initially established the following objectives for the selection process.

1) The shortlist should maintain the most favorable bids in each generation technology category including:
    a. Solar generation in varying size categories
    b. Wind generation in varying size categories
    c. Combined wind and solar generation
    d. Energy storage in varying size categories

e. Heavy frame combustion turbines
f. Aeroderivative combustion turbines
g. Reciprocating engines
h. Combined renewable (both solar and wind) and energy storage solutions
i. Combined natural gas and energy storage solutions

2) The shortlist should generally maintain offerings in each technology category with sufficient capacity to deliver the full replacement need for the San Juan Generating Station. This allows the ability to subsequently perform more detailed system modeling with alternative generation portfolio mixes to investigate and identify the most cost effective portfolio for PNM going forward.

3) The shortlist should maintain optionality in the project implementation schedule and consideration of requirements associated with optimizing Investment Tax Credits (ITCs) and Production Tax Credits (PTCs) associated with renewable energy.

4) The shortlist should avoid including proposals that include any "fatal flaws" considering experience, development status, transmission system viability, and/or incomplete proposals.

5) The shortlist should retain offerings that optimize the total delivered cost of electricity. While some bidders did offer refreshed and reduced pricing prior to the shortlist selection, in a matter of fairness within the bid process, these offers were identified, but not considered in the shortlist selection process.

6) The shortlist should retain proposals that allow the ability to maintain required system reliability.

7) Shortlisted offers should maintain the flexibility to incorporate and allow for future increased integration of renewable energy resources.

The intent of considering the above in the selection of the shortlisted bidders was to provide sufficient information to allow Astrape to perform and evaluate a wide range of generation portfolios in an effort to develop what ultimately is referred to as the Reliable Economic Portfolio for PNM going forward while maintaining system reliability objectives.

Of the 390 bid options evaluated in Phase One, PNM selected 51 bids to proceed into Phase Two as a shortlist. Some of the bids did include alternative offerings for varying project capacities, so the total quantity of bid variants carried into Phase Two were over 51.

Table 4.2-1 provides a summary of the types of projects shortlisted as a result of the Phase One evaluation.

Table 4.2-1. Shortlist Content Summary

Technology	Quantity of Projects (some involve multiple size offerings)	Project Structure	Total Potential Capacity (MW/MWh)
Solar	9	8 PPA / 1 EPC	1,195 MW
Wind	5	PPA	1,500 MW
Battery	10	6 PPA / 4 EPC	784 MW / 2,935 MWH
Frame Combustion Turbine	4	EPC	800 MW
Aeroderivative Turbine	5	EPC	420 MW
Reciprocating Engines	3	2 EPC / 1 PPA	500 MW
Combined Solar / Battery	13	PPA	1,400 MW
Combined Wind/Battery	1	PPA	480 MW
Combined Solar/Wind	1	PPA	150 MW

Justification for removing bids from further evaluation included the following:

- 32 bids were eliminated based upon bidder's lack of having a New Mexico Construction Contractor's License at the time of bid submittal (applicable for EPC and BT offers),
- 81 bids were eliminated based upon total evaluated delivered cost including costs associated with electrical transmission system upgrades and/or wheeling fees to deliver the generation to PNM load within WECC Path 48,
- 25 bids did not comply with the minimum bid requirements with 3 of these proposals involving behind-the-meter customers/hosts,
- 12 bids involved a pilot/demonstration scale technology with insufficient proven, commercial operating experience at the size and scale required for this project,
- 69 bids were eliminated on total delivered cost only,
- An additional 112 projects were eliminated in the selection of the best-in-class proposals including consideration of all evaluation factors and total delivered cost.

4.2.2 Shortlist Notification

The Replacement Resource RFP Phase One evaluation process was finalized by the bid evaluation team during June 2018 with notifications issued in PowerAdvocate to both successful and unsuccessful bidders on July 11, 2018. The notification letters for the successful bidders included a request to schedule a subsequent bid review meeting

between July 24, 2018, and August 3, 2018, to kick off the Phase Two evaluation and more thoroughly review the characteristics of the proposals.

Shortlisting for the BESS RFP occurred during early June 2019 with subsequent meetings held with the shortlisted bidder.

4.3 Phase Two Evaluation

Upon completion of the Phase One evaluation and notification of the selected bidders, the Phase Two evaluation was initiated with the intent to complete a more detailed assessment of the project characteristics, economics, commercial and contracting terms, and project validation to differentiate the short listed bids and to support a final selection. For the Replacement Resource RFP, the Phase Two process was initiated with bidder interview meetings from July 24 to August 3, 2018 in PNM's offices in Albuquerque, NM and was completed with final shortlist notifications being issued on November 21, 2018.

The Phase Two evaluation for the shortlisted BESS bidder was performed in June, 2019 with results compared and evaluated against the Replacement Resource RFP bid evaluation results. Beyond the evaluation described in this report, the Phase Two evaluation for the BESS RFP also considered additional value to PNM for a utility-owned BESS project including battery locational value, capital investment deferral, avoidance of curtailment of renewable generation, system reliability, and other factors. Studies were completed by the Brattle Group, Ascend Analytics, Astrape, and Enovation Partners. The results of these studies are not reflected in this document.

4.3.1 Shortlist Bidder Interviews

The Replacement Resource RFP shortlisted bidder interview meetings were scheduled to allow the bidders to present their proposals and to have an open discussion with the PNM team regarding the status, benefits, and challenges associated with the projects. The meetings were also intended to allow PNM to further clarify certain RFP requirements and discuss certain technical and commercial terms proposed in the bid options. These interview meetings were held with the twenty shortlisted companies from July 24 through August 3, 2018. An agenda and list of clarification questions were issued prior to these meetings with additional questions issued as a result of these meetings. The agenda structure was established to allow a well-rounded discussion of the key project characteristics considered in the evaluation.

Subsequent to these meetings, PNM also issued updated terms and conditions to the shortlisted bidders to be considered in a bid refresh. These updated terms and conditions were provided in an effort to define, equalize, and standardize bid expectations while the initial terms and conditions were structured to allow the bidders to offer their proposals for key commercial terms such as project security provisions and liquidated damages.

During each bidder interview, PNM requested that the bidder submit a refreshed bid and responses to all questions raised during the interview by August 31, 2018. This bid refresh was intended to allow the bidders to address any issues raised during the interview, to consider the updated terms and conditions presented by PNM, and offer

refreshed pricing and proposal information based upon updated information and market adjustments that had occurred since the original proposals.

4.3.2 Bid Refresh

For the Replacement Resource RFP, PNM received a bid refresh for the requested bid options discussed during the bidder interviews from all 20 shortlisted bidders. PNM requested that all refreshed bids include pricing for a December 31, 2021 in-service date and updated redlines to the PPA and EPC contract term sheets.

The information provided in this bid refresh process was incorporated into the overall evaluation process and was utilized to update the generation portfolio modeling. In addition to modeling the refreshed information, the model was updated to reflect the current gas pricing forecast being used by the PNM planning team and incorporated refined cost accounting for transmission system upgrade and interconnection costs, consistent with PNM's revenue requirements modeling. In conjunction with these modifications, the bid evaluation team reviewed the implications of these adjustments to the shortlist selection process and confirmed that the modifications would not have resulted in a change to the selected shortlist proposals.

4.3.3 Proposal Ranking Matrix

As an evaluation tool to guide the detailed comparative evaluation of bids, PNM used a weighted Ranking Matrix developed prior to receipt of bids from the Replacement Resource RFP. The Ranking Matrix allowed the bid evaluation team to assign scores to quantitative and qualitative evaluation criteria and thereby provide a consistent basis from which to compare and rank bids. The Ranking Matrix was only utilized to rank projects of a specific technology and considered price and non-price factors with collaboratively developed weighting factors. Assessment and selection of specific generation technologies was left to the more extensive system planning and modeling efforts performed by the PNM and Astrape modeling teams which considered how the technologies best integrated into PNM's generation portfolio.

The quantitative and qualitative criteria focused on maximizing value for customers and minimizing associated risk.

4.3.4 Qualitative Criteria

A summary of the approach to rating the qualitative evaluation criteria is below:

Commercial Conditions: The bid evaluation team reviewed the redline markups to the form agreements, as applicable, as well as commercial provisions including guarantees and warranties among other terms conveyed in the proposal. The overall conformance to commercial terms was assessed and bid options with exceptions to desired commercial terms, multiple exclusions, or projected significant negotiation challenges received lower ratings.

Creditworthiness: The bid evaluation team reviewed the bidder's (or their third-party enhancement) credit ratings among the credit agencies. Larger value and longer security offerings received higher ratings. PNM also assessed the project financing approach

where options with self-financing and higher level of bidder ownership received higher ratings.

Team Qualifications: The bid evaluation team reviewed the amount of bidder's prior project experience and demonstrated level of team experience. Bid options with a larger number of prior completed projects and long working relationships with personnel and/or contractors received higher ratings. The bidder safety record (i.e. experience modification rate) was also incorporated into the rating.

Project Engineering: The bid evaluation team reviewed the level of detail of the proposed project's engineering design, development and construction schedule, and O&M plan. Also, the project schedule was assessed for development, construction, or interconnection scheduling challenges. Higher ratings were given for bid options that clearly documented the design, schedule and plans. This criteria also included a rating on the measure of technology maturity.

Environmental & Siting: The bid evaluation team assessed the bidder's land control status and plan. Also, the status of an environmental site assessment and level of community engagement was evaluated. Permitting issues related to the presence of sensitive wildlife and habitat and airspace impacts were assessed and categorized to understand the level of risk and potential schedule delay in obtaining the necessary permits and approvals. The current status of land control and the level of community and stakeholder engagement were important factors in assessing the viability and clarity of the proposed development and permitting plan.

Fuel Supply: The bid evaluation team reviewed the fuel supply plan and interconnection status giving higher ratings to proposals with documented ability to secure firm fuel supply. Proposals not using a fuel supply were given the highest rating.

Interconnection / Performance: The bid evaluation team reviewed the interconnection status of the proposed projects in the DISIS process and the existing interconnection process (or plan to obtain). Bid options with secured transmission rights received higher ratings than ones yet to secure rights or that were deemed to have higher costs and significant schedule creep risk. The bid evaluation team also reviewed system upgrade risks and congestion risks. Projects that demonstrated higher congestion issues or increased system upgrade cost requirements received lower ratings.

4.3.5 Technology Risk Mitigation

To minimize technology risk associated with battery energy storage technologies, during the Phase Two evaluation, the bid evaluation team determined that it would be prudent to limit the application of any single energy storage technology at any site to no more than 40 MW. For this reason, energy storage offers from both the Replacement Resource RFP and the supplemental Energy Storage RFP were revisited, modified, and adjusted in capacity, if necessary, to comply with this limitation. The preferred bid options summary below reflects this adjustment to the quoted battery energy storage technology capacities.

4.3.6 Preferred Bid Options

As previously noted, the highest ranking projects were modeled and again validated against the closest competitive bids and with varying pricing sensitivities by PNM's Resource Planning Group and Astrape to understand the resource portfolio that most economically satisfied PNM's future load forecast. Results from the modeling concluded that a mix of gas, wind, solar, solar/battery, and battery resources provides the most effective resource mix with the least impact to the rate payers while maintaining the desired system reliability.

Of the highest ranking projects, primary bids were selected based upon proposed pricing, overall ranking from the bid evaluation process and modeling results. Those primary bidders are identified below.

A list of alternate bidders was also developed to maintain a competitive process during negotiations. These bids, although not ranked as the highest in the evaluation, are competitive and would meet future load forecast needs. The list of alternate bidders was selected to provide an amount of energy supply similar to the primary bidders.

Wind projects were evaluated and considered for satisfaction of PNM's future renewable portfolio objectives and included accordingly.

Contract negotiations were then initiated with the primary bidders identified in Table 4.3-2. Through the Phase Two modeling and evaluation process, some bid refinements were incorporated to optimize project locational benefits, to limit battery technology risk, and to deliver the desired system reliability. Table 4.3-2 provides a summary of the originally quoted bid characteristics as well as the final preferred bid characteristics. The characteristics of the final preferred bids were provided to PNM's Resource Planning Group and Astrape for final portfolio modeling efforts.

Table 4.3-2. Preferred Bid Option Summary

Bidder	Location	Project Structure	Originally Quoted Capacity	Original Capacity Factor	Final Shortlist Capacity	Evaluated Capacity Factor	Strengths	Challenges
Primary Bids								
Bidder #30	Rio Arriba County	Solar PPA	50 MW Solar	31.65%	50 MW Solar / 20 MW (80 MWH) BESS	30.88%	- Favorable solar pricing for capacity of facility - Involvement of Jicarilla Apache Nation and use of land	- Limited team development experience - Electrical interconnection via JANPA
Bidder #13	McKinley County	Solar + Storage PPA	300 MW Solar / 150 MW (600 MWH) BESS	30.25%	300 MW Solar / 40 MW (160 MWH) BESS	31.44%	- Favorable pricing - Private land with lease option - Entered DISIS in July, 2018 - POI is on the project site	- Limited battery storage experience - Largest solar facility is 200 MW
Bidder #4	San Juan County	Natural Gas EPC	160 to 308 MW	34.25%	280 MW	34.25%	- Flexible natural gas technology - Favorable evaluated delivered cost - Existing interconnection	- Fuel sourcing to site
Bidder #10[a]	Torrance County	Wind PPA	140 MW	43.80%	140 MW	43.80%	- Favorable evaluated delivered cost of energy for Wind - Significant development experience - 100% site control - Executed LGIA	- Best pricing would be for a 2020 COD - Completion of BB2 transmission line
Bidder #9	Bernalillo County	Storage EPC	50 MW (100 MWH) BESS	365 cycles per year	30 MW (60 MWH) BESS	365 cycles per year	- Located near PNM load center - Significant battery technology experience - modularized - Local contractor experience – 100% New Mexico construction labor	
Bidder #9	Bernalillo County	Storage EPC	50 MW (100 MWH) BESS	365 cycles per year	40 MW (80 MWH) BESS	365 cycles per year	- Located near PNM load center - Significant battery technology experience - modularized - Local contractor experience – 100% New Mexico construction labor	- Technology park location
Bidder #9	San Juan County	Solar EPC	10 MW	32.66%	20 MW	31.28%	- Favorable solar pricing for capacity of facility - Local contractor experience – 100% New Mexico construction labor	- Plant configuration to utilize existing land availability

Table 4.3-2. Preferred Bid Option Summary

Bidder	Location	Project Structure	Originally Quoted Capacity	Original Capacity Factor	Final Shortlist Capacity	Evaluated Capacity Factor	Strengths	Challenges
Alternative Bids								
Bidder #27	Bernalillo County	Solar + Storage PPA	100 MW Solar / 20 MW (80 MWH) BESS	34.90%	100 MW Solar / 20 MW (80 MWH) BESS	34.90%	- Favorable evaluated delivered cost - Avoiding federal land and not subject to NEPA - Significant development experience - Long-term ownership role	- Critical path is Western Spirit transmission line and ROW needs
Bidder #27	Lincoln / Torrance County	Wind PPA	200 MW	47.40%	200 MW	47.40%	- Significant development experience - Long-term ownership role	- Critical path is Western Spirit transmission line and ROW needs
Bidder #9	Rio Arriba County	Solar + Storage PPA	150 MW Solar / 40 MW (160 MWH) BESS	31.47%	150 MW Solar / 40 MW (160 MWH) BESS	31.47%	- Favorable solar pricing - Involvement of Jicarilla Apache Nation and use of land - Engagement of New Mexico State University in study work - Submitted into DISIS in July, 2018	- Long-term ownership unknown as development would be sold - Limited solar experience - Electrical interconnection via JANPA
Bidder #3	San Juan County	Natural Gas EPC	180 to 360 MW	34.25%	180 to 360 MW	34.25%	- Flexible natural gas technology - Favorable evaluated delivered cost - Existing interconnection	- Fuel sourcing to site
Bidder #9	Bernalillo County	BESS EPC	50 MW / 100 MWH	365 cycles per year	40 MW / 80 MWH	365 cycles per year	- Located near PNM load center - Significant battery technology experience - modularized - Local contractor experience – 100% New Mexico construction labor	- More significant electrical interconnection and network upgrade modifications required
Bidder #9	San Juan County	BESS EPC	50 MW / 100 MWH	365 cycles per year	40 MW / 80 MWH	365 cycles per year	- Significant battery technology experience - modularized - Local contractor experience – 100% New Mexico construction labor	- Distance to load center

a. This bid selected for its contribution to satisfying PNM's Renewable Portfolio Standard commitments.

5 Bid Evaluation Methodology

Given the significant quantity of proposals and the varying project structures, the bid evaluation process had to consider methods to fairly and equally compare the alternatives. Some of the challenges associated with this process included the following:

- Transmission Cost / Schedule Evaluation
  - Variation in level of development of transmission access and interconnection costs
  - Failure of some bidders to quote full delivery to PNM load within WECC Path 48
- Natural Gas Supply Evaluation
- Emissions Control Requirements for Natural Gas Fueled Alternatives
- Total Delivered Cost Evaluation
  - Equalization of pricing structures
  - Variation of in-service dates
  - Operation, maintenance, and energy storage augmentation costs
- Renewable Generation Tax Credit and Tariff Considerations
  - Project start of construction and safe harbor approaches to ITC and PTC qualification
  - Treatment of Section 201 Solar Tariff
  - Battery use case (in conjunction with Investment Tax Credit (ITC) considerations)
- Consideration of Imputed Debt

The following discussion provides an overview of how these factors were considered and evaluated throughout the process.

5.1 Transmission System Analysis

An important element in this bid evaluation process was to consider the full costs to the customer for each new resource selection. Transmission interconnection and transmission service costs can be a significant contributor to this overall cost determination. Therefore the review involved a rigorous process for this determination. This involved consideration of the costs included in each proposal for electrical transmission interconnection, system network upgrades required to support the export of generated electricity from each site, transmission system losses, and any required wheeling fees. Bidders were initially requested to provide an estimate of these costs in their proposals, however, due to the fact that many had not yet entered into the generator interconnection queue, detailed estimates were generally not available for analysis from most respondents. Some however, already had a final interconnection agreement or had transmission system studies with estimated costs for necessary upgrades. Similarly, some of those connecting to PNM's transmission system via a third

party transmission provider had accounted for the appropriate wheeling fees while others had not.

PNM solicited follow-up information and supporting data through the PowerAdvocate question and answer process to gain additional unsupplied information from the bidders and to try to validate supplied transmission cost information.

After first requesting bidders to submit this information and facilitating additional bidder discussions through follow-up information requests, PNM's Transmission Planning team reviewed the information submitted and provided an estimate of any required adjustments for interconnection costs, system upgrade, or wheeling fees as well as an estimation of the required timelines to implement these upgrades. These estimates included a review of the costs for electrical interconnection as well as transmission line and transmission system upgrades required to maintain system reliability and contingency requirements as a result of the project being added into the system. These estimated costs were completed by either referencing previous actual transmission studies or engineering estimates based on the experience of the PNM Transmission Planning group that performs these studies. These transmission costs were incorporated into the total delivered cost estimates considered in the bid evaluation. Permitting timelines associated with obtaining right of ways or easements for the transmission lines as well as any state or federal land (BLM) permitting timelines were also considered.

For EPC proposals located on existing PNM sites, HDR similarly worked with PNM personnel to provide an estimate of the electrical interconnection costs for each facility to tie into the existing site electrical switchyard.

5.2 Fuel Supply / Cost Analysis

For the natural gas fueled proposals, the cost of delivered fuel required adjustment for the specific sources of fuel and the infrastructure required to deliver the fuel to each applicable site. As a basis of natural gas commodity pricing, the Initial Screening utilized PNM's gas commodity forecasts from the 2017 IRP. As the Phase Two evaluation continued, the bid evaluation team deemed it more appropriate to update the natural gas commodity pricing to be consistent with the low range pricing forecast then being utilized for PNM's planning activities. As such, in August 2018, the updated commodity pricing was incorporated and bid rankings re-evaluated to confirm that the updated pricing did not change the selection of the shortlisted respondents.

The natural gas pricing utilized for the evaluation included a delivered commodity price, a firm transport cost, and a capital recovery component associated with the installation of any required infrastructure to deliver the gas to the noted site. This included any natural gas laterals and associated interconnection equipment. Estimates for this infrastructure were developed from prior quotes that PNM had received from past investigations by the PNM Wholesale Power Marketing department.

The first year, 2022 natural gas pricing for the various project locations were assumed as shown in Table 5.2-1.

Table 5.2-1. Summary of Delivered Natural Gas Pricing

Site Location	Commodity Price ($/MMBtu)[a]	Firm Transport Cost ($/MMBtu/day)[b]	Lateral/Infrastructure Cost ($/MMBtu)[c]
San Juan	$2.27	$0.18	$0.06 to $0.13 as a function of plant size and consumption
Reeves	$3.08	$0.18	$0.05 for gas turbines, $0.00 for reciprocating engines
Rio Bravo	$3.08	$0.18	$0.00 - existing infrastructure is sufficient
Rio Puerco	$3.08	$0.18	$0.01
Valencia	$2.56	$0.15	NA – Using Existing Lateral
La Luz	$2.27	$0.15	NA – Using Existing Lateral
Kirtland	$2.27	$0.18	$0.00 as these were BT or PPA proposals
Arizona	$2.43	$0.45	$0.00 as these were BT or PPA proposals

[a] Source: PNM Spreadsheet entitled "Fuel Pricing Assumptions 8-23-18"
[b] Source: PNM file entitled "Gas assumptions.docx" dated April 6, 2018"
[c] Estimated from prior quotations received by PNM

5.3 Emission Control Requirements

For EPC natural gas fueled projects, the Replacement Resource RFP and bid evaluation process requested the utilization of a selective catalytic reduction system (SCR) to control nitrogen oxide (NOx) emissions as well as an oxidation catalyst to control carbon monoxide (CO) and volatile organic compound (VOC) emissions.

However, upon further review, for a project that could be located at the San Juan Generating Station site, it was determined that there is the opportunity to reduce the cost of the facility and the cost to the ratepayers by "netting" emissions associated with the shutdown of the existing Units 1 and 4. In short, a Potential for Significant Deterioration (PSD) netting analysis is an option for offsetting the proposed emission increases due to the project.

A preliminary netting analysis was performed by PNM and assumed that the previous 5 years of actual emissions begins with January, 2015 assuming that for any new project at the San Juan Generating Station site, *"commencement of construction",* the Project start date for PSD purposes, will be in January, 2020. For PSD purposes, the last 5 years of operational data establishes the achievable reduction of emissions associated with the shutdown of the San Juan units.

A new project is only a "major modification" for a federal PSD regulated New Source Review (NSR) pollutant at an existing major stationary source if it causes two types of emissions increases: (1) a significant emissions increase, and (2) a significant net emissions increase. The first step looks at actual to projected potential emission increases due to the project, which by themselves would require a PSD permit

application. The second step applies to any regulated pollutant where emission increases are found to be significant from the first step. This step considers all contemporaneous increases and decreases at SJGS.

For Step 2, emission decreases resulting from a reduction in nitrogen dioxide (NO2) emissions from installation of SNCR on Units 1 and 4 have occurred to meet the above criteria for netting because they are "contemporaneous" and "creditable."

These decreases are "contemporaneous" because they will occur "within the time period five years prior to the commencement of construction on the particular change and the date that the increase from the particular change occurs."

For the projects being considered at the San Juan Generating Station site, the projected "Project" emissions are below the "contemporaneous" emission decreases and would therefore not require a PSD permit application or a BACT analysis.

On this basis, it was determined that either reciprocating engines or combustion turbines, within the size range considered under this RFP process, could be supplied without an SCR system for NOx control. Therefore bids were requested and evaluated for alternatives both with and without an SCR system for the SJGS site.

Ultimately, however, the "Project" will still undergo dispersion modeling analysis for at least the new NO2 and SO2 1-hour standards and most likely for all modeled pollutants. For any modeled pollutant where the "Project" alone is above significant impact levels (SILs), the existing facility and neighboring sources would also need to be included in a cumulative model analysis for the permit application.

While the emissions from any of the options would be offset by the decreases at SJGS, dispersion modeling may dictate limitations on the selected option.

5.4 Total Delivered Cost Methodology

One of the primary evaluation criteria for the bids received in response to the RFP is the total delivered cost of electricity to PNM load within WECC Path 48. As such, the following defines the methodology and costs considered in estimating the total delivered cost for each of the bids received under the Replacement Resource RFP.

For the initial assessment of total delivered cost, the bid evaluation team developed a comparable first year, 2022 cost, for each technology. This was initially developed on a "per technology" basis such that the most cost effective options within each technology could be identified. Subsequently, to compare the lifecycle cost effectiveness of varying technologies, system modeling performed by Astrape was utilized.

The first year cost analysis was developed for each technology and project structure as follows:

EPC and BT Projects:

First year costs accounted for a levelized cost of capital in accordance with PNM's revenue requirements modeling. This value was constant for the evaluation period. For natural gas fueled alternatives, fixed and variable operations and maintenance costs were calculated on the assumption that these would be escalated over the evaluation period. The first year value utilized for evaluation was adjusted to account for future,

periodic investments associated with major maintenance activities. For BESS alternatives, levelized costs over the life of the project were utilized as a basis of comparison.

PPA Projects:

For renewable projects, first year costs were developed as a fixed price that was valid for the term of the PPA agreement. This is consistent with the RFP's request for firm pricing for the duration of the PPA term. If PPA pricing was proposed as an escalating value, the cost was levelized by the bid evaluation team and applied as a fixed value for the term of the agreement.

For natural gas fired projects, first year costs were developed in accordance with the pricing structure proposed by the bidder.

More detail on the build-up of these costs is offered below.

5.4.1 Costs Considered

Throughout all of the bid evaluation phases, an assessment of the total delivered cost of energy was developed and further refined. The methodology utilized for each of the bid structures is as described in the following sections. In all cases, the total delivered cost was developed to account for:

- Project capital cost
- New Mexico Gross Receipts Tax (for EPC and BT options)
- Project fixed and variable operations and maintenance costs
- Equipment start charges, as applicable
- Fuel supply to the project site
- Required transmission interconnection costs
- Required transmission system upgrade costs or wheeling fees to allow for delivery to PNM's system
- Transmission system losses to PNM's system
- PNM's Owner's costs for oversight and management of the contract
- Cost of charging energy storage devices from the grid (for stand-alone battery alternatives)
- Adjustments for expected project dispatch

5.4.2 Capital Cost Assumptions

The capital costs utilized in the cost evaluation were generally as provided by the respondents for the EPC and BT proposals. Through clarification questions and through ongoing assessment, adjustments to the quoted capital costs were incorporated, as necessary, to account for the inclusion of New Mexico Gross Receipts Taxes, shortfalls or variations in project scope, as well as for transmission system and Owner's costs.

For PPA proposals, it was clarified that all capital costs to develop and implement the project in question were to be included in the PPA pricing. For factors that were not included, such as transmission system upgrades and Owner's costs, these costs were added into the economic evaluation and treated as a PNM cost that would be additive to the quoted PPA pricing. The recovery of these additive capital costs were incorporated as a capacity payment and calculated utilizing PNM's economic revenue requirements methodology for the 20 year duration of the agreement.

5.4.3 Dispatch Assumptions

As a basis of evaluation, and as stated in the RFP Instructions to Bidders and technical specifications, the assumed dispatch for each of the generation technologies was as follows:

- Solar and Wind Renewables – dispatched as a function of the energy resource, unconstrained with annual generation forecast as provided by the respondent
- Energy Storage – modeled as one full charge/discharge cycle per day, or 365 full cycles per year
- Simple Cycle Combustion Turbine or Reciprocating Engine
    - 3000 operating hours per year (34.2 percent capacity factor) with 400 starts per year if over 75 MW in capacity
    - 1500 operating hours per year (17.1 percent capacity factor) with 400 starts per year if less than 75 MW in capacity (it should be noted that as the evaluation and system modeling proceeded, the dispatch of the smaller units were also shown to be more consistent with the 3000 operating hour profile and was thus modified during the Phase One evaluation period)
- Combined Cycle Combustion Turbine
    - 3000 operating hours per year (34.2 percent capacity factor) with 400 starts per year

It is noted that the above dispatch assumptions were utilized for the initial, economic evaluation of stand-alone generation resources. As the evaluation progressed into the more detailed system portfolio modeling performed by Astrape and PNM's Resource Planning personnel, the dispatch and associated operation and maintenance costs were refined to be consistent with the economic dispatch of the selected resources.

5.4.4 Operations and Maintenance Cost Assumptions

To compare the cost of generation across PPA bids, EPC bids, and build-transfer bids, the bid evaluation team developed representative annual operations and maintenance (O&M) costs. PPA bids already included O&M costs in their contract price, but EPC and build-transfer bids did not include O&M costs because those projects would be constructed and then turned over to PNM. These O&M costs were than developed by the evaluation team as described below.

The O&M costs were divided into fixed and variable O&M costs. The fixed O&M costs were defined to include project staffing, fixed costs associated with any major equipment long term service agreement(s) (LTSA), battery capacity maintenance costs, project insurances, site maintenance costs, and other balance of plant fixed operating costs. The staffing estimates were based upon traditional PNM staffing methodologies, considered the fact that there would be some level of remote operation of the EPC sites from existing PNM operations centers, and considered the fact that the addition of new units to existing PNM sites would be advantaged by the presence of existing operations staff at the project site.

Variable O&M costs were related to consumable and commodity costs associated with operating hours of the facility. Variable O&M costs included any applicable ammonia consumption for NOx emissions control, water consumption, waste water treatment costs, chemical consumption, and variable long term service agreement costs associated with operating hours or quantity of starts for the major equipment. For the purpose of this bid evaluation, the bid evaluation team utilized variable O&M costs for natural gas fueled technologies associated with prior LTSA quotes to avoid any potential discrepancies from actual PNM unit operating experience and practice as may be compared to predicted costs for technologies for which PNM may not have any operating experience. In this manner, the LTSA costs are based upon comparable and defendable quotations that may be adjusted in a predictable manner for variations in operational dispatch. HDR provided calculational methodologies to the PNM Resource Planning and Astrape team for adjusting the variable LTSA costs as a function of actual operational dispatch.

5.4.5 Transmission Costs

In addition to consideration of transmission system and interconnection capital costs, the bid evaluation also considered transmission losses and wheeling fees associated with long-distance delivery alternatives or delivery via multiple transmission system providers. As an example, for projects located outside the counties directly surrounding Bernalillo County, a four (4) percent loss allowance was considered to account for delivery to the Albuquerque load center. Similar allowances were included for significant generation tie line lengths and OATT standard loss allowances. Some bidders included these losses and wheeling fees in their initial proposals while others required adjustment to equalize the associated pricing.

5.4.6 Owner's Cost Assumptions

To account for PNM's costs associated with the oversight and execution of a project, PNM's Owner's costs were estimated and added to the capital cost values discussed above. The scope of Owner's costs included the following for each type of project structure. As can be expected, the allowance included in each category varied based upon the Owner's level of responsibility under each project structure.

Table 5.4-1. Owner's Cost Considerations

Owner's Cost	EPC	BT	PPA
Owner's Scope of Supply			
Information Technology / Telecom	X	X	X
Land Procurement	X		
Permitting and Environmental	X	X	X
Project Management and Operations	X	X	X
Owner's Engineering	X	X	X
Commissioning Costs			
Commissioning Fuel	X		
Test Energy Credit	X		
Startup Consumables	X		
Permanent Plant Equipment and Furnishings	X	X	
Long Term Service Agreement Mobilization	X	X	
Initial Stock of Spare Parts	X	X	
Administrative Costs			
Legal & Regulatory	X	X	X
Financial			
General & Administrative Costs	X	X	X
AFUDC	X		
Owner's Contingency	X	X	X

Owner's costs generally ranged from 8 to 13 percent of the quoted EPC costs to less than 2.5 percent of the project capital costs for BT and PPA alternatives.

5.5 Renewable Generation Tax and Tariff Considerations

Throughout the bid and bid evaluation process, the advantages of available renewable energy investment tax credits and production tax credits were considered. Maximization of these tax credits also had implications on the associated project timing for each of the respondents. In summary, the phase-out of the tax credits can be summarized as follows:

Table 5.5-1. Tax Credit Phase-out Summary

	Value of Tax Credit
Production Tax Credit (Wind)	
2016 Start of Construction	100% of Production Tax Credit Value
2017 Start of Construction	80% of PTC Value
2018 Start of Construction	60% of PTC Value
2019 Start of Construction	40% of PTC Value
2020 and Beyond Start of Construction	0% of PTC Value
Investment Tax Credit (Solar and Solar + BESS)	
2016 to 2019 Start of Construction	30% of the system cost
2020 Start of Construction	26% of the system cost
2021 Start of Construction	22% of the system cost
2022 and Beyond Start of Construction	10% of the system cost

The production tax credit value is based on an inflation-adjusted rate of $0.015/kWh in 1993 dollars or the equivalent of $0.0237/kWh in 2018. As some of the projects proposed in response to the RFP started construction in as early as 2016, the in-service dates required for these facilities must be within four calendar years after the calendar year during which construction began to obtain the corresponding PTC value. Therefore, the timing of the RFP and New Mexico Public Regulation Commission (NMPRC) process becomes very important with respect to maximizing the value of the PTCs. On the other hand, for those projects not yet under construction, the ability to start construction as early as possible also played a role in the optimization of wind project implementation.

Similar implications held for the investment tax credits which are more frequently applied to solar project investments. Maximization of the value of the ITCs has generally hinged upon being able to start project construction by the end of 2019. This can be accomplished by starting construction or safe harboring major equipment such as solar panels or inverters via early procurement. The other advantage of ITCs is the ability to combine solar and battery installations and being able to apply the ITC value to the combined value of the project. As such, the combined solar and battery storage projects can be advantaged as compared to stand-alone projects as long as the energy storage is charged at least 75 percent of the time from the solar resource for the first 5 years of operation. If the energy storage is charged 100 percent by the solar supply, the project obtains full ITC value credit with a reduction in ITC value corresponding to reduced solar charging down to 75 percent.

Another consideration in the application of solar projects is the applicability of the Section 201 Solar Tariffs which became effective on February 7, 2018. The tariff is initially applied at a rate of 30 percent with a 5 percent declining rate per year over the four year term of the tariff. Only countries deemed as "GSP Eligible" by the Office of the United States Trade Representative are excluded from the tariff and there are 2.5 gigawatts of

cells exempted per year. Therefore, to maximize the value of the project, solar developers who did not purchase panels prior to February 7, 2018 or who will not be able to source panels within the 2.5 gigawatt allowance within the tariff are generally waiting until after February 7, 2022 to purchase the panels for the projects quoted. If the tariff is extended, this could further complicate the project cost and associated risk.

Based upon the above considerations, the bid evaluation team requested numerous clarifications from the solar bidders to truly understand their approach to maximizing the value of the project via both ITC and Section 201 Tariff considerations.

5.6 Consideration of Imputed Debt

The bid evaluation process generally did not consider the cost of imputed debt as may be applicable to PPA type project structures. The bid evaluation team did, however, review the potential implications of considering imputed debt to see if the selection of bids within a technology category would change. For this analysis, a cost equivalent to 10.6 percent of the proposed PPA price was applied to the PPA offers to see if this would impact the selection of EPC or BT bids as compared to PPA proposals. It was found that the impacts to the Total Delivered Costs did not adjust the selection results.

In general, due to the fact that PNM, at the time of the evaluation was not able to fully take advantage of the benefits of renewable tax credits and associated accelerated depreciation such as a developer with a tax equity investor, the renewable EPC and BT proposals were generally not competitive on a Total Delivered Cost basis. Consideration of imputed debt as noted above, was not able to compensate for PNM's revenue requirement expectations.

As a result, and in general with some exception, the shortlisted proposals for renewable and energy storage technologies are of a PPA structure (due to the ability to more effectively monetize the ITCs and PTCs) and for the natural gas solutions are of an EPC structure.

All Resources RFP

PNM Exhibit RWN-5

Is contained in the following 29 pages.

00 2113 - INSTRUCTIONS TO BIDDERS

Table of Contents

Appendices
Appendix A – PPA Term Sheet
Appendix B – EPC Term Sheet
Appendix C – APA Term Sheet
Appendix D – EPC Technical Specification
Appendix E – Proposal Submittal Checklists
Appendix F – BT Term Sheet

EPC Proposal Forms
EPC Attachment A – Notification of Intent to Bid Form
EPC Attachment B – Bid Profile
EPC Attachment C – Bid Certification Form
EPC Attachment D – Proposal Form
EPC Attachment D-1 – Price Breakdown Table
EPC Attachment E-1 – Commercial Clarifications and Exceptions
EPC Attachment E-2 – Technical Clarifications and Exceptions
EPC Attachment F – Conflict of Interest Form
EPC Attachment G – Not Used
EPC Attachment H – Milestone Payment Schedule
EPC Attachment I – Cancellation Schedule
EPC Attachment J – Not Used
EPC Attachment K – Proposal Data Forms
EPC Attachment L – Technical Submittal Checklist
EPC Attachment M – RFI Log
Supplemental Information

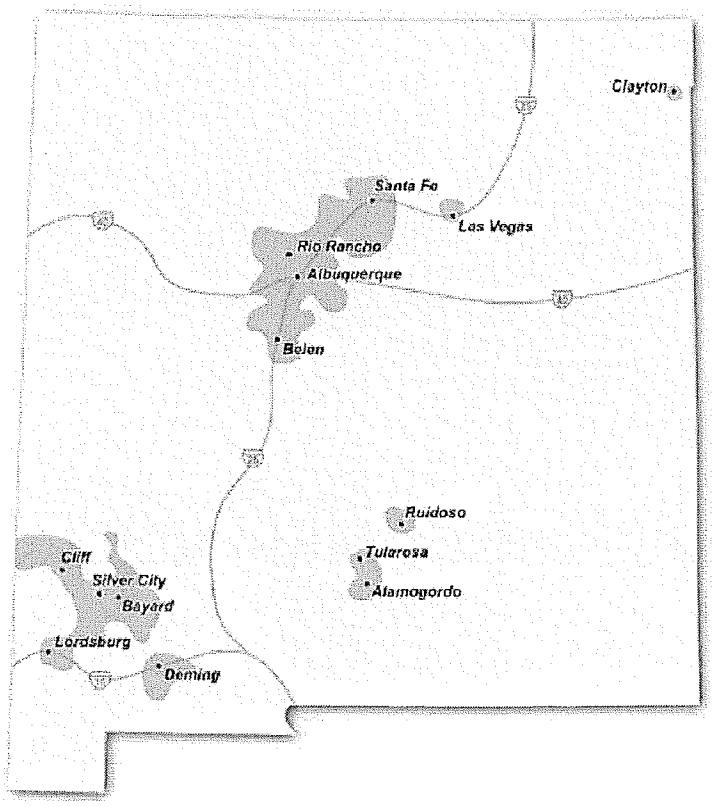
Non-EPC Proposal Forms
Attachment A – Notification of Intent to Bid Form
Attachment B – Bid Profile
Attachment C – Bid Certification Form
Attachment D-1 – PPA Proposal Data Forms
Attachment D-2 – APA Proposal Data Forms
Attachment D-3 – BT Proposal Data Forms
Attachment E – Technical Description
Attachment F – Electrical Interconnection – Power Delivery
Attachment G – Fuel Information
Attachment H – Permitting, Land Use, Zoning
Attachment I – Project Milestones
Attachment J – RFI Log
Attachment K – Conflict of Interest Form
Attachment L – APA/BT Technical Submittal Checklist
Supplemental Information

PART 1 – INTRODUCTION

1.1 COMPANY BACKGROUND

Public Service Company of New Mexico ("PNM") is a wholly owned subsidiary of PNM Resources, Inc. (NYSE: PNM) based in Albuquerque, N.M., with total utility operating revenues of $1.0 billion in 2016. PNM is an electric utility that provides generation, transmission, and distribution service. PNM's retail service territory covers a large area of north central New Mexico, including the cities of Albuquerque, Rio Rancho, and Santa Fe and most of the area around the Rio Grande valley, from Belen to Santa Fe. Other communities served include Lordsburg, Silver City, Deming, Alamogordo, Ruidoso, Tularosa, Clayton, and Las Vegas. PNM also serves several New Mexico Pueblo nations and numerous unincorporated areas serving about 510,000 electricity customers statewide. As shown in Figure 1, PNM's electric service territory covers geographically diverse areas. Electric demand and energy usage varies based upon geography, customer mix, and climate.

Figure 1. PNM's Electric Service Territory Map



1.2 PURPOSE OF RFP

This request for proposals ("RFP") is part of a solicitation process for the purpose of acquiring sufficient resources to meet PNM's forecasted capacity and electric demand, plus reserves, identified in PNM's 2017 - 2036 Integrated Resource Plan ("2017 IRP") under the assumption that the San Juan Generating Station ("SJGS") does not continue to operate

past 2022. Respondents are encouraged to propose renewable resource and battery storage options beyond those included in the 2017 IRP's non-SJGS alternative.

1.3 RESOURCES SOUGHT THROUGH THIS RFP

PNM is soliciting proposals from parties interested in providing supply resources that will provide the most cost effective portfolio for SJGS replacement resources needed by 2023. Respondents are encouraged to propose resources consistent with the 2017 IRP as well as renewable resource and battery storage options beyond those included in the 2017 IRP's non-SJGS alternative.

PNM also has the need for significant capacity additions over the next several years, as more fully described in Section 2.1 below. Specifically, PNM's 2017 IRP has identified the need for additional flexible capacity as the result of the planned retirement of SJGS and the growth of variable energy resources ("VERs") on PNM's system. This RFP is intended to address the need for the addition of 456 MW of identified capacity by no later than June 1, 2023. The exact MW capacity requirement and the types and sizes of resources best suited to meet PNM's capacity, energy, and reliability requirements will be determined through selected modeling and analysis of the resources bid in response to this RFP, their respective capacity factors, and their ability to satisfy a maximum Loss of Load Event (LOLE) metric of ≤0.2 for both capacity and flexibility within PNM's system. It is anticipated that subsequent RFPs will address additional capacity needs outside of this time frame.

Resources selected under this RFP must be placed in service no later than June 1, 2023. Proposals for projects with on-line dates later than June 1, 2023 will not be considered.

During the evaluation stage PNM will consider the impacts of joining an Energy Imbalance Market (EIM) in the resource mix.

1.4 RFP CONTENTS; SOURCING PLATFORM

This RFP includes a description of the request, an outline of the solicitation process, relevant dates, contact information, and proposal submission requirements. All proposals submitted in response to this RFP (each a "bid" or "Proposal") must be submitted through the PowerAdvocate Sourcing Platform as described in Section 6.1 of this RFP.

Respondents to this RFP (each a "Respondent") must follow the instructions provided herein in the preparation and submittal of their bids.

PART 2 - RESOURCE NEEDS ASSESSMENT

2.1 MOST COST-EFFECTIVE RESOURCES

The objective of this RFP is to solicit competitive Proposals for the procurement of a combination of resources that can satisfy system needs consistent with retirement of SJGS in 2022. PNM will consider renewable and battery storage options that demonstrate economic advantages for staging resource additions prior to 2021. PNM's 2017 IRP identifies a physical resource deficit of nearly 456 MW upon the retirement of SJGS as further outlined in Table 1 below. **While the table is indicative of PNM's resource needs, the actual portfolio of resources selected will be the most cost-effective combination of resources that best meets PNM's requirements for energy, capacity, and flexible generation by 2023 based on the results of this RFP and subsequent modeling and analysis.**

Table 1. Summary of 2017-2036 Most Cost Effective Resources.

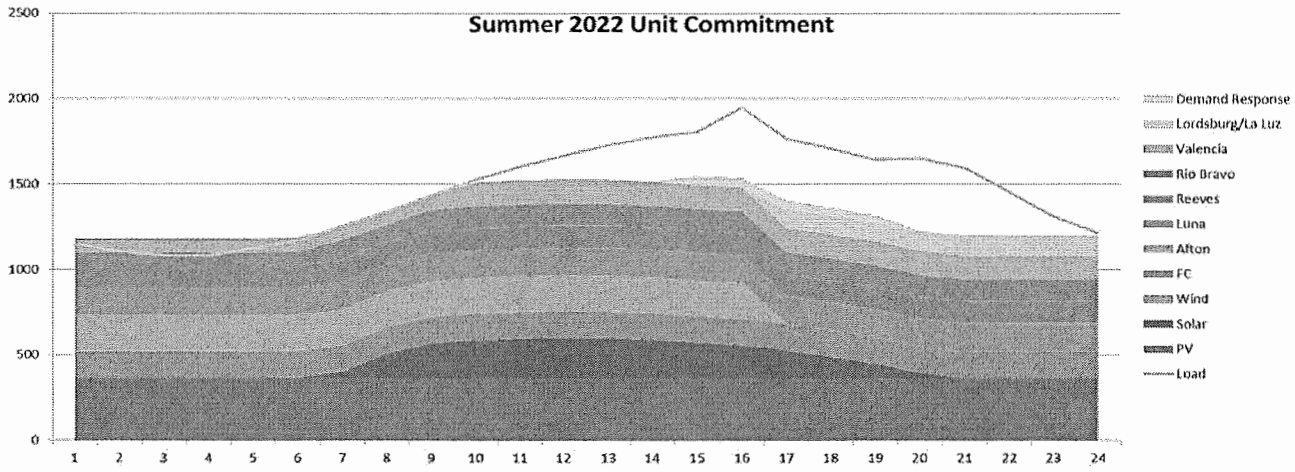
2017-2036 Most Cost Effective Resource Table - Summary from IRP Apprendix N									
Description	2017	2018	2019	2020	2021	2022	2023	2024	2025
Natural Gas Fired Resource (Peaking)							41	41	41
Natural Gas Fired Resource (Peaking)							41	41	41
Natural Gas Fired Resource (Peaking)							187	187	187
Natural Gas Fired Resource (Peaking)							187	187	187
Total Natural Gas Resources Additions							456	456	456
Above 456 MWs being bid as part of this Request For Proposals (RFP)									
100 MW Solar PV									35
50 MW Solar PV								18	18
Data Center 1 Solar - PV 20 MW							11	11	11
Data Center 1 Solar - PV 40 MW						30	30	30	30
Data Center 1 Solar - PV 30 MW					23	23	23	23	23
Data Center 1 Solar - PV 30 MW				23	23	23	23	23	23
Data Center 1 Solar - PV 40 MW			30	30	30	30	30	30	30
Data Center 1 Solar - PV 30 MW		23	23	23	23	23	23	23	23
Data Center 1 Wind - 30 MW						1	2	2	2
Data Center 1 Wind - 50 MW					2	3	3	3	3
Data Center 1 Wind - 50 MW				3	3	3	3	3	3
Data Center 1 Wind - 50 MW			3	3	3	3	3	3	3
Solar for 2020 RPS			7	18	17	17	17	17	17
Total Renewable Additions		23	63	100	124	156	168	186	221
Renewables for this section of the IRP to be bid separately in incremental stages									

As an area Balancing Authority, PNM is required to maintain a minimum level of operating reserves (that is, regulating and contingency reserves) that meet North American Electric Reliability Corporation ("NERC") and Western Electricity Coordinating Council ("WECC") criteria. The required amount of contingency reserves changes hourly. However, generally in the peak-load hour, PNM must maintain the current mandated Southwest Reserve Sharing Group ("SRSG") spin and non-spin quota of approximately 125 MW, plus enough additional contingency reserves to recover from a failure of PNM's single largest hazard. Regulating reserves are an incremental amount of spinning reserve above this, sufficient to adequately follow load and respond to fluctuations in the output of generating units, most importantly renewable resources. Regulating reserves change hourly based on system variables such as changes in load, renewable generation output, and unscheduled generation changes.

PNM must maintain sufficient contingency reserves to respond to a system disturbance within 15 minutes and fully restore the necessary contingency reserves and replace the lost generation to meet load requirements within 60 minutes of a system disturbance.

As currently modeled, PNM cannot meet its contingency reserve obligations and load obligations in the hours immediately following a system disturbance with the anticipated generation retirements in 2022. Figure 1 below depicts a representative summer 2022 daily load profile and associated unit commitment for PNM's fleet after the planned SJGS shut down. The load profile represents a failure of PNM's single largest hazard (note the loss of generation from the Afton unit at the peak hour) and the resulting deficit in generation capability. The energy gap between the customer load and PNM generating fleet is clearly displayed starting in hour 10 and ending in hour 24.

Figure 1. Chart of Summer 2022 Unit Commitment



Initial modeling indicates the following capacity resource additions could potentially address PNM's minimum resource needs by 2023 in the most cost-effective manner; however, results from this RFP will be used to determine the final sizing and combination of resources including renewable resources and storage. While the initial models indicate the following to be MCEP, PNM will consider additional renewable and battery storage resources based on details of the Proposals:

- Up to 200 MW of natural gas fueled generating resources consisting of simple cycle "heavy frame" combustion turbines. Flexible natural gas resources may be substituted for this resource need based on cost
- Up to 300 MW of natural gas fueled flexible generating resources consisting of simple cycle "aero-derivative" combustion turbines and/or reciprocating engines
- Up to 100 MW of renewable energy resources; and
- Up to 40 MW of energy storage, preferably incorporated into the above resources to support system ancillary service requirements such as frequency control, spinning reserves, and operating reserves.

System reliability will be an essential consideration in the selection of new resources under this RFP. PNM must ensure that selected resource additions will maintain necessary system reliability requirements including a maximum Loss of Load Event (LOLE) metric of $\leq$0.2 for both capacity and flexibility. In order to achieve this objective, Proposals will be evaluated in conjunction with PNM's existing resource mix using Astrape's SERVM modeling software.

2.2 LONG-TERM PORTFOLIO NEEDS

This RFP is PNM's first step in addressing the long-term portfolio needs identified in the 2017 IRP via renewable, natural gas peaking, and potentially, energy storage capacity. PNM requires resources with the flexibility to be used in a number of applications, including but not limited to providing capacity for peak-usage times, economic dispatch in real-time markets, intra-hour balancing, and contingency reserves. Additionally, PNM requires resources that will help integrate its increasing portfolio of VERs. While PNM's operations do not currently participate in an organized market, the potential suitability and value of resources in such a market in the future is a consideration in this RFP.

PART 3 - ELIGIBLE PROPOSALS

3.1 TYPES OF ELIGIBLE PROPOSALS

The following types of Proposals are eligible for consideration under this RFP:

- Proposals for engineering, procurement, and construction ("EPC") contracts on a site controlled by PNM (including La Luz, Rio Bravo, Rio Puerco, Reeves, SJGS, or other identified solar generating sites) as described in this RFP;
- Proposals to sell all or a portion of a generating asset under an asset purchase agreement ("APA") with rights to all capacity, energy, renewable energy certificates ("RECs"), and all other physical, financial, environmental, or other attributes associated with the asset;
- Proposals to sell energy, capacity, and/or ancillary services, under a power purchase agreement ("PPA") with or without an option to purchase the generation facility. PPA proposals must utilize facilities located on a site controlled by the Respondent;
- Proposals for build-transfer ("BT") projects on the Respondent's site. The site, the facility, all other improvements, and all environmental and other attributes of the project would be transferred to PNM upon completion;

3.2 PNM PROPOSALS

PNM will not submit a Proposal in response to this RFP.

3.3 OTHER FOSSIL-FUELED RESOURCES

PNM will not consider Proposals for coal-fired generation.

PART 4 - RESOURCE CHARACTERISTICS

4.1 DISPATCHABLE RESOURCES

4.1.1 NATURAL GAS SIMPLE CYCLE (HEAVY FRAME)

Initial modeling shows up to 200 MWs of Heavy Duty Natural Gas Simple Cycle resources may contribute to the most cost effective plan.

Resources acquired as a result of this process are expected to be used by PNM for multiple applications. Requirements associated with natural gas heavy frame resources are included below:

- Be fully dispatchable by PNM, including within-hour dispatch changes;
- Be dispatchable across the entire operating range. Resources that have a lower minimum output provide additional benefit in meeting the requirement for LOLE <0.2.
- Have the control systems in place with the ability to respond to dispatch signals that originate remotely;
- Have a minimum load capability of no more than 40 percent of the unit rated full load capacity;
- Be capable of achieving full output from a cold start in 30 minutes or less (faster start is preferred);

- Be capable of 500 starts per year and up to 8,760 hours of annual operation. Proposal and operations and maintenance ("O&M") costs will be based upon an assumed dispatch of 400 starts and 3,000 hours of operation per year.
- Have a minimum down time requirement of less than 30 minutes after a unit shut down and a minimum up-time requirement of less than 120 minutes after a unit start;
- Have the ability, including any air permit restrictions, to execute multiple starts and cycle from offline to full output at least three (3) times per day; and
- Have a minimum ramp rate of 10% of rated unit capacity per minute both for increasing and decreasing load after initial unit startup and load stabilization, but if this is not achievable, Respondents should indicate the achievable range of ramp rates per generator.
- PNM, as an area Balancing Authority, requires a minimum frequency response capability consistent with NERC Standard BAL-003-1 to maintain interconnection frequency within predefined boundaries. PNM requires that Respondents provide actual frequency response via operating governors. This would require that PNM receive the allocated share of frequency response from the proposed unit(s), based on generation capacities.

4.1.2 NATURAL GAS FLEXIBLE RESOURCES (AERO-DERIVATIVES/RECIP ENGINES)

Flexible combustion turbine technologies and reciprocating engines were identified as potential resources because of their operational characteristics, including the ability to provide fast start times, flexible dispatch, economic ancillary services support and short lead times for construction. These resources improve the ability of PNM's system to incorporate and manage increased VER technologies.

Resources acquired as a result of this process are expected to be used by PNM for multiple applications. Requirements associated with flexible natural gas resources are included below:

- Be fully dispatchable by PNM, including within-hour dispatch changes;
- Be dispatchable across the entire operating range. Resources that are dispatchable from zero (or nearly zero) to full output add additional benefit in meeting the LOLE <0.2. Resources that have a minimum output greater than zero will be considered as long as they meet the dispatchability requirements across their operating ranges;
- Have the control systems in place with the ability to respond to dispatch signals that originate remotely;
- Recip engines minimum load capability of no more than 25 percent of the unit rated full load capacity;
- Aero-Derivatives minimum load capability of no more than 40 percent of the unit rated full load capacity;
- Be capable of achieving full output from a cold start in 10 minutes or less (faster start is preferred);
- Be capable of 1,500 starts per year and up to 8,760 hours of annual operation. Proposal and operations and maintenance ("O&M") costs will be based upon an assumed dispatch of 400 starts and 3,000 hours of operation per year for larger

simple cycle resources (> 75 MW) and 400 starts and 1,500 hours of operation for reciprocating engine and smaller simple cycle resources (< 75 MW);

- Recip engines minimum down time requirement of less than five (5) minutes after a unit shut down and a minimum up-time requirement of less than 5 minutes after a unit start;
- Have the ability, including any air permit restrictions, to execute multiple starts and cycle from offline to full output at least five (5) times per day; and
- Have a minimum ramp rate of 20% of rated unit capacity per minute both for increasing and decreasing load after initial unit startup and load stabilization, but if this is not achievable, Respondents should indicate the achievable range of ramp rates per generator.
- PNM, as an area Balancing Authority, requires a minimum frequency response capability consistent with NERC Standard BAL-003-1 to maintain interconnection frequency within predefined boundaries. PNM requires that Respondents provide actual frequency response via operating governors. This would require that PNM receive the allocated share of frequency response from the proposed unit(s), based on generation capacities.

4.2 REQUIREMENTS APPLICABLE TO ALL RESOURCES

The following requirements are applicable to all resource types:

- The locations being considered to site new EPC generation resources are at the Reeves, La Luz, Rio Bravo, Rio Puerco, and San Juan stations. Other locations would be considered for all proposals if the necessary transmission system improvement costs are provided to ensure resources can deliver to PNM load within WECC Path 48 and evidence is provided that such transmission can be built and operational by 2023.
- Minimum offered site-rated capacities for all EPC and Non-EPC Proposals must be per the following for the technologies specified:
    - Combined cycle – 100 MW
    - Simple cycle combustion turbine – 35 MW
    - Reciprocating engines – 9 MW
    - Solar – 10 MW
    - Wind – 10 MW
    - Battery – 10 MW, four (4) hour storage duration required for stand-alone battery installations
- Proposals involving renewable or non-coal fossil generating resources combined with battery storage will be evaluated considering the combined benefits of all resources proposed.
- All Proposals must utilize the latest version of the selected technology available at the time of bid.

4.3 ADDITIONAL EPC PROPOSAL GUIDELINES

The locations being considered to site new EPC generation resources are at the Reeves, La Luz, Rio Bravo, Rio Puerco, and San Juan stations. Proposals from EPC Respondents should

assume that natural gas interconnection and delivery to the project site as well as the electrical interconnection will be provided by PNM at its cost as further outlined in Appendix D of this RFP.

Table 2 outlines requested resource options at each of the existing PNM controlled sites based upon existing site characteristics and infrastructure. EPC Respondents are encouraged to respond to the Requested EPC Options as presented and supplement these Requested Proposals with optional bids recommended by the Respondent, at the Respondent's discretion.

Table 2. EPC Bid Request

Site	Requested EPC Options
La Luz	Nominal 40 MW LM6000 PC SPRINT consistent with existing site permit Integrated battery energy storage system or equivalent for ancillary services
Reeves	100 MW reciprocating engine installation 40 MW (160 MWh) of battery energy storage
Rio Bravo	80 MW of simple cycle or reciprocating engine installation 30 MW (120MWh) of battery energy storage Nominal 200 MW single unit, simple cycle combustion turbine
Rio Puerco	40 MW of solar generation 40 MW (160 MWh) of battery energy storage 100 MW simple cycle or reciprocating engine installation 50 to 100 MW of additional solar generation
San Juan Generating Station	Nominal 200 MW single unit, simple cycle combustion turbine Additional 80 MW simple cycle or reciprocating engine installation additive to the base bid requirements 100 MW simple cycle or reciprocating engine installation 40 MW of solar generation 40 MW (160 MWh) of battery energy storage

4.4 RENEWABLE RESOURCES

PNM will evaluate renewable resources in its evaluations of MCEP to meet system needs upon the retirement of the San Juan plant. The New Mexico Public Regulation Commission ("Commission") adopted Rule 17.9.572 NMAC ("Rule 572") to carry out the renewable portfolio standard ("RPS") established in the New Mexico Renewable Energy Act. Rule 572 sets an RPS requirement of 15% for renewable energy or renewable energy certificates

rising to 20% of PNM's retail sales beginning in 2020. This figure is subject to some adjustment for certain exemptions and limitations on cost impacts on customers.

4.4.1 RENEWABLE RESOURCE DIVERSITY

Rule 572 sets renewable energy diversity targets as part of PNM's RPS. PNM expects to meet the diversity requirements with PNM's portfolio of current resources including those pending PRC approval. This RFP is a solicitation for the MCEP that meets the 2017 IRP, including resources qualifying as renewable resources under the REA, although not specifically identified in the 2017 IRP. Respondents may propose energy from any renewable type that qualifies under the REA.

4.4.2 PRICING

All pricing must be in terms of nominal U.S. dollars in the year to be incurred. Prices and costs should include all costs to deliver energy to PNM's load within WECC Path 48.

4.4.3 SOLAR PHOTOVOLTAIC ENERGY FACILITIES

PNM has obtained site control for locations suitable for installation of solar energy facilities. Information on those sites is contained in Appendix D – EPC Technical Specification. Respondents may submit proposals for new facilities to be built on these PNM-designated sites, or for existing solar facilities or new facilities, on sites other than these designated sites. Proposals for solar facilities on other sites must reflect and specify costs associated with interconnection and delivery to PNM's system. The PNM-designated solar sites can accommodate at least 10 MWs of capacity. On these sites only, PNM will be responsible for site development, including land acquisition, surface grading, site development permitting and interconnection. PNM will not consider PPA proposals on the PNM-designated sites.

4.4.4 WIND PPA PROPOSALS – OPERATIONAL & DISPATCH FLEXIBILITY AND PRICING STRUCTURE

PNM will evaluate new wind resource proposals with respect to their capabilities for operational flexibility and system reliability capability such as Automated Generator Control (AGC), Fast Frequency Response (FFR), curtailment optionality or other reliability tools. PNM will also examine any contract limitations or pricing penalties in PPA proposals associated with operational flexibility, minimum take obligations or maintenance outage scheduling. PNM has a strong preference for wind resources with these operational/reliability advantages over wind resources without them. Those advantages may offset pricing differentials between bids.

4.4.5 "OTHER" CATEGORY RESOURCES

PNM will evaluate additional "other" (non-wind, non-solar) renewable energy proposals as part of this RFP. Although PNM anticipates meeting the RPS "Other" category with existing resources, we will consider all renewable energy Proposals.

4.4.6 WREGIS REGISTRATION AND CERTIFICATION

For all renewable Proposals, the generating facility must be registered or will have to be registered in the Western Renewable Energy Generation Information System ("WREGIS") and its monthly generation reported to WREGIS, with RECs certified by WREGIS and transferable via WREGIS. All costs and fees associated with WREGIS registration and certification will be borne by the Respondent.

PART 5 – PROPOSAL CONTENT REQUIREMENTS AND SUBMISSION PROCEDURE

5.1 GENERAL

All Proposals must satisfy eligibility requirements set forth in the RFP and be submitted in accordance with the instructions of this RFP to be considered for evaluation.

5.2 "BID DOCUMENTS"

As used in this RFP, "Bid Documents" include all documents comprising this RFP, including but not limited to all design documents, technical specifications, and other appended or related data, all as may be amended or supplemented from time-to-time. The Bid Documents are complementary, and the Respondent must consider anything specified by one and not by the others as binding as though specified by all. In the case of a conflict between the various specification sections and/or the drawings and any supplemental information, the more strict interpretation as determined by PNM will govern.

5.3 REQUIREMENTS APPLICABLE TO ALL PROPOSALS

The following requirements apply to all Proposals. Additional requirements applicable to Proposals for specific project types are included in subsequent sections of this Part 5.

- Due to the potential complexity associated with the implementation of multiple projects at multiple project sites, at its discretion, PNM will consider staging / sequencing the projects from this RFP process. As such, within the date range of June 1, 2021 to June 1, 2023, Respondents are requested to identify the earliest achievable in-service date for the project(s) offered. PNM will consider renewable and battery storage options that demonstrate economic advantages for staging resource additions prior to 2021.
- Proposals and pricing must be provided for a planned project in-service date of no later than June 1, 2023. Respondent must also identify any pricing escalation / de-escalation methodologies required to address project in-service dates ranging from the earliest achievable in-service date identified above through June 1, 2023. Assumed indices, fixed escalation or de-escalation rates, and/or caps on these rates must be clearly identified if required as a condition of the Proposal. Prior to contract award, Respondent and PNM will perform a pricing true-up to account for actual escalation adjustments within the identified caps.
- Proposals and pricing must remain valid and binding through at least December 31, 2019, with the date of expiration explicitly stated in the Proposal.
- All prices in the Proposal and pricing forms must be quoted in U.S. dollars.
- Proposals must provide for firm price for the delivery of energy to PNM's load within WECC Path 48.
- Proposals must include all applicable taxes (i.e New Mexico Gross Receipts Tax), licenses, fees, etc. Respondent must provide a clear description and break-out of these assumptions in the Proposal.
- Proposals must include all costs of shipping and related expenses associated with the Respondent's work scope.
- Proposals must identify assumed insurances and levels.
- Proposals must comply with all applicable federal, state and local laws.

- Proposals that culminate in a successful project are required to obtain appropriate registration for all applicable NERC functions and must operate equipment within applicable NERC Standards.

5.4 ADDITIONAL REQUIREMENTS FOR EPC PROPOSALS

Proposals received from EPC Respondents will be evaluated on equal footing with other Proposals. EPC Respondents will be required to provide detailed information regarding the specifics of engineering and constructing an addition to an existing PNM plant or location. For an EPC bid with an LM6000PC combustion turbine, Respondent will be responsible for ensuring that the proposal will satisfy the existing site permit at La Luz. EPC Respondents must assume that natural gas interconnection and delivery to the project site as well as the electrical interconnection will be provided by PNM at its cost as further outlined in Appendix D of this RFP.

5.5 ADDITIONAL REQUIREMENTS FOR PPA PROPOSALS

- PPA Proposals must be for a minimum term of twenty (20) years.
- Offered resources must be interconnected to PNM load within WECC Path 48 or at the San Juan switch yard, or delivered on firm, third-party transmission to PNM Load within WECC Path 48; in all cases, the ability to deliver to PNM's load is required.
- Costs proposed for all PPA and BT resources must include all natural gas and electrical interconnection costs. Respondent's Proposal must include firm, not to exceed, interconnection costs.
- The Proposal must demonstrate credit support and/or collateral value sufficient to provide surety of contract performance over the full Agreement term.
- The Proposals, in Attachment D-1, must outline considerations associated with potential reliability curtailments as directed by PNM or other area Balancing Authority (BA).
- For Renewable PPA proposals, the Respondent must configure the ramp rate for the Project such that it will not generate energy at a rate that increases greater than ten (10) megawatts per minute
- PNM has a preference for PPA Proposals that do not subject PNM to any accounting or tax treatment that results from imputed debt, capital lease or Variable Interest Entity ("VIE") treatment. All PPA Proposals must:

    - Demonstrate that the Respondent has considered applicable accounting standards in regard to capital leases, specifically Financial Accounting Standards Board (FASB) Accounting Standards Codification Topics ("ASC") 840 and 842 Leases and any PNM variable interest in a VIE pursuant to FASB Topic ASC 810 Consolidation-Variable Interest Entities;

    - Provide analysis and conclusion of the Respondent's knowledge and belief regarding why the Respondent's Proposal would not result in a capital lease (ASC 840 and 842) or a variable interest in a VIE (ASC 810);

    - Summarize any changes that the Respondent proposes to the Model PPA Term Sheet attached to this RFP as Appendix A in order to attempt to address these issues; and

- Describe the role of federal and state production tax credits or investment tax credits (or other incentives) on the financing of the project.

5.6 ADDITIONAL REQUIREMENTS FOR APA PROPOSALS

All Asset Purchase Proposals must provide a description of the proposed transaction from a tax perspective, including whether the Respondent plans to sell an LLC or assets, which could have tax implications for PNM. Costs proposed for all APA resources must include all natural gas and electrical interconnection costs. Respondent's Proposal must include firm, not to exceed, interconnection costs.

5.7 CREDIT REQUIREMENTS

The Respondent must be able to satisfy PNM's credit standards to ensure the Respondent has adequate financial capability. PNM requires qualified Respondents to either have an investment grade rating (S&P BBB- or above; Moody's Baa3 or above), or have sufficient equity security to cover Respondent's anticipated delivery obligations under any Agreement entered into as a result of this RFP process. If Respondent is unable to satisfy the foregoing credit standards, Respondent may designate a Credit Support Provider/Guarantor, and if the Credit Support Provider/Guarantor is satisfactory to PNM, the Respondent will be deemed to have satisfied PNM's credit standards. The quality of credit of the proposed Credit Support Provider/Guarantor will be evaluated under the same standards as that of the Respondent.

5.8 COST OF BIDDING

Respondent will bear all costs associated with the preparation and submission of its bid. Neither PNM, nor its parent company or affiliates, nor any agent of PNM will be responsible or liable for any costs, regardless of the cost or outcome of the bidding process.

5.9 BID SUBMISSION FEE

A non-refundable RFP submission fee of $5,000 per Respondent must accompany the Proposal in order to qualify the Proposal for consideration. For purposes of this RFP, multiple options submitted by a single Respondent will only incur one fee, provided the options do not differ in type of Proposal offered (e.g. PPA, EPC, APA, BT). The fee may be paid by certified check made out to "Public Service Company of New Mexico". Payment via ACH is also accepted.

Mail bid fees to: Public Service Company of New Mexico
San Juan Generating Station
P.O. Box 227
Waterflow, NM 87421
Attention: Rochelle Benally
Mail Station 96B5

ACH Remittance Instructions:

Bank Name: Wells Fargo Bank
ABA# 12100248

Attn: Dan Conklin

MAC: Q2129-103

200 Lomas Blvd. NW

Albuquerque, New Mexico 87102

Phone: (505) 765-5224

Beneficiary:

Account Name: PNM Misc. Depository

Account No.: 651-100-3698

For: PNM 2023 Generation RFP

5.10 DISCLAIMER

Respondent is responsible for examining the complete Bid Documents and any subsequently issued RFP addenda and is responsible for analyzing all RFP requirements that might in any way affect the cost of the project or performance of any part of the work to be completed in connection with the project ("Work"). Failure to do so will be at the sole risk of the Respondent, and no relief will be given for errors or omissions resulting therefrom.

5.11 RESPONDENT'S REPRESENTATION

Each Respondent, by submitting a Proposal, represents that the Respondent has read and understands the Bid Documents and is familiar with the local conditions under which the Work is to be performed. Respondent further represents that it has all licenses and permits required by applicable law to submit its bid.

5.12 REQUIRED APPROVALS

Each Proposal must state that Respondent has obtained all necessary internal approvals prior to the submission of the Proposal. All Proposals must be signed as follows:

- Corporations: Signature of officer must be accompanied by a certified copy of the resolution of the Board of Directors authorizing the individual signing to bind the corporation.
- Partnerships: Signature of one partner must be accompanied by a certified copy of the power of attorney authorizing the individual signing to bind all partners. If a certified copy of the partnership's certificate submitted with the bid indicates that all partners have signed, no authorization is required.
- Joint Ventures: Signature by one of the joint venture parties accompanied by a certified copy of the power of attorney authorizing the individual signing to bind all the joint venture parties. If a certified copy of the joint venture party's certificate submitted with the bid indicates that all joint venture parties have signed, no authorization is required.

5.13 PROPOSAL SUBMITTAL

Respondents must submit Proposals via the PowerAdvocate Sourcing Platform. Instructions for submitting Proposals are provided at the site. Complete Proposals, including all exhibits, forms, and fee, must be received on or before 4:00 p.m. (MST) on the RFP response due date via the PowerAdvocate Sourcing Platform. All Proposals will become the property of PNM and will not be returned to the Respondent.

5.14 CLARIFICATION OF PROPOSALS

PNM may request clarification or additional information during the RFP evaluation process about one or more items in a Respondent's Proposal. Such requests will be sent via email to Respondents, who will be required to provide an electronic response within five (5) business days, or PNM may deem the Respondent to be non-responsive and either suspend or terminate evaluation of the Proposal. Respondents may provide an alternate point of contact to ensure a timely response to clarification questions.

5.15 WITHDRAWAL OF BIDS

A Respondent may withdraw a bid, either personally or by written request, at any time prior to the scheduled time for opening bids. No Respondent may withdraw a bid for a period of three hundred and sixty (360) calendar days after the date set for opening thereof without written consent of PNM, and bids will be subject to acceptance by PNM during this period.

5.16 CONFIDENTIALITY AND COMPLIANCE

PNM will take reasonable precautions and use commercially reasonable efforts to protect any claimed proprietary and confidential information contained in a Proposal, provided that such information is clearly identified by the Respondent as "PROPRIETARY AND CONFIDENTIAL MATERIAL". Notwithstanding the foregoing, PNM in its sole discretion may release such information: (1) to any external contractors for the purpose of evaluating Proposals, but such contractors will be required to observe the same care with respect to disclosure as PNM; (2) to others who have a need for such information for purposes of evaluating the RFP and the Proposals, the RFP process or a final definitive agreement resulting from the RFP process ("Agreement"), including but not limited to the Commission, its employees, staff, consultants and/or agents, and other parties, their consultants and/or agents, or in any Commission proceedings relating thereto; or (3) if PNM is requested or compelled to disclose such information (or portions thereof) (i) pursuant to subpoena or other court or administrative process, (ii) at the express direction of any agency with jurisdiction over PNM, or (iii) as otherwise required by law. If PNM determines that the release of such information will be made under one of the circumstances set out above, PNM will provide Respondent with written notice. PNM is under no duty or requirement to Respondent to withhold such information or take legal steps to protect the information from disclosure if, in PNM's judgment, there is a need to provide it under the circumstances described above. Under no circumstances will PNM, its parent corporation or affiliates, or any of their directors, management, employees, agents or contractors be liable for any damages resulting from the disclosure of Respondent's claimed proprietary and confidential information during or after the RFP process. By submitting a Proposal in response to this RFP, Respondent acknowledges and agrees to the requirements in this provision concerning confidentiality. In the event PNM uses internal, proprietary projections in its evaluation process, the resulting projections will not be shared with Respondents.

5.17 COLLUSION

By submitting a Proposal to PNM in response to this RFP, the Respondent certifies that the Respondent has not divulged, discussed, or compared its Proposal with other Respondents and has not colluded whatsoever with any other Respondent or parties with respect to its Proposal or other Proposals; provided, however, that this provision does not and is not intended to prevent multiple parties from making a joint Proposal in which the roles and responsibilities of each party are clearly delineated in the Proposal.

5.18 COMPLIANCE WITH LAW

Each Respondent must ensure that its Proposal is in full compliance with all applicable Federal, State and local laws, rules, regulations or other requirements. It is the obligation of Respondent to determine whether a contractor's license is required and to ensure that Respondent is in possession of such license at the time it submits its Proposal, as required by New Mexico law, including but not limited to Section 60-13-3 and Section 60 13-12 NMSA 1978. Further information regarding classification of licenses in New Mexico is set forth in the New Mexico Administrative Code at Section 14.6.6.1, and additional information may be obtained from the New Mexico Construction Industries Division - http://www.rld.state.nm.us/construction/.

It is the obligation of Respondent to determine whether a professional engineering license in one or more disciplines is required to perform the Work and to ensure that Respondent is in possession of such license at the time it submits its Proposal. New Mexico Administrative Code Rule 16.39.3.12. See also, generally, Sections 61-23-1 through 61-23-24 NMSA 1978 and New Mexico Administrative Code Title 16, Chapter 39, Part 3. Additional information may be obtained directly from the New Mexico Board of Licensure for Professional Engineers and Professional Surveyors - http://www.sblpes.state.nm.us.

5.19. BID FORMAT AND CONTENTS

This section outlines the content and format requirements for all Proposals submitted in response to this RFP. Unless PNM in its sole discretion elects otherwise, Proposals that do not include the information requested in this section will be ineligible for further evaluation, unless PNM determines that the information requested is not applicable or not relevant to a given Proposal. PNM reserves the right to conduct any further due diligence it considers necessary to fully understand and evaluate Proposals prior to entering into any Agreement.

A complete Proposal will include the following components:

- Executive Summary;
- Complete set of applicable Bid Forms (Forms identified below);
- Form attachments (as necessary to elaborate on Bid Form information); and
- Any additional electronic data or narrative discussion.

5.19.1Executive Summary

The Executive Summary should briefly describe the Respondent, the project(s) or resource(s) that are part of the Proposal, the capacity amount, timing and term of the Proposal, and key highlights of the pricing and terms of the Proposal, including whether it will be considered a capital lease or be subject to VIE treatment.

5.19.2Bid Forms

Required Bid Forms will vary between EPC Proposals and all other Proposals. The required forms for each are as identified below. To the extent the full completion of any form requires additional information or clarification, please provide that information as an attachment to the form. Information provided in these forms will be a basis for determining performance guarantees associated with a potential Agreement. Electronic submissions should include the completed Bid Forms in the format provided on the PowerAdvocate Sourcing Platform.

5.19.2.1 EPC Bid Forms. The Bid Forms for EPC Proposals include:

EPC Attachment A – Notification of Intent to Bid Form
EPC Attachment B – Bid Profile

EPC Attachment C – Bid Certification Form
EPC Attachment D – Proposal Form
EPC Attachment D-1 – Price Breakdown Table
EPC Attachment E-1 – Commercial Clarifications and Exceptions
EPC Attachment E-2 – Technical Clarifications and Exceptions
EPC Attachment F – Conflict of Interest Form
EPC Attachment G – Not Used
EPC Attachment H – Milestone Payment Schedule
EPC Attachment I – Cancellation Schedule
EPC Attachment J – Not Used
EPC Attachment K – Proposal Data Forms
EPC Attachment L – Technical Submittal Checklist
EPC Attachment M – RFI Log

5.19.2.2 Non-EPC Bid Forms. The Bid Forms for all Proposals, other than EPC Proposals, include:

Attachment A – Notification of Intent to Bid Form
Attachment B – Bid Profile
Attachment C – Bid Certification Form
Attachment D-1 – PPA Proposal Data Forms
Attachment D-2 – APA Proposal Data Forms
Attachment D-3 – BT Proposal Data Forms
Attachment E – Technical Description
Attachment F – Electrical Interconnection – Power Delivery
Attachment G – Fuel Information
Attachment H – Permitting, Land Use, Zoning
Attachment I – Project Milestones
Attachment J – RFI Log
Attachment K – Conflict of Interest Form
Attachment L – APA/BT Technical Submittal Checklist

5.19.2.3 EPC Supplemental Information. In addition to the forms noted above, Respondents must include supplemental information to clearly identify the scope of the Proposal. The supplemental information for EPC Proposals, at a minimum, must include the following, in the order identified, with each topic beginning on a separate page.

A. Description of the Respondent
B. Financial Information / Credit Quality
C. Exceptions / Red-Line Markup to Contract or Term Sheet
D. Identification of all Pricing Terms
E. EPC Contractor Rate Schedule (engineering, construction, field labor, and equipment)
F. Construction Contractor License for the State of New Mexico (CLSI)
G. Project Description
H. Equipment Description
I. EPC Experience / Similar Projects
J. Project Team Organization and Resumes

K. Corporate Environmental, Health, and Safety Record

L. Project Implementation Schedule

M. Project and Construction Execution Plan

N. Other Attributes

5.19.2.4 Non-EPC Supplemental Information. The supplemental information, at a minimum, must include the following, in the order identified, with each topic beginning on a separate page.

A. Description of the Respondent

B. Financial Information / Credit Quality

C. Contract Accounting / Project Financing Plan

D. Identification of all Pricing Terms

E. Project Description

F. Power Delivery Plan

G. Transmission Plan

H. Interconnection Plan

I. Fuel Contracting Plan

J. Capacity Plan

K. Operations and Maintenance Plan

L. Exceptions / Red-Line Markup to Contract or Term Sheet

M. Assignability

N. Projects to-be-built

1. Equipment Description
2. Construction Contractor License for the State of New Mexico (CLSI)
3. Development Experience
4. Development Schedule
5. Real Property Acquisition Description and Plan
6. Permitting Plan
7. Community/State Reaction Assessment

O. Other Attributes

PART 6 – RFP PROCESS

6.1 COMMUNICATION

6.1.1 PowerAdvocate Sourcing Platform

All inquiries and other communications relating in any manner to this RFP will be hosted on the PowerAdvocate Sourcing Platform for the PNM 2023 Generation RFP. The site is administered by PowerAdvocate, Inc. To register for the RFP at the PowerAdvocate site, please follow this link:

https://www.poweradvocate.com/pR.do?okey=73211&pubEvent=true

This link to the PowerAdvocate site and a description of the RFP are also available at this PNM website:

http://www.pnm.com/rfp

PNM makes no commitment to respond to other communications received via telephone, FAX, text messaging or other media. Additionally, Respondents may not rely on any oral representation or oral modification made by any PNM employee or agent of PNM. In order to preserve transparency in the process and to assure that all Respondents receive equal consideration, Respondents may not contact any PNM employees or agents of PNM in regard to this RFP. All communications are to be conducted through the PowerAdvocate Sourcing Platform.

6.1.2 RESPONSES TO INQUIRIES

PNM will prepare written responses to questions received and will post the responses (without identification of the party asking the questions) on the PowerAdvocate Sourcing Platform for all Respondents who submit a Notice of Intent to Bid. All questions must be submitted via the PowerAdvocate Sourcing Platform and the RFI Log template included with these Bid Documents.

Questions must be formatted as follows:

- Clearly identify specific document reference to which the question pertains, and date
- Clearly identify the document language or section in question
- Sequentially number each question in each submittal

Questions must be timely submitted in groups to allow for proper consideration and response. Questions that Respondent believes to be commercially sensitive or confidential must be individually marked as "Confidential". Questions marked "Confidential" will not be shared with other Respondents unless PNM determines that the question is a general, non-sensitive technical or commercial question.

6.2 SCHEDULE

The RFP process will proceed in accordance with the following schedule:

BID SCHEDULE – ACTIVITY	DATE
RFP Process Announced / Non-Disclosure Agreement Available on PowerAdvocate	October 30, 2017
RFP/Bid Documents available	October 26, 2017
Pre-Bid Conference and EPC Site Visit Registration Deadline	November 3, 2017
Pre-Bid Conference	November 14, 2017
EPC Site Visits	November 15, 16, 2017
Notice of Intent to Bid Due	November 30, 2017
Deadline for Questions from Respondents	December 15, 2017

RFP Response & Proposal Fee Due*	January 30, 2018
Successful Short-List Respondents Notification	March 30, 2018
Successful Respondent Notification	July, 2018
Latest Power Supply / Commercial Operation Date	June 1, 2023

* Respondents must note that the RFP response due date is firm. No extensions to the bid process duration as noted above must be offered.

PNM reserves the right to revise, suspend, or terminate this RFP process and any schedule related thereto at its sole discretion without liability to Respondents or any other person or entity.

Respondent must note that a signed Non-Disclosure Agreement will be required prior to issuance of the RFP and Bid Documents. The Non-Disclosure Agreement as posted on the PowerAdvocate Sourcing Platform will be non-negotiable.

Communications regarding the status of this RFP process, including any and all changes and addenda to this RFP or attendant schedules, will be made via the PowerAdvocate Sourcing Platform.

6.3 PRE-BID CONFERENCE

6.3.1 SCHEDULE

PNM will host a pre-bid conference further detailing information requested in the RFP. A webinar will be available and preliminary details will be provided on the PowerAdvocate Sourcing Platform for those parties who cannot attend. Please check the PowerAdvocate Sourcing Platform for any schedule changes or updates. Interested parties and Respondents are encouraged to attend or listen on-line and bring any questions requiring clarification. Your registration, submitted via the PowerAdvocate Sourcing Platform will be required to assure adequate space and building access security for participants.

Date: **Tuesday, November 14, 2017**

Time: **3:00 PM – 5:00 PM, Mountain Time**

Where: **PNM Headquarters Building**
414 Silver Ave. SW
Albuquerque, N.M., 87102

Webinar Details: To be posted at PowerAdvocate Sourcing Platform

Additionally, for EPC Respondents, PNM will subsequently host site visits to the PNM sites considered for development, further detailing information requested in the RFP. Please check the PowerAdvocate Sourcing Platform for any schedule changes or updates. Prior registration via the PowerAdvocate Sourcing Platform for these site visits will be required. The RSVP for the site visits and the pre-bid conference will be a single form. Your registration, submitted via the PowerAdvocate Sourcing Platform will be required to assure adequate space and access security for site visit participants.

6.3.2 SITE VISIT DETAILS

PNM will host site visits to the potential EPC project sites as further outlined below. Respondents participating in the site visits must arrive at the addresses noted below no later than the times noted below. Site access to Respondents arriving after the arrival time will not be guaranteed and Respondents will be required to depart the sites at the end of the time windows noted. Respondents will be responsible for their own transportation, food, and lodging arrangements during the site visits. Due to limited parking at the project sites, access will be limited to one car per Respondent.

Day 1 – Wednesday, November 15, 2017

- La Luz Energy Center (8:00 a.m. to 9:30 a.m.)

  Where: La Luz Energy Center Site

  11 La Luz Energy Center Road (Intersection of Harrison and Rubio Road)

  Belen, N.M. 87002

- Rio Bravo Generating Station (10:00 a.m. to 11:30 a.m.)

  Where: Rio Bravo Generating Station Site

  725 Electric Avenue SE

  Albuquerque, N.M. 87105

- Reeves Generating Station (12:30 p.m. to 2:00 p.m.)

  Where: Reeves Generating Station Site

  4400 Paseo Del Norte NE

  Albuquerque, N.M. 87113

- Rio Puerco Substation (greenfield generation site) (3:00 p.m. to 4:00 p.m.)

  Where: Rio Puerco Substation

  5911 Rhythm Rd NW

  Rio Rancho, NM, 87124

Day 2 – Thursday, November 16, 2017

- San Juan Generating Station (10:00 a.m. to 12:00 p.m.)

  Where: San Juan Generating Station Site

  6800 N County Rd

  Waterflow, N.M. 87421

6.4 SITE INSPECTION

In addition to these site visits and examination of the Bid Documents, each Respondent will be solely responsible for conducting such due diligence as it deems necessary or desirable to be fully informed as to the existing and expected job site and off-site conditions and matters which might in any way affect the cost and/or the performance and completion of the Work. Any failure by Respondent to fully investigate the job site and complete its due diligence as

to job site conditions will not relieve Respondent from responsibility for estimating properly the difficulty or cost of successfully performing and completing the Work.

In addition, prior to submitting its bid, Respondent must familiarize itself with local conditions that could affect or impact the Work in any manner whatsoever, and all requirements of applicable permits, licenses, laws, codes, rules, regulations, ordinances, statutes, labor policies, zoning, and local transportation issues. All communications with any local authorities must be coordinated through PNM.

6.5 NOTICE OF INTENT TO RESPOND

In order to identify persons or entities interested in submitting a Proposal, and for those persons or entities to receive any subsequent information distributed in the proposal process, interested parties shall submit via the PowerAdvocate Sourcing Platform a Notice of Intent to Respond on or before 4:00 P.M. Mountain Time on the Notice of Intent to Bid due date. The form is available as Attachment A to this RFP and can be downloaded from the PowerAdvocate Sourcing Platform.

https://www.poweradvocate.com/pR.do?okey=73211&pubEvent=true

6.6 OWNERSHIP OF BID DOCUMENTS

The Bid Documents are confidential, are the property of PNM, and are only for the purpose of Respondents' preparing and submitting a Proposal in response to this RFP. In anticipation of a confidentiality agreement between Respondent and PNM for the project, no information contained or referred to in the Bid Documents may be disclosed or released except as agreed to by PNM.

6.7 PNM RESERVATION OF RIGHTS AND DISCLAIMERS

Nothing in this RFP constitutes an offer or acceptance by PNM, and PNM hereby disclaims any intent for this RFP to constitute a binding contract between PNM and any Respondent. PNM retains the right to determine, in its sole discretion, the value to PNM and its customers of any or all Proposals. PNM reserves the right to negotiate with a Respondent or Respondents after submission of a Proposal. PNM further reserves the right to negotiate with only those Respondents whose Proposals, as PNM determines in its sole discretion, have a reasonable likelihood of being executed. In the event negotiations with a Respondent or Respondents do not produce a final and fully executed Agreement satisfactory to PNM and authorized by the Commission, without material changes, for inclusion in PNM's resource portfolio, PNM reserves the right to pursue any and all other resource options available to it.

PNM may reject any Proposal that it determines, in its sole discretion:

- Does not meet the minimum requirements set forth in the RFP; or
- Does not include all required elements under Commission Rule 572; or
- Does not provide required information in a manner that allows effective evaluation; or
- Is not economically competitive with other Proposals or, when evaluated in combination with other selected Proposals, does not meet PNM's requirements for energy, capacity and flexible generation by 2023.

PNM reserves the right, without qualification and in its sole discretion, to modify, suspend or withdraw this RFP, accept or reject any or all Proposals for any reason at any time after submittal without explanation to the Respondent, or to enter into an Agreement at any time

with a Respondent who, in the opinion of PNM, will provide the most value to PNM customers. PNM also reserves the right to contract with other than the lowest price Respondent or with other than the Respondent evidencing the greatest technical ability, if PNM, in its sole discretion, determines that to do so would result in the greatest value to PNM customers.

PNM, in its sole discretion, may decline to enter into an Agreement with any Respondent, and may terminate negotiations with any Respondent, at any time during the process.

Those Respondents who submit Proposals do so without legal recourse against PNM, PNM's parent company or affiliates, and the directors, management, employees, agents or contractors of any of them, due to (1) PNM's rejection, in whole or in part, of the Respondent's Proposal; (2) PNM's rejection, modification, delay or withdrawal, in whole or in part, of this RFP; (3) failure to execute any Agreement; and (4) any other reason arising out of this RFP. PNM will not be liable to any Respondent or to any other party, in law or equity, for any reason whatsoever relating to PNM's acts or omissions arising out of or in connection with the RFP process.

Respondent will be liable for all of its costs, and PNM will not be responsible for any of Respondent's costs, incurred to prepare, submit, or negotiate its Proposal, a definitive Agreement or any other activity related thereto.

PNM reserves the right, at any time, to establish a minimum and/or maximum amount of energy to be acquired under any Proposal or combination of Proposals.

PART 7 – BID EVALUATION AND CRITERIA

7.1 EVALUATION OF PROPOSALS

The objective of this RFP is to identify and procure the best portfolio of resources. In addition to the evaluation of individual proposals as described below, PNM will also conduct an evaluation of the overall portfolio of selected resources.

An initial screening for minimum requirements (See, e.g., Section 3.1 and Part 5) will be performed for each Proposal to determine if all required information has been provided and minimum requirements satisfied. Material deficiencies will disqualify a Proposal from further consideration, and the Respondent will be notified in such event. PNM reserves the right, in its sole discretion, to either reject incomplete or unclear Proposals from further consideration or to contact Respondents for purposes of Proposal clarification, pursuant to Section 5.14 of this RFP.

After the initial Proposal screening, PNM anticipates a two-phase evaluation process in which the Respondents' cost projections, resource characteristics, and other proposed assumptions will be validated.

At the end of the first phase ("Phase One"), a smaller list of projects will be determined, at which time Respondents may be requested to supply additional information. Unsuccessful Respondents will be notified at the end of the Phase One assessment that their Proposals will not be considered further.

Successful Respondents will be notified via the PowerAdvocate Sourcing Platform that they have passed to the second phase of the process, whereupon additional evaluation will be conducted and the preferred resource alternative combination identified ("Phase Two"). Once the successful alternative(s) from that evaluation have been identified, PNM will pursue negotiations to secure resources. Provided the parties successfully negotiate an Agreement for the project, PNM will then make appropriate filings seeking approval from the Commission based on the negotiated terms of the Agreement(s).

7.1.1 PHASE ONE EVALUATION

Proposals that have provided the required data and satisfied the minimum bid requirements will be passed to Phase One of the evaluation. They will be evaluated individually for both quality and likelihood of achieving successful commercial operation under the terms proposed. Each Proposal will be scored using both price and non-price criteria. A Proposal's score from the non- price evaluation is combined with a price score to produce a ranked "short-list." Respondents must include sufficient detail for PNM to be able to evaluate all costs associated with the Proposal(s). Respondents should be aware that the evaluation in Phase One is based on both price and non-price evaluations (which are detailed below).

7.1.1.1 NON-PRICE EVALUATION PROCESS. The following factors will be given consideration in the non-price evaluation process:

A. Respondent creditworthiness, which includes a Respondent's managerial and financial qualifications;

B. Degree of acceptance of PNM's commercial terms;

C. Respondent's environmental, health, and safety history;

D. Respondent's Engineering, Construction, Operating, Environmental, and/or Ownership Team qualifications, as applicable;

E. Commercial viability, maintainability, and maturity of battery storage and generation technology;

F. Resource capacity, efficiency, and environmental footprint;

G. Operational flexibility characteristics of the proposed resource (start times, ramp rates, frequency response, minimum down-times / up-times, allowable start frequency, etc.). In particular, if proposing a PPA, limitations on or financial consequences of curtailments, maintenance scheduling, or operational parameters will be evaluated;

H. Project Engineering Plan

   a) Detailed operations and maintenance plan for the project;

   b) Preliminary engineering study describing the generation technology, emission control equipment and fresh water usage;

   c) Detailed project critical path schedule identifying all important development elements and their timing; and

   d) Identification of the major equipment supplier(s) to be used for the project.

I. Product and equipment warranty protections;

J. Environmental and Siting Plan

   a) An environmental assessment of the environmental feasibility for each site, access, and all necessary right of ways (for sites other than PNM-designated sites);

   b) A Respondent's Environmental Management System, i.e., how the Respondent handles the environmental risk associated with its operations and the extent Respondent has developed and implemented an Environmental Management System;

c) An environmental milestone schedule addressing all requisite permits including a discussion of interplay with existing permits for EPC Proposals at PNM owned sites; and

d) Detailed description of a water supply plan including a description of fresh water conservation efforts and usage.

K. Fuels Supply Plan

a) A detailed assessment of current and future fuel supply, fuel contracts in place, fuel storage, and fuel transportation, as appropriate per technology type;

b) Meteorological data, as necessary, to support projected energy and capacity values; and

c) Respondent demonstration of fuel supply stability and a robust supply chain for the duration of the plant life or contract life.

L. Electrical Interconnection Path/Plan

a) Assessment of Respondent's transmission capability/deliverability analysis to deliver power to PNM load within WECC Path 48 and how Respondent proposes to address potential transmission constraints ;

b) Third-Party Respondents will be responsible for all transmission arrangements and costs to PNM's load and will assume that PNM has no available long-term, firm transmission rights that may be re-directed or used for this project.

M. Contribution to PNM's overall system reliability. (i.e. the project's operational control or lack thereof and its effect on PNM's reliability metrics);

N. Project development and permitting status, including any potential for delay as the result of a Respondent's need for regulatory actions or approvals or for permitting, licensing or transmission interconnection;

O. Ownership structure; and

P. Geographic diversity of resources with respect to PNM's existing portfolio.

7.1.1.2 PRICE EVALUATION PROCESS. PNM ranks and scores all Proposals from a cost standpoint. The price screening consists of measuring each Proposal's total cost impact, including:

A. Capital costs and/or capacity costs;

B. Fixed operation and maintenance costs;

C. Variable production costs;

D. Fuel and water costs;

E. Transmission costs, including third party wheeling;

F. Operational costs, including system regulation requirements as a result of the project;

G. Costs of compliance with assumed future regulations or requirements;

H. Other system benefits or costs, including impact to system losses;

I. Financial impact to PNM such as impact to credit metrics including debt imputed by credit rating agencies, capital structure and financial statements;

J. Opportunities for marketing of excess energy;

K. Any additional costs that are required, but not provided for in the Proposal; and

L. Financial implications of accounting and tax treatment

Proposals are scored and ranked on the basis of minimizing the net present value of ratepayer revenue requirements (i.e. total cost impact). Proposals with a low total cost impact on the PNM system will receive a higher score than Proposals with a high total cost impact.

7.1.2 PHASE TWO EVALUATION

Following the Phase One evaluation, short-listed Proposals are further evaluated on credit quality, price and non-price factors, including value to PNM and its customers. From the final set of short-listed Proposals, PNM will select the preferred alternative or combination of alternatives.

7.2 CONTRACTUAL CONSIDERATIONS

7.2.1 CREDIT QUALITY

Credit quality of the Respondent is an important factor. Execution of a final, definitive Agreement is conditional upon full satisfaction of any PNM credit support requirements. PNM will utilize the lower of the published credit ratings from Standard & Poor's Ratings Group ("S&P") or Moody's Investor Services, Inc. ("Moody's") for long-term senior unsecured debt to determine a Respondent's credit rating. PNM may also consider credit rating by other credit agencies. Execution of an Agreement under this RFP is conditional upon full satisfaction of any PNM credit support requirements. PNM reserves the right to require additional credit standards and to review and evaluate the quality of credit of each Respondent and Credit Support Provider/Guarantor and to make adjustments, as necessary, in the application of the foregoing standards.

7.2.2 SMALL BUSINESS PLANS

PNM promotes and encourages diversity in project sourcing and encourages all Respondent's to maximize the use of small businesses, veteran-owned small businesses, service-disabled veteran-owned small businesses, HUBZone small businesses, small disadvantaged businesses, and women-owned small business concerns to the greatest extent practical.

7.2.3 CONTRACTOR SAFETY PREQUALIFICATION PROGRAM

PNM has implemented a Contractor Prequalification process as part of our effort to continuously improve in the areas of health, safety, risk, and finance. Respondents who are finalists of this RFP may be required to register with ISNetworld (ISN) auditing at:

https://www.isnetworld.com

so that PNM can review their safety records prior to final award of the contract. PNM will notify all finalists and allow reasonable time for the registration process.

7.2.4 INSURANCE

The successful Respondent will be required to maintain, at a minimum, standard insurance coverages for Workers' Compensation; commercial general, employer's and automobile liability; and an umbrella excess liability. Respondents are requested to define the assumed insurances and levels in the Proposal. Specific insurance requirements of PNM and lender's will be addressed as part of the evaluation and negotiation of the Agreement.

7.2.5 COMMERCIAL TERMS AND CONDITIONS

Commercial terms and conditions will be negotiated with the Respondents who are finalists of this RFP. All Proposals will represent a firm offer to contract on the terms and conditions included as Appendices to this RFP. Each representation of fact and promise of future performance within a Proposal will be incorporated into the Agreement as a warranty or covenant. Any statement of fact or promise of future performance that is not intended by the Respondent as a warranty or covenant should be clearly identified.

7.3 AWARD

PNM reserves the right to reject any and all bids. Prior to PNM's bid award, PNM may have discussions with Respondents whose bids are under consideration. Respondents may be required to travel to PNM's office or other locations for further discussions.

Negotiations arising out of the Proposals may be conducted with any or all Respondents, at PNM's sole discretion. Winning Respondents will be expected to enter into an Agreement following the award of the bid. PNM will have no obligation to accept any Proposal submitted pursuant to this RFP. Whether, and on what terms, any Proposal is accepted is within PNM's sole discretion.

A Proposal will be deemed formally accepted only if and when the Agreement has been executed by a Respondent and delivered to PNM, and PNM has signed it. Until such time, none of PNM, its parent company, its subsidiaries or its other affiliates will have any obligation to any Respondent with respect to a proposed project, and following such time, the only obligations of PNM will be those set forth in the Agreement. By submitting a Proposal, each Respondent agrees that PNM (i) is under no obligation to consider or accept any Proposals made, (ii) will not be liable to any Respondent for the selection of one Proposal in lieu of another Proposal or combination of Proposals and (iii) will not be liable for any costs incurred by any Respondent in connection with this bid process. By submitting a Proposal, each Respondent agrees to the terms of these Instructions to Bidders and acknowledges that it is relying solely upon its own independent investigation and evaluation of its proposed project.

Supplemental Energy Storage RFP

PNM Exhibit RWN-6

Is contained in the following 20 pages.

00 2113 - INSTRUCTIONS TO BIDDERS

Table of Contents

Appendices
Appendix A – EPC Term Sheet – to be provided later
Appendix B – BT Term Sheet – to be provided later
Appendix C – Technical Specification
Appendix D – Proposal Submittal Checklists

EPC Proposal Forms
EPC Attachment A – Notification of Intent to Bid Form
EPC Attachment B – Bid Profile
EPC Attachment C – Bid Certification Form
EPC Attachment D – Proposal Form
EPC Attachment D-1 – Price Breakdown Table
EPC Attachment D-2 – Estimated O&M Cost Forms
EPC Attachment E-1 – Commercial Clarifications and Exceptions
EPC Attachment E-2 – Technical Clarifications and Exceptions
EPC Attachment F – Conflict of Interest Form
EPC Attachment G – Not Used
EPC Attachment H – Milestone Payment Schedule
EPC Attachment I – Cancellation Schedule
EPC Attachment J – Not Used
EPC Attachment K – BESS Data Sheets
EPC Attachment L – Technical Submittal Checklist
EPC Attachment M – RFI Log
Supplemental Information

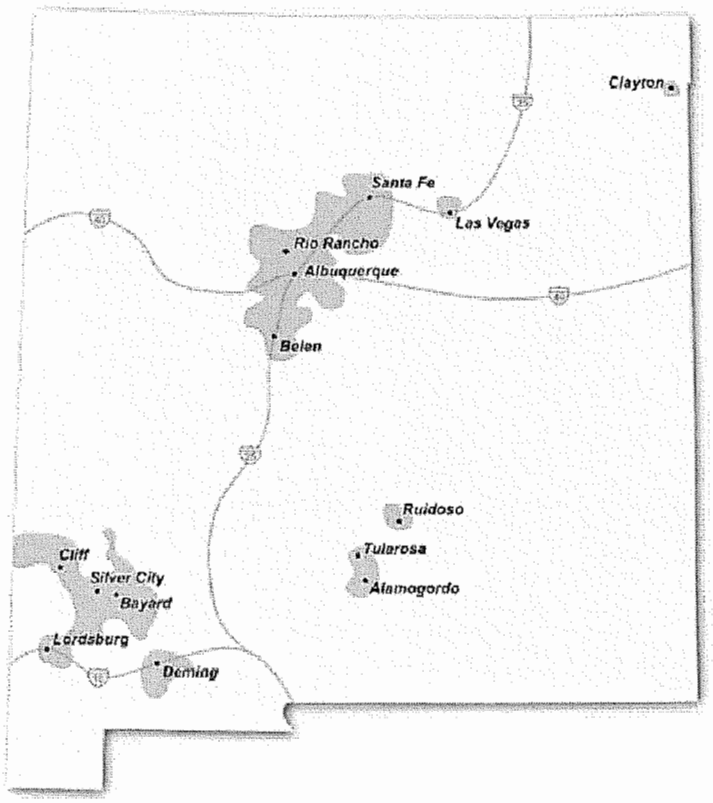
Build Transfer Proposal Forms
Attachment A – Notification of Intent to Bid Form
Attachment B – Bid Profile
Attachment C – Bid Certification Form
Attachment D – BT Proposal Data Forms
Attachment E – BESS Data Sheets
Attachment F – Electrical Interconnection – Power Delivery
Attachment G – Not Used
Attachment H – Permitting, Land Use, Zoning
Attachment I – Project Milestones
Attachment J – RFI Log
Attachment K – Conflict of Interest Form
Attachment L – BT Technical Submittal Checklist
Supplemental Information

PART 1 – INTRODUCTION

1.1 COMPANY BACKGROUND

Public Service Company of New Mexico ("PNM") is a wholly owned subsidiary of PNM Resources, Inc. (NYSE: PNM) based in Albuquerque, N.M., with total utility operating revenues of $1.1 billion in 2017. PNM is an electric utility that provides generation, transmission, and distribution service. PNM's retail service territory covers a large area of north central New Mexico, including the cities of Albuquerque, Rio Rancho, and Santa Fe and most of the area around the Rio Grande valley, from Belen to Santa Fe. Other communities served include Lordsburg, Silver City, Deming, Alamogordo, Ruidoso, Tularosa, Clayton, and Las Vegas. PNM also serves several Native American Pueblos, Tribes, and Nations in New Mexico and numerous unincorporated areas serving about 510,000 electricity customers statewide. As shown in Figure 1, PNM's electric service territory covers geographically diverse areas. Electric demand and energy usage varies based upon geography, customer mix, and climate.

Figure 1. PNM's Electric Service Territory Map



1.2 PURPOSE OF RFP

PNM is progressing with the State of New Mexico's plan to create a sustainable energy future for New Mexico. Our commitment is to provide reliable power with a cleaner, more sustainable energy resource mix in a cost effective manner for our customers. PNM is taking significant measures with plans to meet this commitment. We are proud to issue this

request for proposals ("RFP") to solicit bids from capable providers to construct up to 450 MW of battery energy storage resources ("Project" or "Projects") to be owned and operated by PNM.

1.4 RFP CONTENTS; SOURCING PLATFORM

This RFP includes a description of the request, an outline of the solicitation process, relevant dates, contact information, and proposal submission requirements. All proposals submitted in response to this RFP (each a "bid" or "Proposal") must be submitted through the PowerAdvocate Sourcing Platform as described in this RFP.

Respondents to this RFP (each a "Respondent") must follow the instructions provided herein in the preparation and submittal of their bids.

Respondent must sign a non-negotiable Non-Disclosure Agreement in the form provided by PNM via PowerAdvocate in order to have access to the confidential and proprietary information PNM releases in connection with this RFP.

PART 2 - ELIGIBLE PROPOSALS

2.1 TYPES OF ELIGIBLE PROPOSALS

The following types of Proposals are eligible for consideration under this RFP:

- Proposals for engineering, procurement, and construction ("EPC") contracts on a site controlled by PNM as described in the Technical Specification of this RFP; Reference 4.15 (Compliance with Law) for more details.
- Proposals for build-transfer ("BT") projects on the Respondent's site. The site, the Project, all other improvements, and all environmental and other attributes of the Project would be transferred to PNM upon completion; Reference 4.15 (Compliance with Law) for more details.

2.2 PNM PROPOSALS

PNM will not submit a Proposal in response to this RFP.

PART 3 – PROJECT DETAILS

PNM is seeking up to 450 MW of battery energy storage resources with either 2 or 4 hour storage durations. Projects are to be quoted with a 50 MW (AC) base proposal with pricing for additional 50 MW (AC) increments of storage offered, up to a total of 450 MW. For clarity, the proposal pricing will be presented for the following increments in Project sizing:

Table 1. Required Battery Energy Storage Pricing Increments

Alternative	Pricing Increments	
Base Proposal	50 MW / 200 MWH	50 MW / 100 MWH
100 MW Total Capacity	50 MW / 200 MWH Increment	50 MW / 100 MWH Increment
150 MW Total Capacity	50 MW / 200 MWH Increment	50 MW / 100 MWH Increment
200 MW Total Capacity	50 MW / 200 MWH Increment	50 MW / 100 MWH Increment
250 MW Total Capacity	50 MW / 200 MWH Increment	50 MW / 100 MWH Increment
300 MW Total Capacity	50 MW / 200 MWH Increment	50 MW / 100 MWH Increment
350 MW Total Capacity	50 MW / 200 MWH Increment	50 MW / 100 MWH Increment
400 MW Total Capacity	50 MW / 200 MWH Increment	50 MW / 100 MWH Increment
450 MW Total Capacity	50 MW / 200 MWH Increment	50 MW / 100 MWH Increment

EPC Project(s) shall be constructed on a PNM controlled site(s). The available sites are summarily described below with more specific site conditions and requirements defined in Appendix C – Technical Specification.

- San Juan Generating Station located in San Juan County with capability to site up to a 450 MW Project with interconnection to the existing 345 kV substation.
- Reeves Generating Station located in Bernalillo County with capability to site up to a 150 MW Project with interconnection to the existing 115 kV substation.
- Greenfield site in the Sandia Science and Technology Park near the Sandia substation in Bernalillo County with approximately 5.4 acres available with interconnection to the existing 115 kV substation.

As noted in Part 2, BT Proposals must be located on Respondent selected and controlled sites.

If multiple sites are selected, each site would consist of the Base Proposal plus any multiple of 50 MW increments. The Project(s) will be located within PNM's service territory and will be located within Western Electricity Coordinating Council ("WECC") Path 48. The Project shall be expected to provide multiple services to PNM's system including, but not limited to, contingency reserves, regulating reserves, capacity for peak-usage times, energy arbitrage, intra-hour balancing, frequency regulation, black start, and storage to minimize curtailment of available renewable energy resources. Therefore, this Project shall be an independent energy asset that is individually metered, remotely monitored, not located behind any metered or net-metered load served by a utility, and located within PNM service territory interconnecting to the WECC Path 48 transmission system. PNM expects to own and operate the Project for up to 40 years. Further details regarding the scope of the Project and electrical interconnection requirements are outlined in Appendix C.

The Project is intended to help PNM integrate its increasing portfolio of Variable Energy Resources (VERs). While PNM's operations do not currently participate in an organized market, the potential suitability and value of resources in such a market in the future is a consideration in this RFP. Further detail regarding the expected battery use case is included in Section 37 of Appendix C – Technical Specifications.

PART 4 – PROPOSAL REQUIREMENTS AND SUBMISSION PROCEDURE

4.1 GENERAL

All Proposals must satisfy eligibility requirements set forth in the RFP and be submitted in accordance with the instructions of this RFP to be considered for evaluation.

4.2 "BID DOCUMENTS"

As used in this RFP, "Bid Documents" include all documents comprising this RFP, including but not limited to all design documents, technical specifications, and other appended or related data, all as may be amended or supplemented from time-to-time. The Bid Documents are complementary, and the Respondent must consider anything specified by one and not by the others as binding as though specified by all. In the case of a conflict between the various specification sections and/or the drawings and any supplemental information, the more strict interpretation as determined by PNM will govern.

4.3 REQUIREMENTS APPLICABLE TO ALL PROPOSALS

The following requirements apply to all Proposals. Additional requirements are included in subsequent sections of this Part 4.

- Proposals and pricing must be provided for a target Project in-service date of March 31, 2022. Respondent must identify the schedule milestones required from PNM, regulatory processes, and electrical transmission providers to facilitate the quoted Project in-service date.
- Proposals and pricing must remain valid and binding through at least June 30, 2020, with the date of expiration explicitly stated in the Proposal.
- All prices in the Proposal and pricing forms must be quoted in U.S. dollars in the year to be occurred.
- Proposals must include estimated pricing for ongoing operations and maintenance (O&M) costs and capital costs for the complete Project for a 40 year term. Estimated O&M pricing shall be based upon maintaining the quoted energy storage capacity for the life of the Project and shall include costs for recycling/disposal of battery energy storage system ("BESS") components over the life of the Project. Information provided will be used during the evaluation process.
- Proposals must include all applicable taxes (i.e New Mexico Gross Receipts Tax), licenses, fees, etc. Respondent must provide a clear description and break-out of these assumptions in the Proposal. EPC and BT proposals must include the applicable New Mexico Gross Receipts Tax as a separate item in the cost breakdown of the Project.
- As identified in Part 3, PNM has obtained site control for locations suitable for installation of the Project. Respondents may submit EPC proposals for Projects to be built on the available sites or BT Projects on Respondent sourced sites. On the PNM designated sites only, PNM will be responsible for site development, including land acquisition, site development permitting and electrical interconnection. PNM will not consider BT proposals on the PNM-designated sites.
- Proposals must include all costs of shipping and related expenses associated with the Respondent's work scope.
- Proposals must identify assumed insurance requirements and levels.

- Proposals must comply with all applicable federal, state and local laws, including licensing requirements for submitting a Proposal.
- Proposals that culminate in a successful Project are required to obtain appropriate registration for all applicable NERC functions and must operate equipment within applicable NERC Standards.
- Proposals for BT resources on the Respondent's site must identify all costs including electrical interconnection costs. Respondent's Proposal must include firm, not to exceed capital costs with a break out for electrical interconnection costs. Detailed cost and scope information for the interconnection and power delivery system upgrades must be included in Attachment F – Electrical Interconnection – Power Delivery with additional information included, as required, in the Proposal Supplemental Information.
- PNM promotes and encourages the use of workers residing in New Mexico to the greatest extent practicable and shall take that use into consideration in evaluating proposals.
- In accordance with Section 4.15 regarding Compliance with Law, if New Mexico law requires a contractor's license to construct the Project, Respondent must have such license at the time it submits its Proposal, and such license must be issued explicitly in the name of the Respondent. Proposals not conforming with this requirement will not be further considered.

4.4 CREDIT REQUIREMENTS

The Respondent must be able to satisfy PNM's credit standards to ensure the Respondent has adequate financial capability. PNM requires qualified Respondents to either have an investment grade rating (S&P BBB- or above; Moody's Baa3 or above), or have sufficient equity security to cover Respondent's anticipated delivery obligations under any Agreement, as defined below, entered into as a result of this RFP process. If Respondent is unable to satisfy the foregoing credit standards, Respondent may designate a Credit Support Provider/Guarantor, and if the Credit Support Provider/Guarantor is satisfactory to PNM, the Respondent will be deemed to have satisfied PNM's credit standards. The quality of credit of the proposed Credit Support Provider/Guarantor will be evaluated under the same standards as the standards required of the Respondent.

4.5 COST OF BIDDING

Respondent will bear all costs associated with the preparation and submission of its Proposal. Neither PNM, nor its parent company or affiliates, nor any agent of PNM will be responsible or liable for any costs, regardless of the cost or outcome of the bidding process.

4.6 BID SUBMISSION FEE

A non-refundable RFP submission fee of $5,000 per Respondent must accompany the Proposal in order to qualify the Proposal for consideration. For purposes of this RFP, multiple options submitted by a single Respondent will only incur one fee, provided the options do not differ in type of Proposal offered (e.g. EPC, BT). The fee may be paid by certified check made out to "Public Service Company of New Mexico". Payment via ACH is also accepted.

Mail bid fees to: Public Service Company of New Mexico
San Juan Generating Station
P.O. Box 227
Waterflow, NM 87421
Attention: Rochelle Benally
Mail Station 96B5

ACH Remittance Instructions:

Bank Name: Wells Fargo Bank
ABA# 121000248
Attn: Dan Conklin
MAC: Q2129-103
200 Lomas Blvd. NW
Albuquerque, New Mexico 87102
Phone: (505) 765-5224
Beneficiary:
Account Name: PNM Misc. Depository
Account No.: 651-100-3698
For: PNM Energy Storage RFP - 2019

4.7 DISCLAIMER

Respondent is responsible for examining the complete Bid Documents and any subsequently issued RFP addenda and is responsible for analyzing all RFP requirements that might in any way affect the cost of the Project or performance of any part of the work to be completed in connection with the Project ("Work"). Failure to do so will be at the sole risk of the Respondent, and no relief will be given for errors or omissions resulting therefrom.

4.8 RESPONDENT'S REPRESENTATION

Each Respondent, by submitting a Proposal, represents that the Respondent has read and understands the Bid Documents and is familiar with the conditions under which the Work is to be performed. Respondent further represents that it has all licenses and permits required by applicable law to submit its bid.

4.9 REQUIRED APPROVALS

Each Proposal must state that Respondent has obtained all necessary internal approvals prior to the submission of the Proposal. All Proposals must be signed as follows:

- Corporations: Signature of officer must be accompanied by a certified copy of the resolution of the Board of Directors authorizing the individual signing to bind the corporation.
- Partnerships: Signature of one partner must be accompanied by a certified copy of the power of attorney authorizing the individual signing to bind all partners. If a certified copy of the partnership's certificate submitted with the bid indicates that all partners have signed, no authorization is required.
- Joint Ventures: Signature by one of the joint venture parties accompanied by a certified copy of the power of attorney authorizing the individual signing to bind all the joint venture parties. If a certified copy of the joint venture party's certificate submitted with the bid indicates that all joint venture parties have signed, no authorization is required.

4.10 PROPOSAL SUBMITTAL

Respondents must submit Proposals via the PowerAdvocate Sourcing Platform. The link to register for the RFP via the PowerAdvocate site is provided in Section 5.1.1. Instructions for submitting Proposals are provided at the site. Complete Proposals, including all exhibits, forms, and fee, must be received on or before 4:00 p.m. (MDT) on the RFP response due date via the PowerAdvocate Sourcing Platform. All Proposals will become the property of PNM and will not be returned to the Respondent.

4.11 CLARIFICATIONS

PNM may request clarification or additional information during the RFP evaluation process about one or more items in a Respondent's Proposal. Such requests will be sent via email via the PowerAdvocate Sourcing Platform to Respondents, who will be required to provide an electronic response via the PowerAdvocate Sourcing Platform within five (5) business days, or PNM may deem the Respondent to be non-responsive and either suspend or terminate evaluation of the Proposal. Respondents may provide an alternate point of contact to ensure a timely response to clarification questions.

4.12 WITHDRAWAL OF BIDS

A Respondent may withdraw a bid, either personally or by written request, at any time prior to the scheduled time for opening bids. No Respondent may withdraw a bid for a period of three hundred and sixty (360) calendar days after the date set for opening thereof without written consent of PNM, and bids will be subject to acceptance by PNM during this period.

4.13 CONFIDENTIALITY AND COMPLIANCE

PNM will use commercially reasonable efforts to protect any claimed proprietary and confidential information contained in a Proposal, provided that such information is clearly identified by the Respondent as "PROPRIETARY AND CONFIDENTIAL MATERIAL". Notwithstanding the foregoing, PNM in its sole discretion may release such information: (1) to any external contractors for the purpose of evaluating Proposals, but such contractors will be required to observe the same care with respect to disclosure as PNM; (2) to others who have a need for such information for purposes of evaluating the RFP and the Proposals, the RFP process or a final definitive agreement resulting from the RFP process ("Agreement"), including but not limited to the New Mexico Public Regulation Commission ("Commission"), its employees, staff, consultants and/or agents, and other parties, their consultants and/or

agents, or in any Commission proceedings relating thereto; or (3) if PNM is requested or compelled to disclose such information (or portions thereof) (i) pursuant to subpoena or other court or administrative process, (ii) at the express direction of any agency with jurisdiction over PNM, or (iii) as otherwise required by law. If PNM determines that the release of such information will be made under one of the circumstances set out above, PNM will provide Respondent with written notice; provided, however, PNM shall have no duty or obligation to Respondent to withhold such information or take legal steps to protect the information from disclosure. Under no circumstances will PNM, its parent corporation or affiliates, or any of their respective directors, management, employees, agents or contractors be liable for any damages resulting from the disclosure of Respondent's claimed proprietary and confidential information during or after the RFP process. By submitting a Proposal in response to this RFP, Respondent acknowledges and agrees to the requirements in this provision concerning confidentiality and disclosure. In the event PNM uses internal, proprietary projections in its evaluation process, the resulting projections will not be shared with Respondents.

4.14 COLLUSION

By submitting a Proposal to PNM in response to this RFP, the Respondent certifies that the Respondent has not divulged, discussed, or compared its Proposal with other Respondents and has not colluded whatsoever with any other Respondent or parties with respect to its Proposal or other Proposals; provided, however, that this provision does not and is not intended to prevent multiple parties from making a joint Proposal in which the roles and responsibilities of each party are clearly delineated in the Proposal.

4.15 COMPLIANCE WITH LAW

Each Respondent must ensure that its Proposal is in full compliance with all applicable Federal, State and local laws, rules, regulations or other requirements. It is the obligation of Respondent to determine whether a contractor's license is required to submit a Proposal and/or complete the Work. If a license is required to submit a Proposal, Respondent must ensure that the license is issued in its name and that Respondent is in possession of such license at the time it submits its Proposal. Additional information may be obtained from the New Mexico Construction Industries Division - http://www.rld.state.nm.us/construction/.

It is the obligation of Respondent to determine whether a professional engineering license in one or more disciplines is required to perform the Work and to ensure that Respondent is in possession of such license at the time it submits its Proposal. New Mexico Administrative Code Rule 16.39.3.12. See also, generally, NMSA 1978, Sections 61-23-1 through 61-23-24 and New Mexico Administrative Code Title 16, Chapter 39, Part 3. Additional information may be obtained directly from the New Mexico Board of Licensure for Professional Engineers and Professional Surveyors - http://www.sblpes.state.nm.us.

4.16 BID FORMAT AND CONTENTS

This section outlines the content and format requirements for all Proposals submitted in response to this RFP. Unless PNM in its sole discretion elects otherwise, Proposals that do not include the information requested in this section will be ineligible for further evaluation. PNM reserves the right to conduct any further due diligence it considers necessary to fully understand and evaluate Proposals prior to entering into any Agreement.

A complete Proposal will include the following components:

- Executive Summary;
- Complete set of applicable Bid Forms (Forms identified below);

- Form attachments (as necessary to elaborate on Bid Form information); and
- Any additional electronic data or narrative discussion.

4.16.1 Executive Summary

The Executive Summary should briefly describe the Respondent, the Project(s) or resource(s) that are part of the Proposal, the energy storage capacity, timing and term of the Proposal, and key highlights of the pricing and terms of the Proposal.

4.16.2 Bid Forms

Required Bid Forms will vary between EPC Proposals and BT Proposals. The required forms for each are as identified below. To the extent the full completion of any form requires additional information or clarification, please provide that information as an attachment to the form. Information provided in these forms will be a basis for determining performance guarantees associated with a potential Agreement. Electronic submissions shall include the completed Bid Forms in the native format provided on the PowerAdvocate Sourcing Platform.

4.16.2.1 EPC Bid Forms. The Bid Forms for EPC Proposals include:

EPC Attachment A – Notification of Intent to Bid Form
EPC Attachment B – Bid Profile
EPC Attachment C – Bid Certification Form
EPC Attachment D – Proposal Form
EPC Attachment D-1 – Price Breakdown Table
EPC Attachment D-2 – Estimated O&M Cost Forms
EPC Attachment E-1 – Commercial Clarifications and Exceptions
EPC Attachment E-2 – Technical Clarifications and Exceptions
EPC Attachment F – Conflict of Interest Form
EPC Attachment G – Not Used
EPC Attachment H – Milestone Payment Schedule
EPC Attachment I – Cancellation Schedule
EPC Attachment J – Not Used
EPC Attachment K – BESS Data Sheets
EPC Attachment L – Technical Submittal Checklist
EPC Attachment M – RFI Log

4.16.2.2 BT Bid Forms. The Bid Forms for BT Proposals, include:

Attachment A – Notification of Intent to Bid Form
Attachment B – Bid Profile
Attachment C – Bid Certification Form
Attachment D – BT Proposal Data Forms
Attachment E – BESS Data Sheets
Attachment F – Electrical Interconnection – Power Delivery
Attachment G – Not Used
Attachment H – Permitting, Land Use, Zoning
Attachment I – Project Milestones
Attachment J – RFI Log
Attachment K – Conflict of Interest Form
Attachment L – BT Technical Submittal Checklist

4.16.2.3 EPC Supplemental Information. In addition to the forms noted above, Respondents must include supplemental information to clearly identify the scope of the Proposal. The supplemental information for EPC Proposals, at a minimum, must include the following, in the order identified, with each topic beginning on a separate page.

A. Description of the Respondent

B. Financial Information / Credit Quality

C. Exceptions / Red-Line Markup to Section 25 of Appendix C - Technical Specification

D. Identification of all Pricing Terms

E. EPC Contractor Rate Schedule (engineering, construction, field labor, and equipment)

F. Construction Contractor License for the State of New Mexico (CLSI)

G. Project Description

H. Equipment Description

I. EPC Experience / Similar Projects

J. Project Team Organization and Resumes

K. Corporate Environmental, Health, and Safety Record

L. Project Implementation Schedule

M. Project and Construction Execution Plan

N. Battery Technology Environmental Characteristics and End of Life / Recycling Program

O. Other Attributes

4.16.2.4 BT Supplemental Information. The supplemental information, at a minimum, must include the following, in the order identified, with each topic beginning on a separate page.

A. Description of the Respondent

B. Financial Information / Credit Quality

C. Contract Accounting / Project Financing Plan

D. Identification of all Pricing Terms

E. Construction Contractor License for the State of New Mexico (CLSI)

F. Project Description

G. Power Delivery Plan

H. Transmission Plan

I. Interconnection Plan

J. Equipment Description

K. Development Experience

L. Development Schedule

M. Real Property Acquisition Description and Plan

N. Permitting Plan

O. Community/State Reaction Assessment

P. Corporate Environmental, Health, and Safety Record

Q. Battery Technology Environmental Characteristics and End of Life / Recycling Program

R. Other Attributes

PART 5 – RFP PROCESS

5.1 COMMUNICATION

5.1.1 PowerAdvocate Sourcing Platform

All inquiries and other communications relating in any manner to this RFP will be hosted on the PowerAdvocate Sourcing Platform for the PNM Energy Storage RFP - 2019. The site is administered by PowerAdvocate, Inc. To register for the RFP at the PowerAdvocate site, please follow this link:

https://www.poweradvocate.com/pR.do?okey=90526&pubEvent=true
Event 90526 Energy Storage RFP

This link to the PowerAdvocate site and a description of the RFP are also available at this PNM website:

http://www.pnm.com/rfp

All communications are to be conducted through the PowerAdvocate Sourcing Platform. PNM makes no commitment to respond to other communications received via telephone, email, FAX, text messaging or other media. Additionally, Respondents may not rely on any oral representation or oral modification made by any PNM employee or agent of PNM. In order to preserve transparency in the process, Respondents may not contact any PNM employees or agents of PNM in regard to this RFP.

5.1.2 Responses to Inquiries

PNM will prepare written responses to questions received and will post the responses (without identification of the party asking the questions) on the PowerAdvocate Sourcing Platform for all Respondents who submit a Notice of Intent to Bid. All questions must be submitted via the PowerAdvocate Sourcing Platform and the RFI Log template included with these Bid Documents.

Questions must be formatted as follows:

- Clearly identify specific document reference to which the question pertains, and date
- Clearly identify the document language or section in question
- Sequentially number each question in each submittal

Questions must be timely submitted in groups to allow for proper consideration and response. Questions that Respondent believes to be commercially sensitive or confidential must be individually marked as "Confidential". Questions marked "Confidential" will not be shared with other Respondents unless PNM determines that the question is a general, non-sensitive technical or commercial question.

5.2 SCHEDULE

The RFP process will proceed in accordance with the following schedule:

BID SCHEDULE – ACTIVITY	DATE
RFP Process Announced / Non-Disclosure Agreement Available on PowerAdvocate	April 2, 2019
RFP/Bid Documents available	April 2, 2019
Pre-Bid Conference Registration Deadline	April 5, 2019
Pre-Bid Conference	April 9, 2019
Notice of Intent to Bid Due	April 19, 2019
Deadline for Questions from Respondents	May 3, 2019
RFP Response & Proposal Fee Due*	May 24, 2019
Successful Short-List Respondents Notification	TBD
Successful Respondent Notification	TBD
Latest Power Supply / Commercial Operation Date	TBD

* Respondents must note that the RFP response due date is firm. No extensions to the bid process duration as noted above will be offered.

PNM reserves the right to revise, suspend, or terminate this RFP process and any schedule related thereto at its sole discretion without liability to Respondents or any other person or entity.

Communications regarding the status of this RFP process, including any and all changes and addenda to this RFP or attendant schedules, will be made via the PowerAdvocate Sourcing Platform.

5.3 PRE-BID CONFERENCE

5.3.1 Schedule

PNM will host a pre-bid conference and webinar further detailing information requested in the RFP. Preliminary details for the pre-bid conference will be provided on the PowerAdvocate Sourcing Platform. Please check the PowerAdvocate Sourcing Platform for any schedule changes or updates. Interested parties and Respondents are encouraged to participate and provide any questions requiring clarification. Your registration, submitted via the PowerAdvocate Sourcing Platform will be required to assure adequate space and building access security for participants.

Date: **Tuesday, April 9, 2019**

Time:	**10:00 AM – 12:00 PM, Mountain Time**
Where:	**PNM Headquarters Building**
	Conference Room HQ4-East
	414 Silver Ave. SW
	Albuquerque, N.M., 87102
Webinar Details:	To be posted at PowerAdvocate Sourcing Platform

5.4 NOTICE OF INTENT TO RESPOND

In order to identify persons or entities interested in submitting a Proposal, and for those persons or entities to receive any subsequent information distributed in the proposal process, interested parties shall submit via the PowerAdvocate Sourcing Platform a Notice of Intent to Respond on or before 4:00 P.M. Mountain Time on the Notice of Intent to Bid due date. The form is available as Attachment A to this RFP and can be downloaded from the PowerAdvocate Sourcing Platform.

5.5 OWNERSHIP OF BID DOCUMENTS

The Bid Documents, unless otherwise designated, are confidential, are the property of PNM, and are only for the purpose of Respondents' preparing and submitting a Proposal in response to this RFP. In anticipation of a Non-Disclosure Agreement between Respondent and PNM for the Project, no information contained or referred to in the Bid Documents may be disclosed or released except as agreed to in writing by PNM.

5.6 PNM RESERVATION OF RIGHTS AND DISCLAIMERS

Nothing in this RFP constitutes an offer or acceptance by PNM, and PNM hereby disclaims any intent for this RFP to constitute a binding contract between PNM and any Respondent. PNM retains the right to determine, in its sole discretion, the value to PNM and its customers of any or all Proposals. PNM reserves the right to negotiate with a Respondent or Respondents after submission of a Proposal. PNM further reserves the right to negotiate with only those Respondents whose Proposals, as PNM determines in its sole discretion, have a reasonable likelihood of being executed. In the event negotiations with a Respondent or Respondents do not produce a final and fully executed Agreement satisfactory to PNM and authorized by the Commission, without material changes, for inclusion in PNM's resource portfolio, PNM reserves the right to pursue any and all other resource options available to it.

PNM may reject any Proposal that it determines, in its sole discretion:

- Does not meet the minimum requirements set forth in the RFP; or
- Does not provide required information in a manner that allows effective evaluation; or
- Is not economically competitive with other Proposals.

PNM reserves the right, without qualification and in its sole discretion, to modify, suspend or withdraw this RFP, accept or reject any or all Proposals for any reason at any time after submittal without explanation to the Respondent, or to enter into an Agreement at any time with a Respondent who, in the opinion of PNM, will provide the most value to PNM customers. PNM also reserves the right to contract with other than the lowest price

Respondent or with other than the Respondent evidencing the greatest technical ability, if PNM, in its sole discretion, determines that to do so would result in the greatest value to PNM customers.

PNM, in its sole discretion, may decline to enter into an Agreement with any Respondent, and may terminate negotiations with any Respondent, at any time during the process.

Those Respondents who submit Proposals do so without legal recourse against PNM, PNM's parent company or affiliates, and the directors, management, employees, agents or contractors of any of them, due to (1) PNM's rejection, in whole or in part, of the Respondent's Proposal; (2) PNM's rejection, modification, delay or withdrawal, in whole or in part, of this RFP; (3) failure to execute any Agreement; and (4) any other reason arising out of or relating to this RFP. PNM will not be liable to any Respondent or to any other party, in law or equity, for any reason whatsoever relating to PNM's acts or omissions arising out of or in connection with the RFP process.

Respondent will be liable for all of its costs, and PNM will not be responsible for any of Respondent's costs, incurred to prepare, submit, or negotiate its Proposal, a definitive Agreement or any other activity related thereto.

PNM reserves the right, at any time, to establish a minimum and/or maximum amount of energy to be acquired under any Proposal or combination of Proposals.

PART 6 – BID EVALUATION AND CRITERIA

6.1 EVALUATION OF PROPOSALS

The objective of this RFP is to identify and procure the most cost effective energy storage resources to be applied within PNM's energy portfolio.

An initial screening for minimum requirements (See, e.g., Section 3.1 and Part 4) will be performed for each Proposal to determine if all required information has been provided and minimum requirements satisfied. Material deficiencies will disqualify a Proposal from further consideration, and the Respondent will be notified in such event. PNM reserves the right, in its sole discretion, to either reject incomplete or unclear Proposals from further consideration or to contact Respondents for purposes of Proposal clarification, pursuant to Section 4.11 of this RFP.

After the initial Proposal screening, PNM anticipates a two-phase evaluation process in which the Respondents' cost projections, resource characteristics, and other proposed assumptions will be validated.

At the end of the first phase ("Phase One"), a smaller list of Projects will be determined, at which time Respondents may be requested to supply additional information. Unsuccessful Respondents will be notified at the end of the Phase One assessment that their Proposals will not be considered further.

Successful Respondents will be notified via the PowerAdvocate Sourcing Platform that they have passed to the second phase of the process, whereupon an additional evaluation will be conducted ("Phase Two"). Once the successful alternative(s) from that evaluation have been identified, PNM will pursue negotiations to secure resources. Provided the parties successfully negotiate an Agreement for the Project, PNM will then make appropriate filings seeking approval from the Commission based on the negotiated terms of the Agreement(s).

6.1.1 Phase One Evaluation

Proposals that have provided the required data and satisfied the minimum bid requirements will be passed to Phase One of the evaluation. In Phase One, the Proposals will be evaluated

individually for both quality and likelihood of achieving successful commercial operation under the terms proposed. Respondents must include sufficient detail for PNM to be able to evaluate all costs associated with the Proposal(s). Respondents should be aware that the evaluation in Phase One is based on both price and non-price evaluations (which are detailed below).

6.1.1.1 Non-Price Evaluation Process. The following factors will be given consideration in the non-price evaluation process:

A. Respondent creditworthiness, which includes a Respondent's managerial and financial qualifications;

B. Degree of acceptance of PNM's commercial terms;

C. Respondent's environmental, health, and safety history;

D. Respondent's Engineering, Construction, Operating, Environmental, and/or Ownership Team qualifications, as applicable;

E. Commercial viability, maintainability, and maturity of battery storage technology;

F. Resource capacity, efficiency, and environmental footprint;

G. Operational flexibility characteristics of the proposed resource (system latency, ramp rates, frequency response, etc.);

H. Project Engineering Plan

a) Preliminary engineering study describing the battery storage technology and environmental footprint including end of life considerations;

b) Detailed Project critical path schedule identifying all important development elements and their timing; and

c) Identification of the major equipment supplier(s) to be used for the Project.

I. Product and equipment warranty protections;

J. Environmental and Siting Plan

a) Respondent's battery recycling and environmental management program;

b) An environmental assessment of the environmental feasibility for each site, access, and all necessary right of ways (for sites other than PNM-designated sites);

c) A Respondent's Environmental Management System, i.e., how the Respondent handles the environmental risk associated with its operations and the extent Respondent has developed and implemented an Environmental Management System;

d) An environmental milestone schedule addressing all requisite permits including a discussion of interplay with existing permits for EPC Proposals at PNM owned sites; and

e) Detailed description of a water supply plan including a description of fresh water conservation efforts and usage.

K. Electrical Interconnection Path/Plan (for BT Proposals)

a) Assessment of Respondent's transmission capability/deliverability analysis to deliver power to PNM load within WECC Path 48 and how Respondent proposes to address potential transmission constraints ;

b) BT Respondents will be responsible for all transmission arrangements and costs to PNM's load and will assume that PNM has no available long-term, firm transmission rights that may be re-directed or used for this Project.

L. Contribution to PNM's overall system reliability. (i.e. the Project's operational control or lack thereof and its effect on PNM's reliability metrics); and

M. Project development and permitting status, including any potential for delay as the result of a Respondent's need for regulatory actions or approvals or for permitting, licensing or transmission interconnection. and

6.1.1.2 Price Evaluation Process. PNM ranks and scores all Proposals from a cost standpoint. The price screening consists of measuring each Proposal's total cost impact, including:

A. Capital costs and/or capacity costs;

B. Estimated fixed operation and maintenance costs;

C. Estimated variable operation and maintenance costs;

D. Water costs;

E. Transmission costs;

F. Costs of compliance with assumed future regulations or requirements;

G. Other system benefits or costs, including ancillary services;

H. Financial impact to PNM;

I. Any additional costs that are required, but not provided for in the Proposal; and

J. Financial implications of accounting and tax treatment

Proposals are scored and ranked on the basis of the net present value for PNM customers.

6.1.2 Phase Two Evaluation

Following the Phase One evaluation, short-listed Proposals are further evaluated on credit quality, price and non-price factors, including value to PNM and its customers. Each Proposal will be scored using both price and non-price criteria. A Proposal's score from the non-price evaluation will be combined with a price score to produce a ranked "short-list." From the final set of short-listed Proposals, PNM will select the preferred alternative or combination of alternatives.

6.2 CONTRACTUAL CONSIDERATIONS

6.2.1 Credit Quality

Credit quality of the Respondent is an important factor. Execution of a final, definitive Agreement is conditional upon full satisfaction of any PNM credit support requirements. PNM will utilize the lower of the published credit ratings from Standard & Poor's Ratings Group ("S&P") or Moody's Investor Services, Inc. ("Moody's") for long-term senior unsecured debt to determine a Respondent's credit rating. PNM may also consider credit rating by other credit agencies, at its sole discretion. PNM reserves the right to require additional credit standards and to review and evaluate the quality of credit of each Respondent and Credit Support Provider/Guarantor and to make adjustments, as it deems necessary, in the application of the foregoing standards.

6.2.2 Small Business Plans

PNM promotes and encourages diversity in project sourcing and encourages all Respondent's to maximize the use of small businesses, veteran-owned small businesses, service-disabled veteran-owned small businesses, HUBZone small businesses, small disadvantaged businesses, and women-owned small business concerns to the greatest extent practical.

6.2.3 Contractor Safety Prequalification Program

PNM has implemented a Contractor Prequalification process as part of its effort to continuously improve in the areas of health, safety, risk, and finance. Respondents whose Proposals are finalists of this RFP may be required to register with ISNetworld (ISN) auditing at:

https://www.isnetworld.com

so that PNM can review their safety records prior to final award of the contract. PNM will notify all finalists and allow reasonable time for the registration process. ISN registration does not guarantee any specific business will be transacted with PNM. Contractor shall be responsible for all registration related costs.

6.2.4 Insurance

The successful Respondent will be required to maintain, at a minimum, standard insurance coverages for Workers' Compensation; commercial general, employer's and automobile liability; and an umbrella excess liability. Respondents are requested to define the assumed insurances and levels in the Proposal. Specific insurance coverages required by PNM and lenders will be addressed as part of the evaluation and negotiation of the Agreement.

6.2.5 Commercial Terms and Conditions

Commercial terms and conditions will be negotiated with the Respondents whose Proposals are finalists of this RFP. All Proposals will represent a firm offer to contract on the terms and conditions included as Appendices to this RFP. Each representation of fact and promise of future performance within a Proposal will be incorporated into the Agreement as a warranty or covenant. Any statement of fact or promise of future performance that is not intended by the Respondent as a warranty or covenant should be clearly identified.

6.3 AWARD

PNM reserves the right to reject any and all Proposals. Prior to PNM's bid award, PNM may have discussions with Respondents whose Proposals are under consideration. Respondents may be required to travel to PNM's office or other locations for further discussions.

Negotiations arising out of the Proposals may be conducted with any or all Respondents, at PNM's sole discretion. Winning Respondents will be expected to enter into an Agreement within a reasonable period of time following the award of the Proposal. PNM will have no

obligation to accept any Proposal submitted pursuant to this RFP. Whether, and on what terms, any Proposal is accepted is within PNM's sole discretion.

A Proposal will be deemed formally accepted only if and when the Agreement has been executed by a Respondent and delivered to PNM, and PNM has signed it. Until such time, none of PNM, its parent company, its subsidiaries or its other affiliates will have any obligation to any Respondent with respect to a proposed Project, and following such time, the only obligations of PNM will be those set forth in the Agreement. By submitting a Proposal, each Respondent agrees that PNM (i) is under no obligation to consider or accept any Proposals made, (ii) will not be liable to any Respondent for the selection of one Proposal in lieu of another Proposal or combination of Proposals and (iii) will not be liable for any costs incurred by any Respondent in connection with this bid process. By submitting a Proposal, each Respondent agrees to the terms of these Instructions to Bidders and acknowledges that it is relying solely upon its own independent investigation and evaluation of its proposed Project.

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF PUBLIC SERVICE COMPANY OF NEW MEXICO'S CONSOLIDATED APPLICATION FOR APPROVALS FOR THE ABANDONMENT, FINANCING, AND RESOURCE REPLACEMENT FOR SAN JUAN GENERATING STATION PURSUANT TO THE ENERGY TRANSITION ACT	)	**19-_____-UT**

AFFIDAVIT

STATE OF FLORIDA)
) ss
COUNTY OF ORANGE)

ROGER W. NAGEL, Vice President, Power Generation Practice, HDR Engineering Inc., upon being duly sworn according to law, under oath, deposes and states: I have read the foregoing **Direct Testimony of Roger W. Nagel** and it is true and accurate based on my own personal knowledge and belief.

SIGNED this 24th day of June, 2019.

ROGER W. NAGEL

SUBSCRIBED AND SWORN to before me this 24 day of June, 2019.

NOTARY PUBLIC IN AND FOR
THE STATE OF FLORIDA

My Commission Expires:

02/13/2022

LINDA CHRAPCZYNSKI
Commission # GG 185298
Expires February 13, 2022
Bonded Thru Budget Notary Services