

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF THE APPLICATION OF)
ARROYO SOLAR LLC, ARROYO STORAGE)
LLC, AND PUBLIC SERVICE COMPANY)
OF NEW MEXICO FOR EXPEDITED LOCATION)
APPROVAL OF THE PINTADO SWITCHYARD) Case No. 21-_____-UT
IN MCKINLEY COUNTY, NEW MEXICO)
PURSUANT TO NMSA § 62-9-3.)
_____)**

DIRECT TESTIMONY

OF

LAURIE A. WILLIAMS

April 9, 2021

**DIRECT TESTIMONY
OF LAURIE A. WILLIAMS
NMPRC CASE NO. 21-____-UT**

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

2 **A.** My name is Laurie A. Williams. I am employed by Public Service Company of New
3 Mexico (“PNM”) in the capacity of Director, Transmission and Substation Engineering.
4 My business address is 2401 Aztec Road Northeast, Albuquerque, New Mexico. My
5 resume is attached as PNM Exhibit LAW-1.

6
7 **Q. WHAT ARE YOUR RESPONSIBILITIES AS DIRECTOR OF**
8 **TRANSMISSION/DISTRIBUTION PLANNING AND CONTRACTS FOR PNM?**

9 **A.** In my role as Director, Transmission and Substation Engineering, I am responsible for
10 overseeing the evaluation of existing transmission system planning function, analyzing
11 system deficiencies, and creating plans for the capital expansion of the system. I am also
12 responsible for overseeing the administration of the Federal Energy Regulatory
13 Commission (“FERC”) jurisdictional open access transmission tariff, also known as the
14 OATT. This responsibility involves providing transmission delivery services, processing
15 generator interconnection applications, and executing transmission agreements.

16
17 **Q. WHAT IS THIS CASE ABOUT?**

18 **A.** PNM is jointly applying for Location approval of certain PNM facilities associated with
19 the interconnection of generator and storage facilities (“Arroyo Facilities”) owned by
20 Arroyo Solar LLC and Arroyo Storage LLC (together, “Arroyo”) to PNM’s transmission
21 system.

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**Q. HAS THE COMMISSION PREVIOUSLY APPROVED ANY APPLICATIONS
RELATING TO THE ARROYO FACILITIES AND PROJECT?**

A. Yes. In Case No. 19-00195-UT, the Commission selected the Arroyo Facilities as one of the replacement resource projects needed to supply PNM's customers, when the San Juan Generating Station is closed in June of 2022. The Commission directed PNM to enter into long-term supply and storage agreements with Arroyo and those agreements were approved by the Commission in Case No. 20-00182-UT.

Arroyo applied for and received Location approvals associated with the Arroyo Facilities from the New Mexico Public Regulation Commission ("Commission") in Case No. 20-00188-UT. The developer is responsible for obtaining all necessary permits and approvals associated with the construction of the Arroyo Project.

**Q. WHAT OBLIGATION DOES PNM HAVE TO INTERCONNECT THE ARROYO
PROJECT TO ITS SYSTEM?**

A. PNM's FERC approved Open Access Transmission Tariff ("OATT") requires the company to complete the necessary transmission system enhancements and upgrades, including any required network upgrades, to facilitate the interconnection of the Arroyo Facilities to the PNM transmission system. PNM's OATT establishes Large Generator Interconnection Procedures ("LGIP") and the interconnection of the Arroyo Facilities will be accomplished under a Large Generator Interconnection Agreement ("LGIA") as required by the OATT. Pursuant to the OATT, LGIP and LGIA, PNM is required to provide generator interconnection service on a non-discriminatory basis to any eligible

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1 customer such as the Arroyo Facilities that meets the criteria outline in PNM's OATT.
2 PNM is required to use due diligence to implement the interconnection, pursuant to its
3 FERC OATT. PNM and Arroyo are in the process of finalizing and executing the LGIA.
4

5 **Q. WHY IS PNM JOINTLY APPLYING WITH ARROYO FOR LOCATION**
6 **APPROVAL OF THE PNM FACILITIES?**

7 **A.** PNM is jointly applying for Location approval to remove any doubt whether the necessary
8 permits have been obtained for this project. In Arroyo's original application for Location
9 approval, the Recommended Decision accepted the evidence that no Location approvals
10 were necessary for the PNM Facilities to which the Arroyo 300 MW solar project and
11 related energy storage project would interconnect to PNM's transmission system. As
12 indicated in the Rule 440 filing PNM filed with the Commission on April 2, 2022, PNM
13 concurred with the uncontested testimony noted in the Recommended Decision that further
14 Location approvals were not necessary for the PNM Facilities. Although the
15 Commission's final order did not specifically find that Location approval for the
16 Switchyard or other PNM facilities was required, Arroyo thereafter informed PNM that
17 there was a material question on whether Location approvals relating to the PNM facilities
18 should be obtained in order for the Arroyo Project to move forward.

19
20 PNM is jointly pursuing this Application with Arroyo to ensure that the Arroyo Project can
21 be timely completed and brought into commercial service. Although PNM believes that
22 its interconnection facilities do not involve the construction of a new transmission line that
23 falls within the Location statute, PNM is in agreement with Arroyo that the evidence

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1 supports the granting of Location approvals for the PNM facilities to the extent that the
2 Commission determines such approval is necessary or appropriate under the
3 circumstances. If the Commission determines that Location approval is not required under
4 the facts presented in the original Case No. 20-00188-UT application and this Application,
5 PNM believes a summary order to that effect would also provide certainty to Arroyo, PNM,
6 and its customers.

7
8 **Q. WHAT FACILITIES ARE NECESSARY TO INTERCONNECT THE ARROYO**
9 **PROJECT TO PNM'S TRANSMISSION SYSTEM?**

10 **A.** The necessary infrastructure consists of two interconnecting tap lines to an existing PNM
11 transmission line, the tap lines' terminus point and a new substation referred to as the
12 Pintado switchyard (associated "Network Upgrades"). In accordance with the LGIP,
13 Arroyo requested interconnection to PNM's transmission system for the Arroyo Solar LLC
14 300 MW Project and associated 150 MW Arroyo Energy Storage LLC Project
15 (interconnection project not to exceed a total of 300 MW at the Point of Interconnection)
16 and the Arroyo Gen-Tie line (collectively, the "Arroyo Facilities"). The tap lines, Network
17 Upgrades, and the interconnection project facilities have been determined through PNM's
18 FERC-mandated assessments and interconnection studies. The Project is being
19 constructed in the ordinary course of business under PNM's OATT.

20
21 In order to interconnect the Arroyo Project in accordance with PNM's OATT and FERC
22 regulation, PNM must construct certain interconnection facilities. These consist of a 345
23 kV substation or switchyard (the "Pintado Switchyard") in McKinley County, New Mexico

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1 and two line taps to sectionalize PNM's existing 345kV Four Corners-Rio Puerco 345kV
2 transmission line. The location for the Pintado Switchyard is depicted in PNM's 440 filing
3 and as attached to the Direct Testimony of Dustin A. Shively as Arroyo Exhibit DAS-2.

4
5 The fenced-in area of the Pintado Switchyard is 8.7 acres. The switchyard will be sited
6 within a 14.7 acre parcel to be ultimately owned by PNM (the "PNM Property"), shown
7 on Arroyo Exhibit DAS-2, and will connect the Arroyo Project via a tie approximately
8 500-foot from the Switchyard to the Arroyo Substation. Arroyo holds a purchase option
9 on the privately owned land on which the Switchyard will be located, which will ultimately
10 be transferred to PNM. The facilities encompassed within the Pintado Switchyard include
11 the terminus of PNM's tap lines and a short span of PNM's tap lines, and the switchyard
12 facilities including protection and control devices such as breakers and switches as well as
13 communication facilities, steel structures, foundations, and a control building.

14
15 **Q. DO YOU BELIEVE THESE FACILITIES FALL WITHIN THE SAFE HARBOR**
16 **PROVISIONS OF RULE 17.9.592 NMAC?**

17 **A.** Yes. First, PNM is not constructing a new high voltage transmission line, but rather a
18 Switchyard which establishes the interconnection point with the Arroyo Gen-Tie facilities,
19 and two tap lines to complete the interconnection to PNM's existing 345 kV transmission
20 line. The Commission's Rule 592 provides Safe Harbor language that PNM believes
21 reasonably applies to these facilities, based on the nature and physical location of the
22 facilities in relation to: the Arroyo Project for which Location approval has been granted;
23 the existing right-of-way issued by the Bureau of Land Management for the public lands

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1 on which interconnection facilities will be located; and PNM's existing transmission line
2 right-of-way. A copy of the Rule 440 filing which provides a further description of the
3 physical location of the facilities in relation to existing rights-of-way is attached as PNM
4 Exhibit LAW-2.

5
6 **Q. WHEN MUST SWITCHYARD CONSTRUCTION COMMENCE?**

7 A. PNM must commence construction on the Pintado Switchyard by no later than July 1, 2021
8 in order to be completed in time to transmit energy from the Arroyo Project to PNM's
9 existing grid and enable the Arroyo Project to achieve a Commercial Operation Date of
10 June 30, 2022, the retirement date of the San Juan Generating Station. Ideally, PNM
11 construction could begin by May 7, 2021 to meet its original planned construction
12 schedule.

13
14 These compressed time frames are necessary to ensure the Arroyo Project is in place to
15 meet the needs of customers when the San Juan Generating Station closes in June 2022.
16 PNM joins with Arroyo in requesting an expedited final decision by the Commission under
17 the circumstances. PNM therefore requests that a final decision determining no approval
18 is necessary or granting the approvals the Commission deems to be necessary or
19 appropriate under the Location statute, as soon as possible but no later than June 30, 2022.

20
21 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

22 A. Yes.

GCG#527908

Name: Laurie A. Williams

Address: Public Service Company of New Mexico
2401 Aztec Rd. NE
Albuquerque, New Mexico 87107

Position: **Director, Transmission and Substation Engineering**

Education: Bachelor of Science in Electrical Engineering, New Mexico State University, Las Cruces, New Mexico 1992

Master of Business Administration,
University of New Mexico, Albuquerque, New Mexico 2020

Employment: PNM Resources, Inc. and Public Service Company of New Mexico, Albuquerque, New Mexico, 1992-Present

2010 – 2020 Director, Senior Manager, Senior Project Manager – PNMR NERC Reliability Governance

- Managed Internal Compliance Program for PNMR and its utility subsidiaries

2002 – 2010 Senior Planning Engineer – Strategy Planning and Analytics – PNM Integrated Resource Planning

- Performed Integrated Resource Planning and Electric Supply Planning studies including system modeling and simulation studies to identify resource additions to meet long-term reliability needs and prepared annual renewable resource plans

1997-2002 Planning Engineer – Business Development and Special Projects

- Provided various business and engineering analysis, represented PNM in regional independent system operator development – *Desert Star*

1992-1997 Planning Engineer – Transmission Planning

- Provided power flow and stability computer modeling and analysis to support maintenance and expansion of Bulk Power System in New Mexico

Professional Affiliations: Chair, Western Interconnection Compliance Forum, Event Analysis Focus Group (2017-2020)
Member, EEI Reliability Executives Advisory Committee (REAC)
Member, North American Transmission Forum (NATF)
Member, Western Interconnection Compliance Forum (WICF)
Member, Texas Reliability Entity, CIP Working Group (CIPWG)
Chamber of Commerce, Leadership Albuquerque, Class of 2018

Experience: Management professional with 29 years of broad utility experience, progressively responsible technical management positions. Experience in generation and transmission planning and modeling, root cause analysis (RCA) and event analysis, NERC and Regional standards compliance program management, cross-functional experience with engineering, operations, technical maintenance, and regulatory.

Previous Testimony: New Mexico Public Regulation Commission: Provided testimony on behalf of Public Service Company of New Mexico in support of renewable resource procurement. Case No. 06-00340-UT.

GCG#527907

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April 2, 2021

Ms. Melanie Sandoval
Records Bureau Chief
New Mexico Public Regulation
P.O. Box 1269
Santa Fe, NM 875

Subject: NMPRC Rule 440
Filing No. 1253
Arroyo Solar and Arroyo Storage Interconnection Project

Dear Ms. Sandoval,

In compliance with the New Mexico Administrative Code, Title 17 – Public and Utility Services, Chapter 5 – Utility Interconnectivity and Cooperative Agreements, Part 440 – Extensions, Improvements, Additions and Cooperative Agreements between and or Among Utilities, Section 17.5.440.9, Public Service Company of New Mexico (“PNM” or the “Company”) submits the following information.

CHARACTER OF UNDERTAKING

The character of this undertaking is to construct the infrastructure, consisting of two interconnecting tap lines to an existing PNM transmission line, the tap lines’ terminus point and a new substation referred to as the Pintado switchyard (collectively, the “Network Upgrades”), to interconnect a new PNM transmission customer’s generation project. Arroyo Solar, LLC and Arroyo Storage, LLC requested interconnection to PNM’s transmission system for the Arroyo Solar LLC 300 MW Project and associated 150 MW Arroyo Energy Storage LLC Project (interconnection project not to exceed a total of 300 MW at the Point of Interconnection) and the Arroyo Gen-Tie line (collectively, the “Arroyo Facilities”). The resulting Network Upgrades and interconnection project (“Project”) has been determined by PNM’s FERC-mandated assessments and interconnection studies. The Project is being constructed in the ordinary course of business under PNM’s Open Access Transmission Tariff (“OATT”). PNM anticipates that construction will begin no later than May 7, 2021.

A detailed drawing is attached, which provides the location of the Project’s tap lines and switchyard in relation to PNM’s existing transmission line. The tap lines and terminus will be located wholly within a right-of-way granted by the Bureau of Land Management (“BLM”), within or substantially within 1,200 feet of PNM’s existing Four Corners-Rio Puerco 345 kV transmission line right-of-way, and less than 1,200 feet from the Arroyo Facilities which have been granted

Location approval in Case No. 20-00188-UT. The tie-in switchyard that interconnects to the Arroyo Facilities substation will be located on land within or adjacent to an existing right-of-way granted to the Arroyo Facilities from the BLM. The land will ultimately be transferred to PNM for the switchyard.

Safe Harbor Statement

The Project construction is within the Safe Harbor provisions in the Commission's Location Rule. Separate location approval in Section 17.9.592.15.A(5) NMAC of the Location Rule which states that additions to an existing plant or transmission line such as tap lines and their terminus points do not require Location approval under NMSA 1978, § 62-9-3(D), where such additions are within the existing right-of-way or within twelve hundred (1,200) feet of the existing right-of-way not adjacent to a developed residential, commercial or industrial area. The Safe Harbor exemption is based on the physical location of the tap lines within or nearby of the existing PNM right-of-way and is not dependent on the length of the tap lines.

The terminus of the tap lines at the associated Pintado switchyard will also be located within the 1,200-foot zone for the right of way of the BLM right-of-way.

The Pintado switchyard between the tap lines and its terminus and the Arroyo Facilities is partially located within 1,200 feet of the PNM transmission right-of-way and is located within the existing BLM right-of-way or within 1,200 feet of this right-of-way; thus if the Location statute applies to it, then the Safe Harbor exemption also applies to the switchyard. Further, if the switchyard is considered to be an "associated facility" to the tap lines, which do not themselves require location approval pursuant to NMSA 1978, § 62-9-3(D) and Section 17.8.592.15 NMAC, then the associated switchyard does not require location approval.

Please see the attached detailed map that was prepared to demonstrate compliance with the Safe Harbor provisions described above.

PURPOSE SOUGHT TO BE ACCOMPLISHED

The purpose of the Project is to complete the construction of the Network Upgrades that will enable interconnecting the Arroyo Facilities with the existing PNM transmission system. The interconnection will allow the Arroyo Facilities to be interconnected by April 15, 2022, in order to begin serving PNM customers in June 2022, as part of the replacement portfolio for the San Juan Generating Station. The Arroyo Facilities will deliver power to PNM customers pursuant to Commission-approved purchased power and energy storage agreements discussed below. PNM was directed by the Commission in Case No. 19-00195-UT, to enter into long-term power purchase and energy storage agreements with Arroyo Solar LLC and Arroyo Energy Storage LLC as part of the Commission-approved replacement generation portfolio for the San Juan Generating Station. The Commission approved the resulting agreements in Case No. 20-00182-UT. The project developer filed for and was granted approval for the projects pursuant to the Location Statute, NMSA 1978, § 62-6-3, in Case No. 20-00188-UT.

The Project allows PNM to maintain and enhance system reliability by installing equipment necessary to operate its transmission network and generation balancing functions to ensure electric service to PNM customers. It will also comply with various North American Electric Reliability Corporation (“NERC”) and Western Electricity Coordination Council (“WECC”) reliability standards that require the transmission system to be designed to ensure acceptable system performance. Please see Figure 1 for the project location.

MEANS BY WHICH PURPOSE IS INTENDED TO BE REALIZED

Construction of the Project and the Network Upgrades will occur in McKinley County, New Mexico. Arroyo Facilities is in the process of executing a Large Generator Interconnection Agreement (“LGIA”) with PNM, which incorporates all requirements for interconnection of the solar generating facility and the energy storage system to the PNM transmission system. The LGIA includes the cost and construction schedule estimates for the facilities needed to physically and electrically interconnect the Arroyo Facilities to the PNM transmission system. Due to the required timing of the Arroyo Facilities and the construction time necessary for the PNM Project construction, the schedule for this project is of critical importance.

ESTIMATED COST

The Project’s estimated cost is approximately \$32M, including a contribution in aid of construction of \$940,000 equal to the cost of the Transmission Provider’s interconnection Facilities. The Arroyo Facilities will provide the land and have acquired all approvals for rights-of-way for the required interconnection facilities, which will transfer them to PNM at no cost. The Arroyo Network Upgrades’ costs associated with this interconnection will be included in the transmission rate base for both Federal Energy Regulatory Commission (“FERC”) jurisdictional and retail ratemaking purposes. A cost breakdown is provided in the table below:

Project Cost Summary for the Arroyo Solar Project	
Labor	\$568,000
Material	\$12,064,000
Contract Services	\$14,997,000
Transmission Provider’s Interconnection Facility (TPIF)	\$940,000
Other*	\$3,471,000
TOTAL	\$32,040,000

* Contingency, AFUDC, Loads and Taxes

Cost Breakdown Between Transmission Provider's Interconnection Facilities and Network Upgrades	
Transmission Provider's Interconnection Facilities (Note 1)	\$940,000
Network Upgrades (Note 2)	\$31,100,000
Total	\$32,040,000

Note 1: PNM to construct these facilities, however, since these are "Transmission Provider's Interconnection Facilities" Arroyo Solar will not receive reimbursement for the cost of these facilities. Arroyo Solar will fund via payment of monthly invoices from PNM.

Note 2: PNM to construct these facilities and Arroyo Solar will be reimbursed (including interest) for the cost of the facilities. Arroyo Solar will fund via payment of monthly invoices from PNM.

FERC requires that the actual network upgrade portion of the costs be refunded to the interconnection customer by the Transmission Provider, with interest calculated per FERC requirements, either through a repayment, or in the form of credits against monthly-billed invoices for transmission delivery service once the Arroyo Facilities enter commercial operation. The Arroyo Facilities will provide funding for the direct-assigned costs of the Interconnection Facilities and Network upgrades in accordance with FERC regulation and therefore these costs will not be refunded. PNM will own all of the new facilities required to facilitate the interconnection of the Arroyo Facilities to the PNM transmission system and will operate and maintain them.

ENGINEERING AND ECONOMIC FEASIBILITY INFORMATION

The PNM transmission system is planned, designed, and constructed so that line and equipment loading are within applicable rating limits, voltage levels are maintained within applicable limits, and stability of the network is maintained.

1) Interconnection Requirements

PNM is required to complete the necessary transmission system enhancements and upgrades, including any required network upgrades, to facilitate the interconnection to the PNM transmission system, in compliance with PNM's FERC approved OATT, and requirements under the Large Generator Interconnection Procedures ("LGIP"). PNM and the Arroyo Facilities will be filed with FERC, an executed a Large Generator Interconnection Agreement ("LGIA") as required by the OATT. Pursuant to the OATT, LCIP and LGIA, PNM is required to provide generator interconnection service on a non-discriminatory basis to any eligible customer such as the Arroyo Facilities that meets the criteria outline in PNM's OATT. PNM is required to use due diligence to implement the interconnection, pursuant to its FERC OATT.

2) Engineering Considerations

In accordance with PNM's OATT, PNM completed a system impact study that identified the system enhancements and network upgrades required to interconnect the Arroyo Facilities to PNM's transmission system. PNM also completed a subsequent facility study to identify the cost estimates and milestones for the system reinforcements identified in the system impact study.

The required facilities include a new Arroyo 345 kV Switching Station in a 3-breaker ring bus configuration, disconnect switches, and protection and controls, and communications equipment. The Transmission System Network Upgrades, of which a portion are allocated to this project, include Network Upgrades to other existing facilities, including a new PEGS-Yah-ta-hey 115 kV line series reactor, and Rio Puerco Series Capacitor Reduction.

As shown on the attached plans and diagrams, the Project tap lines will be wholly located within 1,200 feet of the existing transmission line right-of-way not adjacent to a developed residential, commercial or industrial area. The terminus point for the tap lines at the associated switchyard will also be located wholly within the 1,200-foot zone of the 345 kV transmission line right-of-way. The tap lines are wholly or substantially within a Bureau of Land Management right-of-way and the switchyard and its tie-in to the Arroyo Solar and Storage Facilities will be located on land adjacent to the Bureau of Land Management right-of-way and less than 1,200 feet from the Arroyo Facilities.

The tap lines themselves do not require rights-of-way greater than 100 feet thus the Commission's right-of-way determination pursuant to NMSA 1978, § 62-9-3.2 is not required.

ALTERNATIVES

Because PNM is required to interconnect the Arroyo Facilities pursuant to FERC requirements from the PNM OATT and the Commission-approved purchased power agreement to purchase energy and storage capacity from the Arroyo Facilities, there are no feasible alternatives. Not building the Project would preclude the Arroyo Facilities from interconnecting with the PNM transmission system. PNM is mandated under FERC regulation to interconnect wholesale generators and associated energy storage systems by providing non-discriminatory interconnection services to qualified customers.

CONCLUSION

PNM's Project information is filed in accordance with the provisions of Rule 17.5.440.9 NMAC and the Safe Harbor provisions of Rule 17.9.592.15.A(5) NMAC. Constructing the Project is consistent with good utility practices and will be built to PNM standards and specifications in order to construct the tap lines necessary to interconnect the Arroyo Facilities with the existing PNM transmission system in accordance with NERC and WECC reliability standards. Interconnection of the Arroyo Facilities to PNM's transmission system is necessary to deliver power to PNM's

customers pursuant to the long-term purchased power and energy storage agreements approved by the Commission in Case Nos. 19-00195-UT and 20-00182-UT and in connection with the Location approval granted the Arroyo Facilities in Case No. 20-00188-UT. The estimated cost is approximately \$32M, and is the least costly and most efficient way to provide the necessary interconnection service to the Arroyo Facilities in accordance with the PNM OATT and LGIA, to maintain good utility practices, and comply with the FERC requirements. The Project has a very critical schedule to maintain following the receipt of the Arroyo Facilities' Location approval, with a targeted start date of May 15, 2021 and a completion date of the transmission interconnection facilities by January 30, 2022, for the LGIA transmission commercial operation date for the generator and storage systems of April 15, 2022.

Please feel free to contact me if you have further questions.

Sincerely,

/s/
Adam J. Alvarez,
Senior Regulatory Project Manager

CGC#527890

cc: Michael Smith, NMPRC General Counsel
Judith Amer, NMPRC Assistant General Counsel
Joan Drake, Counsel for Arroyo Solar LLC and Arroyo Energy Storage LLC
John Bogatko, NMPRC Staff Counsel
John Reynolds, NMPRC Utility Division Director
Jack Sidler, NMPRC Utility Division
Mark Fenton, PNM
Todd Fridley, PNM
Laurie Williams, PNM
Jesus Flores-Olivas, PNM

FORM 2
ELECTRIC EXTENSION OF SERVICE

Name of Utility: Public Service Company of New Mexico (PNM)

County: McKinley

Name/Distance of Nearest Utility: N/A

Starting Date of Project: May 7, 2021

ENGINEERING DATA

Length of Extension: N/A

Voltage: N/A

Phase: N/A

Connection: N/A

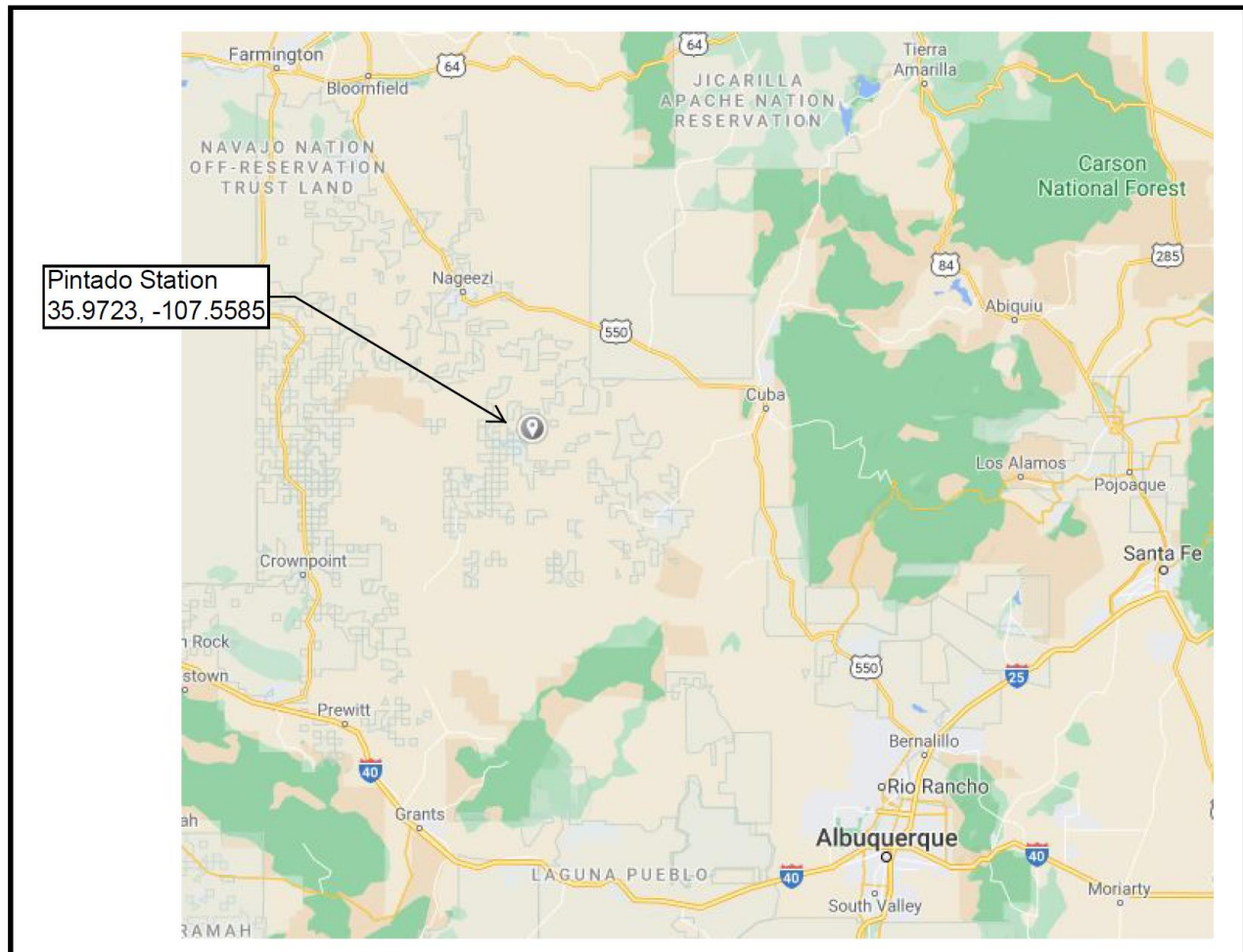
Number of Wires: N/A

COST INFORMATION

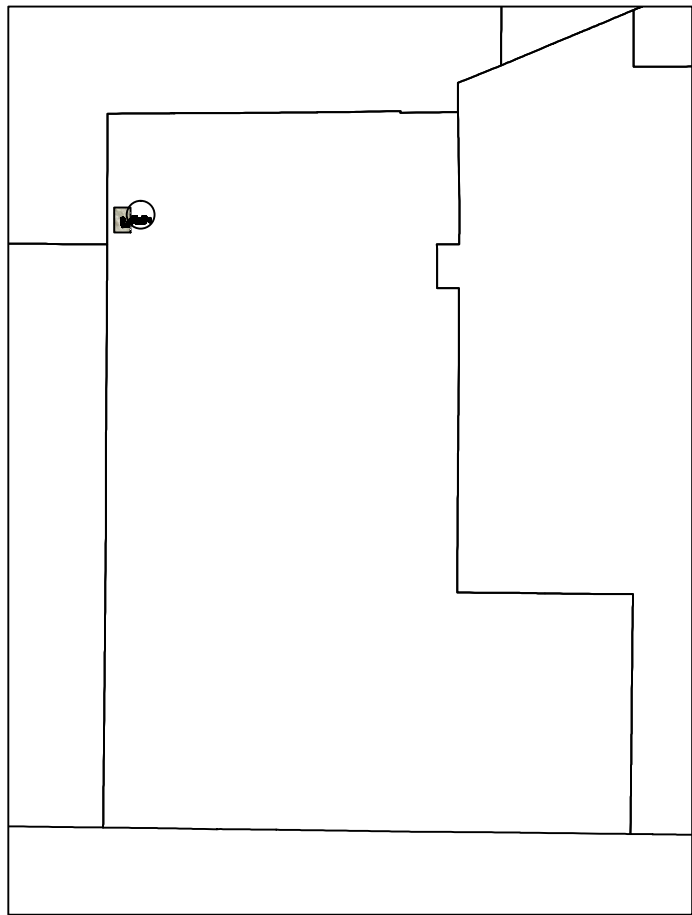
Cost estimate (exclude transformer, service and meter)	<u>\$0</u>
Estimated average monthly consumption	<u>\$0</u>
Estimated annual revenue	<u>\$0</u>
Contribution in aid of construction	<u>\$940,000</u>
Customer advance for construction	<u>\$0</u>
Material, Labor and Equipment Costs	<u>\$28,440,000</u>
Land, Contract and other Miscellaneous Costs	<u>\$0</u>
Overhead costs	<u>\$3,471,000</u>
TOTAL PROJECT COST	<u>\$32,040,000</u>

Location/Description of Project: Construct a new substation adjacent to PNM's FW 345kV transmission line in Northeast McKinley County, NM, northeast of the community of Pueblo Pintado. This substation will interconnect the new Arroyo Solar Energy Center with the existing PNM transmission system. Construction of the Project is expected to begin May of 2021 with an anticipated in-service date of January 21st, 2022.

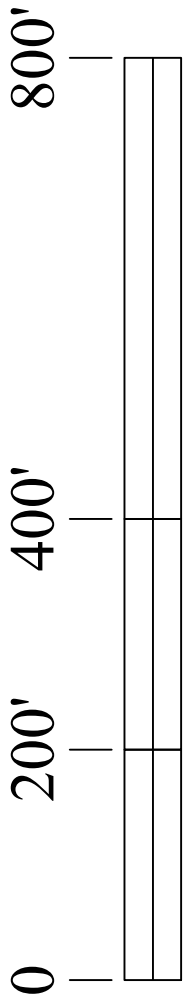
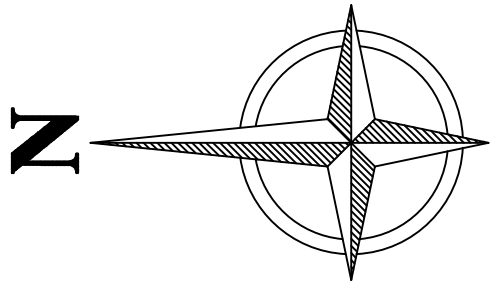
Figure 1



PNM PINTADO SWITCHYARD



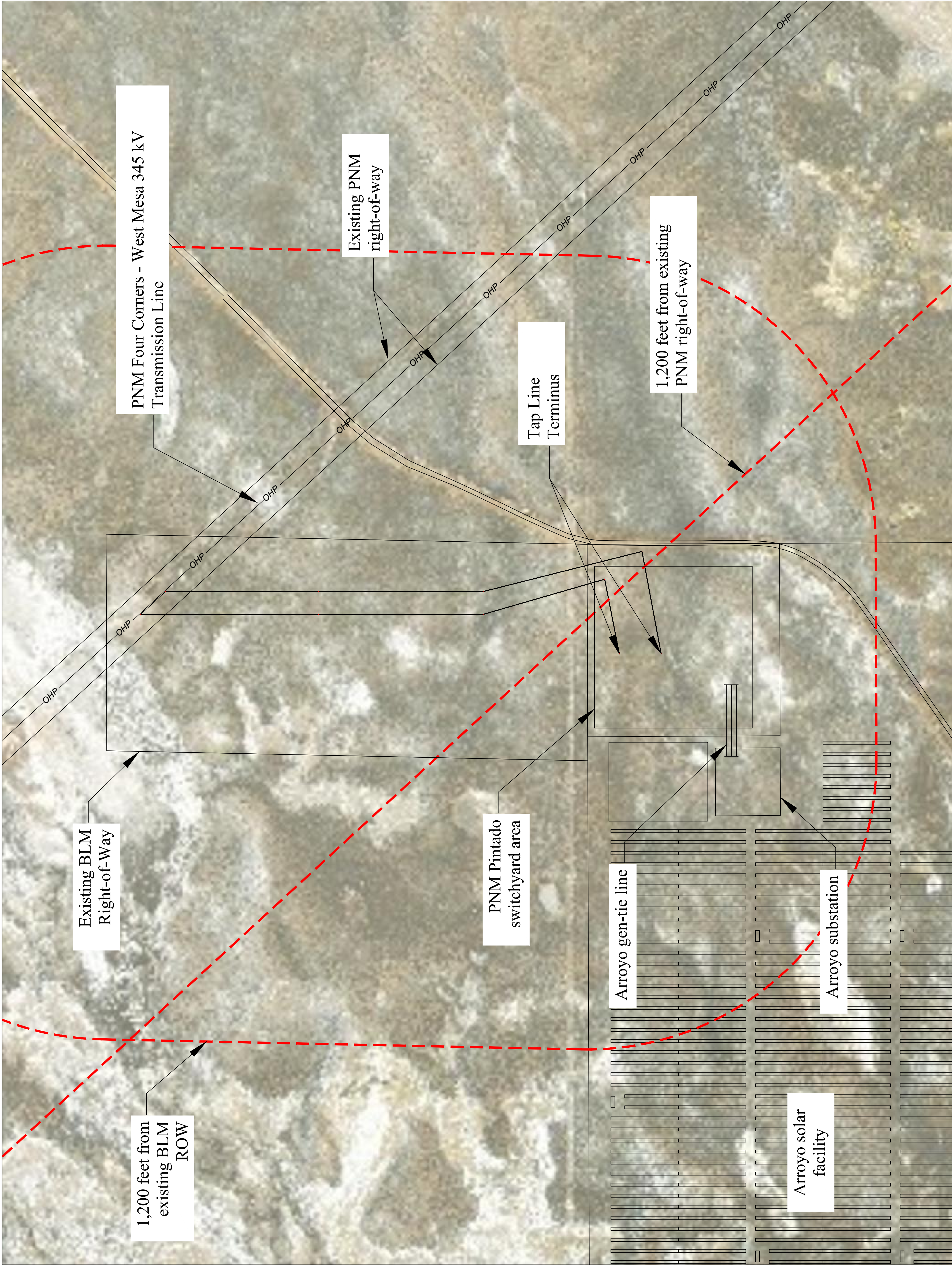
McKinley County, NM
Township 20 North
Range 7 West



NM PRC
440 Filing

ILLUSTRATIVE LAYOUT

PROJECT: Pintado Switchyard
NOTE: Dimensions and orientation are indicative and subject to change



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IN MCKINLEY COUNTY, NEW MEXICO)
PURSUANT TO NMSA § 62-9-3.)
_____)

Case No. 21-_____-UT

SELF AFFIRMATION

LAURIE A. WILLIAMS, Director, Transmission and Substation Engineering, upon penalty of perjury under the laws of the State of New Mexico, affirm and state: I have read the foregoing **Direct Testimony of Laurie A. Williams** and it is true and correct based on my personal knowledge and belief.

GIVEN AND SIGNED this 9th day of April, 2021.

/s/ Laurie A. Williams
LAURIE A. WILLIAMS