

**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 )**

**Case No. 19-00195-UT**

**REBUTTAL TESTIMONY**

**OF**

**ROGER W. NAGEL**

**January 13, 2020**

**NMPRC CASE NO. 19-00195-UT  
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ROGER W. NAGEL**

**WITNESS FOR  
PUBLIC SERVICE COMPANY OF NEW MEXICO**

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AFFIDAVIT

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OF ROGER W. NAGEL  
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**I. INTRODUCTION**

**Q. PLEASE STATE YOUR NAME AND POSITION**

**A.** My name is Roger W. Nagel. I am a Principal for Aion Energy LLC (“Aion”).

**Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS CASE?**

**A.** Yes, I filed direct testimony in this matter on July 1, 2019. At the time I filed my direct testimony I was Vice President for the HDR Engineering Inc. ("HDR") Power Generation Practice.

**Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

**A.** My rebuttal testimony responds to certain of the testimonies filed by intervenors in this matter addressing PNM’s request for proposals (“RFP”) and bid evaluation process. To the extent other intervenors make arguments similar to those that I address in this rebuttal, my testimony is intended to address those arguments as well.

**Q. WHOSE TESTIMONY ARE YOU REBUTTING?**

**A.** I rebut the testimony of the following witnesses, with the following references:

- Tyler Comings and Justin Brant of the Coalition for Clean Affordable Energy (“CCAIE”) regarding battery storage and demand response.
- Sierra Club Witness Michael Goggin and Western Resource Advocates (“WRA”) Witness Patrick O’Connell regarding battery storage, and

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- 1           • Southwest Generation Operating Company, LLC (“SWG”) Witness William  
2           Babcock regarding the RFP process.

3

4   **Q.   WHAT ARE YOUR QUALIFICATIONS TO REBUT THIS TESTIMONY?**

5   **A.**   I am currently a Principal in Aion, which is a company that provides strategic  
6           consulting services to the energy industry. Aion specializes in front-end strategy,  
7           project development and optimization of energy solutions and supports clients by  
8           aligning organizational drivers, achieving development objectives, and providing  
9           market-based guidance. I previously served as a Vice President for HDR. A more  
10          extensive description of my qualifications can be found on pages 1 to 2 of my  
11          direct testimony in this case along with a copy of my resume attached as PNM  
12          Exhibit RWN-1.

13

14   **Q.   WHAT ROLE DOES HDR PLAY IN THE POWER GENERATION**  
15          **INDUSTRY AND HOW DID THAT BENEFIT THE PNM RFP PROCESS?**

16   **A.**   HDR frequently serves as an Owner’s Engineer to the power generation industry.  
17          In this role, HDR is active in numerous RFP processes for generating resources,  
18          project implementation, energy storage resources, and demand side management  
19          opportunities. As an Owner’s Engineer, HDR generally does not bid into these  
20          RFP processes but gains insights into the energy market through receipt,  
21          evaluation, selection, and negotiation of proposals for all forms of resources and  
22          equipment. This broad market knowledge and content was leveraged to inform

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1 and assist PNM in the structuring and execution of the RFP process as well as the  
2 associated decision-making process.

3  
4 **II. RESPONSE TO TESTIMONY ON DEMAND RESPONSE**

5 **Q. SEVERAL INTERVENOR WITNESSES, INCLUDING SIERRA CLUB**  
6 **WITNESS MICHAEL GOGGIN (AT PAGES 33-34), WRA WITNESS**  
7 **PATRICK O’CONNELL (AT PAGE 18), AND CCAE WITNESSES TYLER**  
8 **COMINGS (AT PAGE 14) AND JUSTIN BRANT (AT PAGES 8-9) STATE**  
9 **THAT DEMAND RESPONSE SHOULD HAVE BEEN INCLUDED IN**  
10 **THE RFP. HOW DO YOU RESPOND?**

11 **A.** The RFP was an all source RFP and did not specifically preclude demand  
12 response proposals. PNM would have evaluated these options had they been  
13 offered.

14  
15 **Q. BASED ON YOUR INDUSTRY KNOWLEDGE, ARE DEMAND**  
16 **RESPONSE PROPOSALS TYPICALLY PART OF AN ALL SOURCE**  
17 **REQUEST FOR NEW RESOURCES?**

18 **A.** Based upon my experience, they typically are not.

19  
20 **Q. HOW ARE DEMAND RESPONSE AND ENERGY EFFICIENCY**  
21 **OPPORTUNITIES TYPICALLY CONSIDERED?**



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1 **Q. SEVERAL PARTIES, INCLUDING CCAE, ADVOCATE FOR THE RE-**  
2 **ISSUANCE OF THE SOLICITATION FOR BATTERY STORAGE AND**  
3 **THE ALLOWANCE OF ENERGY STORAGE AGREEMENTS. DO YOU**  
4 **BELIEVE SUCH A SOLICITATION WOULD MAKE A MATERIAL**  
5 **DIFFERENCE IN PNM'S SELECTED SCENARIOS?**

6 **A.** No. The bids received in response to the all source RFP and the supplemental  
7 Energy Storage RFP are representative of the offerings available in the  
8 marketplace and consistent with more recent bids in another RFP with which I am  
9 familiar. The results from the original RFP issued in October 2017 and the  
10 supplemental Energy Storage RFP in April 2019 did not suggest a significant shift  
11 in energy storage pricing that would materially change the selected scenarios.  
12 Furthermore, the shortlisted, stand-alone energy storage agreement bids received  
13 from the original RFP were competitively refreshed by the bidders in August  
14 2018 and compared to the supplemental Energy Storage RFP results.

15  
16 **Q. DO BID PRICES GENERALLY REFLECT THE IN-SERVICE DATES OF**  
17 **PROJECTS?**

18 **A.** Yes. I believe that the bids received accounted for the point in time at which the  
19 projects would be on-line. I would expect a predominant driver for pricing to be  
20 the in-service date of the project. Therefore, because PNM's service date remains  
21 unchanged, I would not expect to see material pricing revisions in a new RFP.

22

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1   **Q.    WRA WITNESS O’CONNELL ON PAGE 27 OF HIS TESTIMONY**  
2           **STATES THAT PNM SOLICITED ONLY TURN-KEY PROPOSALS FOR**  
3           **ITS STAND-ALONE BATTERY PROJECTS. HE ALSO STATES THAT**  
4           **MOST OF THE STAND-ALONE BIDDERS IN THE RFP THAT**  
5           **PRODUCED ALL OF THE OTHER PROJECTS PROPOSED IN THIS**  
6           **CASE WERE DISQUALIFIED DUE TO NEW MEXICO CONTRACTOR**  
7           **LICENSING RULES. DO YOU AGREE WITH THESE STATEMENTS?**

8   **A.**    No. The original all source RFP resulted in a total of 50 stand-alone energy  
9           storage agreement (PPA or ESA) proposals not involving PNM ownership that  
10          were not disqualified for New Mexico contractor licensing rules. Six of these  
11          projects were shortlisted and ultimately evaluated on a competitive basis together  
12          with the EPC project(s) shortlisted from both the original all source RFP and the  
13          supplemental Energy Storage RFP. The evaluation of these shortlisted ESA  
14          proposals was based upon refreshed pricing received from these bidders in August  
15          2018. Contrary to the apparent belief of some intervenors PNM did not evaluate  
16          only bids received from the supplemental RFP.

17

18           **IV.    RESPONSE TO SWG WITNESS BABCOCK’S TESTIMONY ABOUT**  
19                           **PNM’S RFP**

20   **Q.    SWG WITNESS BABCOCK, AT PAGES 17 – 19, STATES THAT PNM**  
21           **SHOULD HAVE EXPANDED THE ELIGIBLE RESOURCES FOR SJGS**  
22           **REPLACEMENT RESOURCES AFTER THE ENERGY TRANSITION**  
23           **ACT WAS PASSED. DO YOU AGREE?**



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1   **A.**    No. The responses received in response to the original 2017 RFP provided a wide  
2           variety of generation and storage resources that could fulfill the requirements of  
3           the Energy Transition Act. These proposals encompassed resources available in  
4           the marketplace, could fulfill renewable portfolio standard requirements, offered  
5           varying environmental impacts, offered projects within the county of the  
6           qualifying generating facility, and could contribute to PNM’s goal of being 100%  
7           carbon free by 2040.

8

9   **Q.**    **SWG WITNESS BABCOCK SPECIFICALLY STATES, AT PAGE 34,**  
10           **THAT SHORTER-TERM RESOURCES SHOULD HAVE BEEN**  
11           **INCLUDED IN THE RFP, SUCH AS PPAS WITH LESS THAN A 20-**  
12           **YEAR TERM. WOULD THAT HAVE BEEN A GOOD APPROACH?**

13   **A.**    As a basis of the all source RFP, PNM desired to secure long-term resources that  
14           could provide surety of system service and reliability as well as cost certainty for  
15           its customers for an extended period of time while also serving as a first phase to  
16           achieving a planned energy transition into the future. PNM did receive a shorter-  
17           term bid which it evaluated and found to be uneconomic. While shorter-term  
18           resources could possibly provide the opportunity to allow evolution of  
19           technologies for future energy sourcing, they also bring uncertainty associated  
20           with replacement resources and the planned energy transition in future years.  
21           PNM Witnesses Fallgren, Phillips, Duane, and Maestas further address this  
22           concern and the short-term resources noted by SWG Witness Babcock in their  
23           rebuttal testimony.

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1 **Q. SWG WITNESS BABCOCK SEEMS TO SUGGEST, AT PAGES 40 – 42**  
2 **OF HIS TESTIMONY, THAT PNM’S RFP PREFERRED PROPOSALS**  
3 **FOR RESOURCES THAT WOULD BE OWNED BY PNM. DO YOU**  
4 **AGREE?**

5 **A.** No. PNM’s RFP was intended to encourage participation from a wide variety of  
6 technologies, developers, owners and contractors. The indicated perception that  
7 the RFP process “preferred proposals for resources that would be owned by  
8 PNM” is incorrect. The evaluation process and evaluation metrics were  
9 established to equally and fairly compare all types of proposals as represented by  
10 the wide variety of projects that were carried into the shortlist for further  
11 evaluation via portfolio modeling. The “best in class” proposals for each resource  
12 type were selected if they provided the lowest total evaluated delivered cost of  
13 energy and presented the lowest risk to the timely and successful execution of the  
14 project, as discussed in my Direct Testimony. The “best in class” shortlist  
15 included 35 proposals that did not involve PNM ownership and 16 proposals that  
16 did. The bid information was available for review and analysis by the parties. No  
17 party has shown that PNM selected non-competitively priced bids.

18

19 **Q. SWG WITNESS BABCOCK STATES AT PAGES 41 – 42 OF HIS**  
20 **TESTIMONY THAT IT IS UNFAIR FOR PNM TO RESTRICT THE USE**  
21 **OF PNM’S SITES TO PNM-OWNED ASSETS. DO YOU AGREE?**

22 **A.** No. SWG’s Witness inference that utility owned property should be made  
23 available to third parties is contrary to typical industry practice. The fact that

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1 PNM did not offer its owned sites for PPA or Build-Transfer proposals is based  
2 upon the uncertainty regarding ongoing property ownership and liabilities as well  
3 as the associated risk of liabilities (health, safety, environmental, or other)  
4 resulting from a third-party owner/operator on a PNM-controlled site. This  
5 limitation on property use is a commonly applied limitation for utility RFP  
6 processes and protects the utilities from future risk and liability beyond their  
7 control. Utility-controlled sites are the subject of NERC and WECC security  
8 requirements. Having multiple owners on a single site greatly complicates  
9 adherence to these requirements.

10  
11 **Q. SWG WITNESS BABCOCK SEEMS TO SUGGEST, AT PAGE 43 OF HIS**  
12 **TESTIMONY, THAT IT IS UNFAIR FOR PNM TO REQUEST FIRM**  
13 **PRICING THROUGH A BID VALIDITY DATE WITHIN THE RFP BID**  
14 **PERIOD. DO YOU AGREE?**

15 **A.** No. An RFP evaluation process cannot reliably be performed based upon  
16 indicative pricing that may significantly change over time or during a contract  
17 negotiation. Furthermore, the 97-day bid period duration is very consistent with  
18 other utility all-source RFP bid period durations. The original bid evaluation was  
19 performed on the pricing submitted in response to the RFP on January 30, 2018.  
20 As SWG Witness Babcock notes, PNM indicated that “on selected bids PNM may  
21 ask for any price updates.” This was, in fact, the process that PNM executed; once  
22 the shortlist was established, PNM requested pricing updates from all of the  
23 shortlisted bidders in August 2018, while still in a competitive environment, in an

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1 effort to obtain any more favorable, updated pricing that could benefit PNM's  
2 customers.

3  
4 In addition, PNM continued to evaluate all submitted bids beyond the screening  
5 for minimum bid requirements to ensure a low-cost opportunity was not missed  
6 for customers even if a bid technically did not meet the RFP requirements. The  
7 project cited by SWG Witness Babcock as being "indicative" was evaluated and  
8 determined to be not economical.

9

10 **Q. SWG WITNESS BABCOCK EXPRESSES A NUMBER OF CONCERNS**  
11 **ON PAGE 32 OF HIS TESTIMONY REGARDING THE PERIOD OF**  
12 **TIME FROM RECEIPT OF RFP RESPONSES TO PROJECT**  
13 **SELECTION AND FILING FOR REGULATORY APPROVAL. DO HIS**  
14 **CONCERNS HAVE MERIT?**

15 **A.** No. The RFP process resulted in the submittal of initial proposals in January  
16 2018 utilized for shortlisting the bids, a price refresh of the shortlisted bids in  
17 August 2018 under a competitive situation to refresh the pricing and scope, and  
18 ongoing negotiations through June 2019. This process was intended to allow for a  
19 thorough evaluation of all proposals received while also keeping the proposals  
20 current and competitive. Given the quantity of bids received and the complexity  
21 of evaluating technologies of all types as compared to more simplified, historical  
22 RFP processes focused on limited resource types, this period of time was prudent  
23 to thoroughly assess and determine the most beneficial portfolio solutions.

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1           Regarding the federal tax credit benefits, for the selected PNM Scenario 1  
2           projects, PNM has satisfied all bidder-requested commitments to maintain the  
3           validity of the federal tax credits assumed within their proposals. PNM Witness  
4           Fallgren addresses these concerns in more detail in his rebuttal testimony, but I  
5           disagree that our process to identify and select resources was flawed.

6

7   **Q.   DID PNM PROVIDE ANY DIRECTION THAT WOULD HAVE**  
8   **UNFAIRLY RESTRICTED THE EVALUATION OF THE BIDS?**

9   **A.**   No. On the contrary, in my opinion, PNM took a very conservative approach to  
10          retaining bid options throughout the process to the extent possible. Even though  
11          several of the bids could technically have been excluded for not complying with  
12          RFP guidance, PNM insisted that the team complete a full evaluation of each bid  
13          and allow the shortlisted bids to be refreshed to ensure that the low-cost resources  
14          were selected. The bid evaluation spreadsheets and ranking matrices provided in  
15          discovery to Interrogatories WRA 1-12 and 1-13 represent the extensive  
16          consideration of each bid. As can be noted in the evaluation spreadsheets, over  
17          100 columns of proposal data were reviewed and evaluated for each of the 390  
18          bids received. The specifics of the data evaluated are further described in my  
19          Direct Testimony.

20

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1

**V. CONCLUSION**

2 **Q. WHAT IS YOUR OPINION OF PNM'S RFP PROCESS BASED ON**  
3 **COMPARISONS WITH OTHER LARGE UTILITY ALL-SOURCE RFPs?**

4 **A.** PNM's RFP process resulted in 390 viable and high-quality proposals of varying  
5 ownership structures, technology approaches, locations, sizes, and financial  
6 approaches. The results of the RFP provided a variety of low-cost, industry  
7 competitive alternatives that represent the current state of the energy marketplace,  
8 could fulfill the intent of the Energy Transition Act, and are consistent with the  
9 results of other large utility all-source RFPs. PNM's RFP process involved an  
10 exhaustive analysis of the proposals that was transparent, reasonable and fair and  
11 was accommodating to the range of proposals received in an effort to consider the  
12 potential for lowest cost resources.

13

14 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

15 **A.** Yes, it does.

GCG#526583

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**AFFIDAVIT**

STATE OF FLORIDA )  
 ) ss  
COUNTY OF ORANGE )

**ROGER W. NAGEL, Principal, Aion Energy, LLC**, upon being duly sworn according to law, under oath, deposes and states: I have read the foregoing **Rebuttal Testimony of Roger W. Nagel** and it is true and accurate based on my own personal knowledge and belief.

SIGNED this 22<sup>nd</sup> day of December, 2019.

Roger W. Nagel  
**ROGER W. NAGEL**

**SUBSCRIBED AND SWORN** to before me this 22<sup>nd</sup> day of December, 2019.

Swati Modha  
**NOTARY PUBLIC IN AND FOR  
THE STATE OF FLORIDA**

My Commission Expires:  
March 20, 2022

