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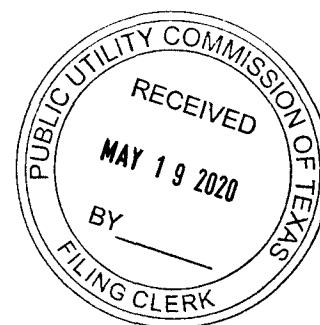


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**APPLICATION OF EL PASO
ELECTRIC COMPANY TO AMEND
ITS CERTIFICATE OF
CONVENIENCE AND NECESSITY
FOR AN ADDITIONAL GENERATING
UNIT AT THE NEWMAN
GENERATING STATION IN EL PASO
COUNTY AND THE CITY OF
EL PASO**

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BEFORE THE STATE OFFICE

OF

ADMINISTRATIVE HEARINGS

REBUTTAL TESTIMONY

OF

OMAR GALLEGOS

FOR

EL PASO ELECTRIC COMPANY

MAY 2020

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I. Introduction

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Omar Gallegos. My business address is 100 North Stanton Street, El Paso, Texas, 79901.

Q. ARE YOU THE SAME OMAR GALLEGOS WHO PREVIOUSLY FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

II. Purpose of Rebuttal Testimony

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. The purpose of my rebuttal testimony is to respond to City of El Paso witness Scott Norwood's direct testimony filed in this proceeding.

III. Mr. Norwood's General Arguments

Q. MR. NORWOOD CLAIMS AT PAGES 20 THROUGH 21 OF HIS DIRECT TESTIMONY THAT EL PASO ELECTRIC COMPANY ("EPE") HAS NOT DEMONSTRATED THAT NEWMAN 6 WAS THE LOWEST REASONABLE COST RESOURCE AVAILABLE AT THE TIME THE COMPANY SELECTED THE PROJECT IN DECEMBER OF 2018. DO YOU AGREE?

A. No, I do not agree.

It is important to recall that, although EPE is seeking approval only of Newman Unit 6 in this case, EPE selected a portfolio of resources through its 2017 Request for Proposal ("RFP") process that I and Wayne Oliver address in our direct testimonies. Newman Unit 6 is just one resource in that portfolio and was evaluated along with the others on an integrated system-wide, and not a stand-alone, basis. By focusing on only one resource from that portfolio, Mr. Norwood's analysis adopts a limited perspective, compared with how the evaluation was actually performed, and his criticisms are therefore misplaced. Newman Unit 6 and the other selected resources were the lowest cost portfolio

1 that met the objectives of providing reliable firm capacity to customers and prudent utility
2 planning.

3 As another example of his limited perspective, Mr. Norwood claims at page 18 of
4 his direct testimony that EPE did not consider that peak load only occurs for a small
5 percentage of hours. First, EPE, in accordance with acceptable industry standards, is
6 obligated to plan to reliably meet customer peak load regardless of the number of hours the
7 peak occurs. EPE's previous generation CCN cases (for Newman Unit 5, Rio Grande
8 Unit 9, Montana Units 1 and 2, and Montana Units 3 and 4), that the City of El Paso
9 participated in, were based on the same premise and concept of how to analyze the need
10 for generation capacity and considered other resource options like demand side
11 management. The RFP was an all-source RFP, open to all resource options, including
12 demand side options, and EPE evaluated all submitted proposals to determine the best
13 options to pursue.

14 Second, the full value and purpose of the portfolio selection, which includes solar
15 and battery storage, is perfectly illustrated by the exact point that Mr. Norwood describes.
16 The battery storage offers capacity to meet the highest of load levels during peak days.
17 Collectively, the portfolio of resources, Newman Unit 6 together with solar and battery
18 storage, is designed to reliably meet peak loads at the lowest reasonable cost, as I described
19 above.

20 Last, EPE undertook a thorough and lengthy RFP process to achieve a reasonable
21 outcome, assisted by outside help from Mr. Oliver, National Renewable Energy Laboratory
22 ("NREL"), and Energy+Environmental Economics ("E3"). EPE contracted with
23 Mr. Oliver early in the RFP process, and Mr. Oliver participated from development of the
24 RFP prior to issuance through the selection process to ensure the fair and impartial process
25 described in my Direct Testimony on pages 16 through 17. EPE solicited NREL's
26 assistance to assess solar variability in order to reliably integrate higher amounts of solar
27 resources and reliably meet peak loads. Further, EPE solicited E3's help to separately
28 assess the RFP selection with their own methodologies and tools to ensure EPE's
29 methodologies resulted in an appropriate resource selection and were not biased against
30 renewable resources. This process was comprehensive and assessed not only cost, but also
31 the provision of safe and reliable service to our customers.

1 In summary, EPE's robust RFP evaluation and selection process, assisted by
2 outside experts, resulted in the selection of the lowest cost resource portfolio that met its
3 operating requirements, and that portfolio included Newman Unit 6.

4
5 Q. MR. NORWOOD CLAIMS AT PAGES 13 THROUGH 14 OF HIS DIRECT
6 TESTIMONY THAT EPE DOES NOT NEED TO ADD NEWMAN UNIT 6 BY 2023 TO
7 PROVIDE RELIABLE AND ADEQUATE SERVICE TO ITS TEXAS CUSTOMERS.
8 WHAT IS YOUR RESPONSE?

9 A. I disagree with Mr. Norwood and his wait-and-see approach (on the COVID-19 pandemic).
10 Specifically, Mr. Norwood claims that, instead of adding Newman Unit 6, EPE can simply
11 postpone the retirement of Rio Grande Units 6 and 7 and Newman Units 1 and 2 and
12 supplement any shortfalls with short-term purchases to meet its resource requirements. As
13 conveyed on page 14 in my Direct Testimony, Rio Grande Units 6 and 7 and Newman
14 Units 1 and 2 are well past their useful lives and beyond the average industry age of
15 retirement age of 40 to 50 years.

16 EPE hired Burns and McDonnell ("BMcD") as part of its 2018 Integrated Resource
17 Plan ("IRP") process to assess the conditions of Rio Grande Units 6 and 7 and Newman
18 Units 1 and 2 and to estimate the cost to extend their retirements by 5 years and 15 years.
19 Strategist runs of the 5-year and 15-year extensions resulted in neither option being selected
20 as the top portfolio. However, the 15-year extensions were present within the top
21 4,000 portfolios. Given this, EPE included the 15-year extensions for all four units
22 (Rio Grande Units 6-7 and Newman Units 1-2) in the Strategist runs for the 2017 RFP
23 selection in direct competition with new resource additions. As explained on page 12 of
24 my Direct Testimony, the analysis indicated that the selected resource portfolio including
25 Newman Unit 6 was the lowest reasonable cost option for providing reliable service to
26 customers. The generation unit life extensions that Mr. Norwood recommends were not
27 part of that portfolio.

28 EPE witness David Hawkins further addresses in his rebuttal testimony the current
29 state of the units planned for retirement and why continuing to run the units without any
30 investment is not viable. Simply delaying the retirement of the units is not an option to

eliminate the need for additional generation capacity to meet customers' needs as Mr. Norwood suggests.

Q. IS RIO GRANDE UNIT 6 A REASONABLE CANDIDATE FOR LIFE EXTENSION, AS MR. NORWOOD ASSUMES?

A. No, it is not. Rio Grande Unit 6 is EPE's oldest unit, was commissioned in 1957, and was originally scheduled for retirement in 2007. EPE was able to extend its retirement until 2014, and since then it has been in inactive reserve status with minimal maintenance as required to operate the unit and only utilized to support responses to contingencies such as forced outages. Rio Grande Unit 6 has not been used since November 2018 and could not be utilized as a dependable resource without making significant investment. As it did with the other three retirement units, EPE contracted with BMcD to analyze the cost of refurbishing Rio Grande Unit 6, and EPE also analyzed this refurbishment within Strategist as part of the 2017 RFP evaluation. As with the other three units, refurbishment and life extension of Rio Grande Unit 6 was not cost effective. In addition to cost-effectiveness, Rio Grande Unit 6 lacks the latest, best available pollutions controls, which Newman Unit 6 will have.

Q. DOES MR. NORWOOD PRESENT ANY ANALYSIS THAT HIS PROPOSAL TO EXTEND THE LIVES OF THOSE GENERATING UNITS AND TO PURCHASE SHORT-TERM RESOURCES IS THE LOWEST REASONABLE COST OPTION?

A. No. Not only is his proposal to delay retirements and increase short-term purchases not viable, he also provides no analysis whatsoever of the costs of his proposal.

Q. DO YOU AGREE WITH MR. NORWOOD THAT IMPACT OF COVID-19 MAY ELIMINATE THE NEED FOR NEWMAN UNIT 6?

A. No. EPE witness George Novela in his rebuttal testimony addresses the topic of COVID-19 as it relates to the load forecast. I address the topic of resource need.

It is important to recall that Newman Unit 6 is necessary to replace the capacity of the three planned unit retirements described above in addition to being necessary for load growth. Analysis of loads versus resource balance with three load scenarios is illustrated

1 in Exhibit OG-01-R. Exhibit OG-01-R is based on the 2019 Loads and Resources (“L&R”)
2 table in Exhibit OG-04 from my Direct Testimony with the exception of updating the 2020
3 load forecast, distributed generation growth, and energy efficiency. Load is projected with
4 three trend lines of 2020 load forecast baseline, 50% growth reduction, and zero load
5 growth. As indicated in Exhibit OG-01-R, once the three units are retired, EPE is deficient
6 in resources to meet load projections. This is exacerbated in 2026 when additional
7 retirements are planned to take effect. Moreover, the only scenarios where EPE is not
8 deficient is in the zero load growth or 50% growth reduction scenarios, which, as described
9 by EPE witness Novela, are not in line with previous economic downturns.

10 Furthermore, the New Mexico Public Regulatory Commission recently denied
11 approval of the 50-megawatts (“MW”) stand-alone battery for 2023, which EPE witness
12 Schichtl discusses in his rebuttal testimony. While EPE has not determined the next steps
13 for the 50-MW stand-alone battery, Exhibit OG-02-R shows the same loads and resources
14 table as in Exhibit OG-01-R, less the 50-MW battery storage project. As Exhibit OG-02-R
15 shows, the only scenario in which EPE is not deficient is in the zero load growth scenario,
16 which again, and as testified to by EPE witness Novela, is not a scenario supported by
17 history.

18 19 **IV. Capacity Value of Solar Resources**

20 Q. ON PAGES 17 THROUGH 18 OF HIS DIRECT TESTIMONY, MR. NORWOOD
21 EXPRESSES CONCERN THAT EPE ASSIGNED TO NEW SOLAR PPAs A
22 CAPACITY VALUE OF 25% OF THE NAMEPLATE CAPACITY RATING. WHY IS
23 A VALUE OF 25% REASONABLE, AS OPPOSED TO A SIGNIFICANTLY HIGHER
24 VALUE?

25 A. A 25% capacity value for solar resources (reflected in the 2019 L&R planning table) is
26 warranted based on the information that EPE collected on actual performance of its solar
27 resources in 2016, the NREL analysis, and reliability concerns. Adopting a significantly
28 higher value, as Mr. Norwood appears to suggest, would mean that fewer solar resources
29 could thus be acquired to meet the same capacity need, but reliability could suffer, as I
30 explain below.

1 As EPE progresses into higher levels of renewable resource integration, for
2 reliability reasons it is necessary to assess the appropriate contribution to peak demand
3 value for solar resources. As more solar is added to the resource mix and thus to the L&R
4 planning table, there is higher dependency on the solar resources to be available during
5 peak hour to meet load. Mr. Norwood's comparison to the Electric Reliability Council of
6 Texas's ("ERCOT") current use of a 76% rated capacity, for instance, fails to recognize
7 the difference in magnitude of solar as a percentage of resources that EPE faces compared
8 to ERCOT. His Exhibit SN-5 shows 1,728 MW of solar capacity in ERCOT out of the
9 total 82,417 MW of resources, or 2% of the system capacity. With the additional solar
10 resources selected by EPE, solar will represent, at nameplate rating, approximately 13% of
11 EPE's resources. ERCOT does not have nearly the same saturation of solar that EPE is
12 planning to add.

13 Because solar resources are not dispatchable and their output is reduced by clouds
14 and eliminated at sundown, a different planning approach is necessary for reliability than
15 for more conventional dispatchable generation such as gas-fired resources. The following
16 is an effective illustration of the importance of addressing this subject for reliability and is
17 more easily done through an example with assumed amounts.

18 Assume we are presently operating with 100 MW of solar on the system. The
19 average output of solar during the peak hour is calculated to be 70 percent based on actual
20 data. So, we are expecting to receive 70 MW from solar on a peak day. If the solar output
21 dropped to approximately 30 MW on a peak day due to cloud coverage (as EPE has
22 experienced), EPE would be short approximately 40 MW ($70 - 30 = 40$). The shortfall of
23 40 MW would not be a significant amount and could probably be replaced by increasing
24 gas generation. It is correct that the shortfall is not significantly large, but it does utilize
25 reserves.

26 Now, let's assume we add 300 MW of solar and walk through the same calculation.
27 In adding 300 MW of solar, we are now at 400 MW of solar on the system. The average
28 output of solar expected during peak hour is calculated to be 280 MW ($70\% \times 400 = 280$).
29 EPE is expecting to receive 280 MW from solar on a peak day. However, now assume a
30 similarly cloudy day and that output drops to 30%. Now, with EPE receiving only 120 MW
31 of solar ($30\% \times 400 \text{ MW}$), EPE is short approximately 160 MW ($280 - 120 = 160$). The

1 shortfall of 160 MW is significant and would basically require EPE to bring online two of
2 its combustion turbines rated at about 88 MW each. Suddenly, the shortfall is much larger
3 and utilizing more than half of the planning reserve margin that is intended to be available
4 in case of generation forced outages, transmission forced outages, or greater than
5 forecasted load levels. The 15% reserve margin did not include the variability of higher
6 amounts of solar generation.

7 The variability analysis for solar output through EPE's peak months is consistent
8 with the fact that EPE (unlike most of ERCOT) is subject to seasonal monsoon weather
9 patterns during our peak load months when clouds roll in or develop in the late afternoon
10 for EPE's peak load hours. EPE's actual data showed solar output dropping below 40%
11 output during four of the top ten load hours and below 30% for two of those hours.

12 EPE needs to plan to reliably meet peak load hours, and Mr. Norwood's apparent
13 endorsement of a solar capacity value far in excess of 25% would not help achieve that
14 objective. With the above in mind, EPE credited new solar with a 25% contribution to
15 peak and maintained its existing 115 MW of solar at 70% credit to peak. The weighted
16 average for solar is 37.5% contribution to peak with 115 MW at 70% and 300 MW at 25%.
17 It is a common industry practice to treat increasing levels of solar as having a declining
18 contribution to peak as the net peak load shifts towards sunset when stand-alone solar is no
19 longer able to support serving load. EPE believes this is a reasonable value and reliable
20 assessment. EPE witness Wayne Oliver addresses this industry practice for declining solar
21 contribution to peak in his rebuttal testimony.

22 23 **V. The Foreseeability of Carbon Restrictions**

24 Q. MR. NORWOOD STATES ON PAGE 19 OF HIS DIRECT TESTIMONY THAT EPE
25 SHOULD HAVE FORESEEN THE ADOPTION OF INCREASED RESTRICTIONS ON
26 FUTURE CARBON EMISSIONS IN NEW MEXICO OR AT THE FEDERAL LEVEL
27 AND EVALUATED THESE RISKS AS PART OF ITS OVERALL ANALYSIS OF
28 NEWMAN UNIT 6. HOW DO YOU RESPOND?

29 A. EPE has closely followed this and related statutory issues and believes it has taken prudent
30 planning measures. A significant portion of EPE's generation assets is nuclear or gas-fired.
31 The nuclear, carbon-free generation at Palo Verde supplied 40% of EPE's total energy in

1 2018. In 2016 EPE divested itself of its coal-fired generation at Four Corners and no longer
2 has any coal-fired generation. As a result, the Company's carbon emissions are low relative
3 to electric power companies that rely more on coal-fired generation or lack nuclear
4 generation. Additionally, EPE's 2017 RFP selection included 200 MW of solar and
5 100 MW of battery storage in addition to the 228 MW gas-fired Newman Unit 6. This
6 represents a significant increase in renewables and the adoption of battery storage.

7 Mr. Norwood does not provide specific facts to support his argument that the
8 New Mexico legislation was foreseeable in 2017 and 2018. While public initiatives for
9 increased renewables and carbon reduction existed, for which EPE was well positioned as
10 explained above, the specifics of zero carbon targets and milestones could not have been
11 known a year in advance.

12 Moreover, EPE did assess its resource selection in light of the New Mexico
13 legislation and determined that no change was needed to achieve compliance. EPE added
14 large amounts of renewable resources, and Newman Unit 6 complements those additions
15 and further renewable integration given its flexibility for daily cycling.
16

17 Q. MR. NORWOOD ASSERTS ON PAGES 19-20 OF HIS DIRECT TESTIMONY THAT
18 EPE DID NOT EVALUATE THE RISK OF MORE STRINGENT FUTURE LIMITS ON
19 CARBON EMISSIONS AS PART OF ITS EVALUATION OF NEWMAN UNIT 6. IS
20 HE CORRECT?

21 A. As I described above, the carbon-free targets and timing milestones were not known at the
22 time of selection. EPE's resource selections provided both Texas and New Mexico
23 customers with the lowest cost portfolio that reliably meets customer peak demand while
24 simultaneously integrating an additional 200 MW of solar and 100 MW of battery storage.
25 Furthermore, while the New Mexico legislation does establish zero carbon targets for 2045,
26 it makes allowances for consideration of reliability and costs. Therefore, even now there
27 is no certainty that Newman Unit 6 would not continue to be a part of the New Mexico
28 resource portfolio through its useful life.
29

30 Q. DO YOU HAVE ANY OTHER COMMENTS ON MR. NORWOOD'S CARBON
31 EMISSIONS ARGUMENT?

1 A. Yes. Mr. Norwood does not offer what would or should have been the planning result if
2 EPE had foreseen the carbon limitations and burdens that he himself apparently foresaw
3 for New Mexico. That is, he does not say if he believes Newman Unit 6 would or should
4 have been rejected. EPE, in contrast, had to make concrete decisions.

5

6

VI. Conclusion

7 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

8 A. Yes, it does.

