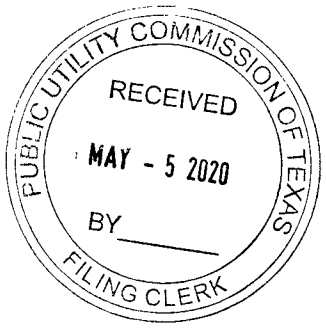
Control Number: 50277

Item Number: 59

Addendum StartPage: 0



SOAH DOCKET NO. 473-20-2278

DOCKET NO. 50277

APPLICATION OF EL PASO	**§**	
ELECTRIC COMPANY TO AMEND	**§**	
ITS CERTIFICATE OF	**§**	**BEFORE THE**
CONVENIENCE AND NECESSITY	**§**	**PUBLIC UTILITY COMMISSION**
FOR AND ADDITIONAL	**§**	**OF TEXAS**
GENERATING UNIT AT THE	**§**	
NEWMAN GENERATING STATION	**§**	

DIRECT TESTIMONY

OF

SCOTT NORWOOD

ON BEHALF OF

THE CITY OF EL PASO

MAY 5, 2020

59

SOAH DOCKET NO. 473-20-2278
PUC DOCKET NO. 50277

DIRECT TESTIMONY OF SCOTT NORWOOD

TABLE OF CONTENTS

EXHIBITS:

I. INTRODUCTION

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

A. My name is Scott Norwood. I am President of Norwood Energy Consulting, L.L.C. My business address is P.O. Box 30197, Austin, Texas 78755-3197.

Q. WHAT IS YOUR OCCUPATION?

A. I am an energy consultant specializing in the areas of electric utility regulation, resource planning and energy procurement.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I am an electrical engineer with over 35 years of experience in the electric utility industry. I began my career as a power plant engineer for the City of Austin's Electric Utility Department where I was responsible for electrical maintenance and design projects for the City's three gas-fired power plants. In January 1984, I joined the staff of the Public Utility Commission of Texas ("PUCT" or "Commission"), where I was responsible for addressing resource planning, fuel, and purchased power cost issues in electric rate and plant certification proceedings before the Commission. Since 1986 I have provided utility regulatory consulting, resource planning, and power procurement services to public utilities, electric consumers, industrial interests, municipalities, and state government clients. I have testified in over 200 utility regulatory proceedings over the last 20 years, before state regulatory commissions in Alaska, Arkansas, Florida,

Georgia, Illinois, Iowa, Kentucky, Louisiana, Michigan, Missouri, New Jersey, Ohio, Oklahoma, Texas, Virginia, Washington, and Wisconsin.[1]

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?

A. I am testifying on behalf of the City of El Paso ("CEP" or "the City").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present my evaluation and recommendations regarding El Paso Electric Company's ("EPE" or "the Company") application with the Commission for approval to amend the Company's Certificate of Convenience and Necessity ("CCN") to construct a new 228 MW gas-fired simple cycle combustion turbine generating unit at EPE's existing Newman Generation Station ("Newman 6" or "the Project"), which is in the City of El Paso.[2]

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS?

A. Yes. I have filed testimony in numerous past proceedings before the Commission as a consultant and former member of the Commission's staff, including proceedings involving adjustments to base rates, new-plant certification proceedings, fuel-factor adjustments, and fuel-reconciliation applications. I have represented the CEP in EPEC regulatory proceedings for more than 30 years. I am currently assisting the City in evaluation of the Company's pending fuel reconciliation case (PUCT Docket No. 50058). I also filed testimony in EPE's most recent base rate case (PUCT Docket No. 46831). Through my participation in these past EPE regulatory proceedings, I am quite familiar

[1] *See* Exhibit SN-1 for additional details on my background and experience.
[2] See EPE's Application, page 1.

with the Company's system operations and generating resources and other ratemaking issues raised by the Company's CCN application in this case.

Q. HAVE YOU PREPARED ANY EXHIBITS TO SUPPORT YOUR TESTIMONY?

A. Yes. I have prepared six exhibits which are included with my testimony.

II. SUMMARY OF TESTIMONY

Q. PLEASE SUMMARIZE YOUR TESTIMONY AND RECOMMENDATIONS.

A. EPE has requested the Commission's approval to amend the Company's CCN to allow the Company to construct, own and operate Newman 6, a 228 MW natural gas-fired, simple cycle combustion turbine generating unit at EPE's existing Newman Generation Station in the City of El Paso. The estimated capital cost of Newman 6 is $163.8 million, or $718/kW, including Allowance for Funds Used During Construction ("AFUDC") and estimated transmission interconnection costs.[3] The Project is expected to be completed and placed in-service by May of 2023, at which time the Company is forecasting a 370 MW capacity need on its system, due to due to forecasted load growth and the planned retirements of several older gas-fired generating units in 2022.[4] My primary conclusions and recommendations regarding EPE's request for approval to construct Newman 6 are as follows:

1) The competitive solicitation and resource evaluation process used by EPE to select Newman 6 generally appears to have been well-documented and reasonably conducted, with certain exceptions.

[3] See EPE's Application, page 4.

2) The Company's evaluation of the need for Newman 6 fails to account for economic impacts of the COVID-19 pandemic, or the impacts of recently enacted legislation in New Mexico that requires EPE to eliminate 100% of carbon emissions from generating resources by 2045. The impacts of these two factors could materially change EPE's conclusions regarding the need for and cost-effectiveness of Newman 6. The Commission has previously determined that utilities are obligated to re-evaluate generating resource investments whenever significant changes occur in market conditions or other factors that may alter the forecasted costs, benefits or need for such projects; however, EPE has not re-evaluated Newman 6 considering the above changes.

3) EPE's economic analyses of Newman 6 do not consider the flexibility that exists for the Company to delay new generating capacity additions by deferring planned retirements of existing resources, taking greater advantage of short-term market purchases, or possibly attributing greater firm capacity value to new solar PPAs. These alternatives to delay the proposed construction of Newman 6 for several years and could be significantly less costly to Texas customers. Delaying the decision to construct Newman 6 for several years would also allow the Company to better assess impacts of COVID-19 and new carbon regulations on the long-term resource requirements of the EPE system.

In summary, EPE has not analyzed the potential impacts of the COVID-19 pandemic or the recently adopted New Mexico carbon regulations that likely will

[4] See EPE's Application, pages 1-2, and EPE witness Hawkins' Direct Testimony, Exhibit DCH-2.

materially impact the Company's forecasts of the need for and cost-effectiveness of Newman 6. The Company has the flexibility to supply its forecasted system capacity requirements for several years beyond the planned 2023 in-service date of Newman 6, without the addition of the Project, by delaying retirements of existing gas units and using short-term market purchases if needed. It would be imprudent for the Company to proceed with Newman 6 until it has a better understanding of impacts of the COVID-19 pandemic and the ETA on its future resource requirements. Proceeding with the investment would place far too much economic risk on EPE's Texas customers. For these reasons, I recommend that the Commission deny EPE's request for approval to amend the Company's CCN to construct Newman 6.

III. DESCRIPTION OF EPE'S CCN APPLICATION

Q. PLEASE DESCRIBE THE EVENTS LEADING TO EPE'S PROPOSAL TO CONSTRUCT NEWMAN 6.

A. EPE indicates that based on peak demand forecasted in the Company's 2017 load forecast, and the expected need to retire older gas-fired generating units on its system, EPE issued a competitive solicitation in June of 2017 seeking bids for up to 370 MW of long-term supply-side or demand-side resources, to commence service by the summer peak season of 2023.[5] In response to the 2017 RFP, EPE received 81 proposals from 36 companies, and with the assistance of an independent evaluator, selected four winning bids in December of 2018, including:

1) Newman 6, a 228 MW gas-fired simple cycle generating unit to be developed and owned by EPE;

[5] See EPE's Application, page 3.

2) The Hecate 100 MW solar purchased power agreement ("PPA");

3) The Buena Vista 100 MW solar PPA, along with 50 MW of battery storage; and

4) The Canutillo 50 MW battery storage project.

EPE indicates that it will seek Commission approval of the Hecate, Buena Vista and Canutillo contracts in a future base rate or fuel reconciliation proceeding because the Commission's rules do not require utilities to obtain a CCN for these (or other) purchased power contracts.

Q. PLEASE DESCRIBE EPE'S PROPOSED NEWMAN 6 FACILITY.

A. Newman 6 is a proposed a 228 MW, Mitsubishi Hitachi Power Systems Americas G-Series Air-Cooled ("MHPSA GAC") natural gas-fired, simple cycle combustion turbine generating unit to be constructed at EPE's existing Newman Generation Station, located in the northeast area of the City of El Paso.[6] EPE indicates that the Project is expected to be completed and placed in-service by May of 2023.[7]

Newman 6 would be directly interconnected with EPE's transmission system. The Company indicates that it expects natural gas for Newman 6 to be supplied through an existing pipeline owned by El Paso Natural Gas ("EPNG") that is connected to the Newman Station.[8] The EPNG pipeline transports interstate gas purchased by EPE from the Permian and San Juan gas-producing regions. There is also a second gas pipeline

[6] See EPE witness Hawkins' Direct Testimony, page 3.
[7] See EPE witness Hawkins' Direct Testimony, Exhibit DCH-2.
[8] See EPE witness Hawkins' Direct Testimony, page 4.

owned by ONEOK Westex ("OWT") that could supply Newman 6 intrastate gas from the WAHA and Permian gas-producing regions, if necessary.[9]

EPE further indicates that Newman 6 is designed for daily cycling and would be operated to meet peaking and load following requirements of the Company's system which are currently supplied by EPE's Montana Units 1-4 and Rio Grande Unit 9 combustion turbine units. Newman 6 would be capable of operations in a "quick start" mode, in which 50% of full load is reached in 8 minutes and 100% of full load is reached in 12 minutes, or in a "regular start-up" mode in which the unit can be started and placed on-line in 20 minutes and achieve full load in 35 minutes.[10] The Company indicates that the Project is expected to enhance overall system reliability and the risk of outages due to transmission failure by providing voltage support within EPE's El Paso load area. [11] The Project's quick start, daily cycling, and load following capabilities are also expected to complement the intermittent nature of EPE's new solar resources.[12]

Q. WHAT IS THE ESTIMATED COST OF NEWMAN 6?

A. The total estimated cost of Newman 6, including AFUDC and estimated transmission interconnection costs is $163.8 million, or $718/kW, as summarized in Table 1 below.[13]

[9] See EPE witness Hawkins' Direct Testimony, page 4.
[10] See EPE witness Hawkins' Direct Testimony, page 5.
[11] See EPE witness Hawkins' Direct Testimony, page 5.
[12] See EPE witness Hawkins' Direct Testimony, page 8.
[13] See EPE's Application, page 4.

Table 1
Estimated Capital Cost of Newman 6
($Millions)

Plant Construction Cost	$141.2
Plant AFUDC	$16.4
Transmission Interconnection	$6.2
Total Project Cost	$163.8
Cost/kW at 228 MW	$718.4

Q. WHAT ARE THE EXPECTED AVAILABILITY, CAPACITY FACTOR AND HEAT RATE OF NEWMAN 6?

A. Newman 6 is expected to have a starting reliability of 99.05%, a forced outage rate of 0.48%, a full load heat rate at summer peak conditions of 10,101 Btu/kWh, and an average annual capacity factor of approximately 35%.[14]

Q. WHAT ARE THE ESTIMATED RATE IMPACTS ASSOCIATED WITH EPE'S PROPOSED OWNERSHIP AND OPERATION OF NEWMAN 6?

A. EPE estimates that the Company's annual base rate revenue requirement would increase by approximately $18.6 million in 2024, the first full year of operation of Newman 6. EPE claims this would increase the base rate charges to a typical residential customer that uses 642 kWh per month by $1.77 per month, and is forecasted to have a total net rate increase after fuel savings of $1.45 per month (1.85%) on that residential customer for the same period. [15]

[14] See EPE witness Hawkins' Direct Testimony, pages 6-7.
[15] See EPE witness Schichtl's Direct Testimony, page 14. It should be noted that EPE's workpapers supporting this rate impact calculation indicate that Newman 6 costs were allocated on an energy basis to all classes. This assumption likely understates the estimated rate increase for Residential class customers when compared to the EPE's normal allocation of generating asset costs on a peak demand allocation basis.

Q. WHAT ARE THE STANDARDS FOR APPROVAL OF CCN FOR EPE'S PROPOSED OWNERSHIP AND OPERATION OF NEWMAN 6?

A. The Public Utility Regulatory Act ("PURA"), Section 37.056(a) provides that the Commission may approve an application and grant a CCN only if the Commission finds that the certificate is necessary for service, accommodation, convenience or safety of the public. PURA Section 37.056(c) further specifies that the Commission must grant a CCN on a nondiscriminatory basis after considering:

1) the adequacy of existing service;
2) the need for additional service;
3) the effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area; and
4) other factors, such as:
    A) community values;
    B) recreational and park areas;
    C) historical and aesthetic values;
    D) environmental integrity;
    E) the probably improvement of service or lower of cost to consumers in the area if the certificate is granted; and
    F) to the extent applicable, the effect of granting the certificate on the ability of this state to meet the goal established by Section 39.904(a) – [PURA's goal for adding renewable energy resources].

My analysis of EPE's CCN application focuses on the extent to which Newman 6 is necessary to meet the above standards regarding adequacy of existing service, need for additional service, and probability of lower cost to consumers.

Q. WHICH ISSUES IDENTIFIED BY THE COMMISSION'S PRELIMINARY ORDER ARE ADDRESSED BY YOUR TESTIMONY?

A. My testimony addresses the following issues identified by the Commission's Preliminary Order[16]:

2. What is the proposed date of commercial operation for the proposed Newman Unit 6?
3. What is the total estimated cost of the proposed Newman Unit 6?
4. What is the total estimated cost, if any, for additional facilities such as, but not limited to, transmission facilities, necessary to ensure that the proposed Newman Unit 6 would serve Texas customers cost-effectively?
7. Has EPE filed applications for any of those necessary approvals? If so, when were the applications filed?
8. Which regulatory authorities have approved applications relating to the proposed Newman Unit 6, and which ones have disapproved them? When is action anticipated on any applications that have not yet been approved or disapproved?
11. Is the proposed CCN amendment necessary for the service, accommodation, convenience, or safety of the public under PURA § 37.056? In answering this issue, please address the issues below. Adequacy of exis1in2 service
12. Is EPE currently providing adequate service?
13. What existing generating facilities does EPE plan to retire in the next five years, and what is the anticipated timeline for those retirements? How do those retirements affect EPE's need for additional service?
14. Has EPE demonstrated a need for additional capacity? a. If so, is the proposed Newman Unit 6 a prudent alternative to meet that need for additional capacity?
18. Will granting the CCN amendment improve service or lower the cost of service to consumers in the area?
21. To the extent applicable, what is the effect of granting the CCN amendment on the ability of this state to meet PURA's goal of adding renewable energy resources established by PURA § 39.904(a)?
22. Does the proposed Newman Unit 6 satisfy identified reliability needs of EPE as required by PURA § 39.452(j)? Would the proposed Newman Unit 6 improve the reliability of EPE's service? If so, how would reliability be improved, and is the proposed Newman Unit 6 the most cost-effective alternative for EPE to meet reliability needs?
26. Are the circumstances for this proposed CCN amendment such that the seven-year limit discussed in section III of this Order should be changed?

[16] Docket 50277. *Application of El Paso Electric Company to Amend its Certificate of Convenience and Necessity for an Additional Generating Unit at the Newman Generating Station*, Preliminary Order (February 27, 2020, Item 30)

Q. WOULD IT BE APPROPRIATE FOR THE COMMISSION TO EXTEND THE SEVEN-YEAR CONDITIONAL APPROVAL PERIOD SPECIFIED IN THE PRELIMINARY ORDER SHOULD IT APPROVE A CCN FOR NEWMAN 6?

A. No. We are in a period of high uncertainty in the electric utility industry, both due to near-term questions regarding the economic impacts of the COVID-19 pandemic, and due to intermediate-term questions regarding the impacts of future state and federal policies to address carbon emissions and climate change, and the evolution of technology and price trends for renewable energy resources. Given these significant uncertainties, and for other reasons discussed later in my testimony, it would not be appropriate to extend the conditional approval period for any CCN granted for Newman 6 for more than seven years because the need for and cost effectiveness of the Project could easily change over the next several years.

IV. ADEQUACY OF SERVICE/NEED FOR NEWMAN 6

Q. WHAT ARE THE KEY FACTORS TO BE EVALUATED IN DETERMINING WHETHER EPE NEEDS TO ADD NEWMAN 6 TO ITS SYSTEM BY 2023 AS THE COMPANY PROPOSES?

A. The key issues in determining the need for investments in new generating resources are normally, 1) whether such resources are required to ensure a utility has adequate supply- or demand-side resources to provide reliable service to customers, and 2) if there is a demonstrated need, whether the proposed resources are the lowest reasonable cost alternative available to supply that need at time they are selected. In this section of my

testimony I address the issue of whether Newman 6 must be added by 2023 for EPE to provide reliable service.

Q. DOES EPE NEED TO ADD NEWMAN 6 BY 2023 TO PROVIDE RELIABLE AND ADEQUATE SERVICE TO ITS TEXAS CUSTOMERS?

A. No. As an initial matter, EPE's forecasted peak demand and need for capacity by 2023 is based on a 2017 load forecast that does not consider potential impacts of the COVID-19 pandemic, and therefore likely overstates the Company's capacity requirement to provide reliable service. Because the Company's peak demand drives the need for new generation, to the extent COVID-19 decreases peak demand in EPE's service area, the need for Newman 6 will be decreased, if not eliminated.

Moreover, as shown in Table 2 below, even if EPE's peak demand in 2023 is not impacted by COVID-19 economic effects, the Company has flexibility to supply the same level of capacity until 2027 *without adding Newman 6* simply by deferring planned retirements of existing gas-fired units and increasing planned short-term market capacity purchases by 35 to 60 MW over the period 2023 to 2026.

Table 2
EPE Capacity, Demand and Reserves – 2020-2029
With Deferred Retirement of Gas Units, and 35-60 MW Short-term Purchase
Plus 4-yr Delay of Newman 6

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1.0 GENERATION RESOURCES										
1.1 RIO GRANDE	278	278	278	278	278	278	278	232	232	232
1.2 NEWMAN	736	736	736	736	736	736	736	262	262	262
1.3 COPPER	63	63	63	63	63	63	63	63	63	63
1.4 MONTANA	352	352	352	352	352	352	352	352	352	352
1.5 PALO VERDE	633	633	633	633	633	633	633	633	633	633
1.6 RENEWABLES	6	6	6	6	6	6	6	6	6	6
1.7 STORAGE	0	0	0	50	50	50	50	50	50	50
1.8 POSSIBLE EMERGING TECHNOLOGY EXPANSION[1]	0	0	0	0	0	40	40	40	40	40
1.9 NEW BUILD (local)	0	0	0	0	0	0	0	546	596	596
1.0 TOTAL GENERATION RESOURCES[2]	**2,068**	**2,068**	**2,068**	**2,118**	**2,118**	**2,158**	**2,158**	**2,184**	**2,234**	**2,234**
2.0 RESOURCE PURCHASES										
2.1 RENEWABLE PURCHASE (SunEdison & NRG)	29	29	28	28	28	28	27	27	27	27
2.2 RENEWABLE PURCHASE (Hatch)	3	3	3	3	3	3	3	3	3	3
2.3 RENEWABLE PURCHASE (Macho Springs)	34	34	34	34	34	34	33	33	33	33
2.4 RENEWABLE PURCHASE (Juwi)	7	7	7	7	7	7	7	7	7	7
2.5 NEW RENEWABLE/ BATTERY PURCHASE	0	0	100	100	100	100	100	100	131	131
2.6 RESOURCE PURCHASE	80	110	35	35	35	35	60	70	20	70
2.0 TOTAL RESOURCE PURCHASES[4]	**153**	**183**	**207**	**207**	**206**	**206**	**231**	**240**	**221**	**271**
3.0 TOTAL NET RESOURCES (1.0 + 2.0)	**2,221**	**2,251**	**2,275**	**2,325**	**2,324**	**2,364**	**2,389**	**2,424**	**2,455**	**2,505**
4.0 SYSTEM DEMAND										
4.1 NATIVE SYSTEM DEMAND	2,009	2,044	2,073	2,104	2,128	2,166	2,200	2,237	2,269	2,315
4.2 DISTRIBUTED GENERATION[5]	-3	-4	-6	-7	-9	-10	-10	-10	-10	-10
4.3 ENERGY EFFICIENCY	-12	-18	-24	-30	-36	-41	-47	-53	-59	65
4.4 LINE LOSSES	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7
4.5 INTERRUPTIBLE SALES	-59	-59	-59	-59	-59	-59	-59	-59	-59	-59
5.0 TOTAL SYSTEM DEMAND (4.1-(4.2+4.3+4.4+4.5))[6]	**1,928**	**1,956**	**1,978**	**2,001**	**2,018**	**2,048**	**2,077**	**2,108**	**2,134**	**2,174**
6.0 MARGIN OVER TOTAL DEMAND (3.0 - 5.0)	**293**	**294**	**297**	**324**	**307**	**316**	**312**	**316**	**321**	**331**
PLANNING RESERVE, % W/O Newman 6	**15.2%**	**15.0%**	**15.0%**	**16.2%**	**15.2%**	**15.4%**	**15.0%**			
7.0 PLANNING RESERVE 15% OF TOTAL SYSTEM DEMAND	**289**	**293**	**297**	**300**	**303**	**307**	**312**	**316**	**320**	**326**
8.0 MARGIN OVER RESERVE (6.0 - 7.0)	**4**	**1**	**1**	**24**	**4**	**8**	**0**	**0**	**1**	**5**

Q. HAS EPE RE-EVALUATED THE NEED FOR ADDING NEWMAN 6 WITH CONSIDERATION OF ECONOMIC RISKS CAUSED BY THE COVID-19 PANDEMIC?

A. No. The Company has not re-evaluated the need for Newman 6 to consider potential impacts of COVID-19 and indicates that it is not presently possible to forecast the impacts of the virus with certainty.

The selection of Newman Unit 6 as part of the 2017 All-Source RFP pre-dates the current coronavirus pandemic, which thus was not taken into consideration during the selection process. The long-term economic impact of coronavirus pandemic is not known at this time and it is too early in the pandemic timeline to assess if it

may impact long-term peak demand. More specifically, EPE cannot predict at this time that the pandemic will depress demand to the extent that EPE can determine that it will not need the proposed unit in 2023 and thereafter to meet demand. [17]

Q. WOULD IT BE PRUDENT FOR EPE TO PROCEED WITH NEWMAN 6 BEFORE IT IS MORE CERTAIN ABOUT FUTURE ECONOMIC IMPACTS OF COVID-19 ON THE COMPANY'S SERVICE AREA?

A. No. A reduction of only 10% (~200 MW) of the Company's forecasted peak demand would largely eliminate the need for Newman 6 for the next 10 years. When faced with the great economic uncertainty caused by COVID-19, it makes no sense for the Company invest $163 million to construct Newman 6 now, when it could delay that investment decision for at least several more years until COVID-19 impacts are more certain, simply through deferral of planned retirements of existing generating units and additional short-term capacity purchases without significant additional capital investment. The Company's proposal to move forward with construction of Newman 6 before the impacts of COVID-19 are known, places far too much economic risk on customers.

Q. WOULD DELAYING THE PLANNED RETIREMENT OF EPE'S OLDER GAS-FIRED UNITS FOR SEVERAL YEARS UNTIL THE IMPACTS OF COVID-19 ARE MORE CERTAIN CREATE UNDUE RELIABILITY RISKS FOR EPE'S TEXAS CUSTOMERS?

A. No. As summarized in Table 3 below, the summer peak period equivalent availability performance of the three generating units that EPE plans to retire in 2022, plus Rio Grande Unit 6 which has been maintained in inactive reserve status, has been remarkably good over the last several years, as was noted in 2018 studies commissioned by the

[17] See Exhibit SN-2, EPE's response to CEP2-3.

Company to assess the feasibility of extending the operating lives of the units beyond their current planned retirement dates.

Table 3
Summer Peak Month Equivalent Availability Performance
of EPE's Older Gas-Fired Units[18]

Plant/Unit	2015	2016	2017	2018	2019	Average
Rio Grande 6	100.0%	99.7%	98.9%	98.6%		99.3%
Rio Grande 7	99.0%	97.4%	96.7%	96.1%	95.7%	97.0%
Newman Unit 1	88.0%	100.0%	38.5%	84.0%	99.4%	82.0%
Newman Unit 2	95.8%	96.8%	85.9%	37.6%	97.5%	82.7%

Source: EPE's response to CEP 1-16(e).

Moreover, EPE generating unit outages or shortages have rarely led to customer outages in the past. For example, the Company indicates that it has experienced only one event during the last ten years in which generating capacity shortages on EPE's system lead to customer outages.[19] That outage occurred due to highly abnormal cold weather event in February of 2011, which caused the simultaneous loss of nearly all of EPE's local area generation due to freezing of boiler controls. Loss of service to customers under such rare extreme weather events is very difficult to avoid, even without generation outages, and was not due to EPE's failure to plan adequate capacity reserves. It is my understanding that the Company has since implemented operational and control modifications to prevent a recurrence of such an abnormal event.

[18] See Exhibit SN-3, EPE's response to CEP1-16.
[19] See Exhibit SN-4, EPE's response to CEP 2-13.

Q. ARE THERE OTHER REASONS WHY YOU BELIEVE THE COMMISSION SHOULD DENY EPE'S REQUEST FOR APPROVAL TO PROCEED WITH CONSTRUCTION OF NEWMAN 6?

A. Yes. In addition to EPE's failure to re-evaluate the need for Newman 6 with due consideration to potential impacts of the COVID-19 pandemic, I have several other concerns regarding EPE's analysis of the need for Newman 6. First, even if the COVID-19 virus ultimately has no adverse impact on the near-term economic growth (and demand for electricity) in EPE's service area, as shown in my Table 1 above, EPE would still have sufficient generating capacity available on its system until at least 2026, simply by delaying planned retirements of the Company's existing generating resources, and supplementing those resources with short-term market purchases if necessary.

Second, I am concerned that EPE's capacity need analysis may understate the true firm capacity value of 200 MW of planned new solar PPA resources, which the Company has assumed to be 25% of nameplate capacity rating. The Company assumed a 70% of nameplate capacity rating for evaluating the firm capacity value of existing and planned solar resources in the Company's 2017 Integrated Resource Plan ("IRP"). By applying the lower 25% of nameplate rating as the firm capacity value for EPE's new solar PPAs, the Company's forecasted need for generating capacity was increased by 90 MW when compared to the level that would result from continued use of a 70% of nameplate firm capacity value factor.[20] While the Company has provided some explanation for this proposed reduction in the firm capacity value of future solar resources, EPE's proposed 25% firm capacity value for future solar resources is far lower than the 76% solar

[20] The referenced 90 MW difference is calculated as 200MW x (70%-25%) = 90 MW.

capacity credits level currently used by the Electric Reliability Council of Texas ("ERCOT"), and should not be accepted until proven through actual performance of the new solar resources on EPE's system.[21]

Third, I am concerned that EPE's resource needs analysis does not appear to consider the fact that the Company's peak demand occurs over a very small number of hours each year. For example, peak demand information provided by the Company in discovery shows that EPE's system peak demand was 188 MW lower than the annual peak demand after the highest peak 100 hours, or approximately 99% of all hours in each of the last five years.[22] This means that the additional capacity provided from Newman 6 would not likely be needed to meet EPE's system peak demand and reserve requirements for 99% of the hours each year. This raises a serious question as to whether EPE's proposed $163 million investment for Newman 6 is truly the most cost-effective means to serve such a very short-term peak demand requirement, or whether low-investment alternatives such as short-term purchases, interruptible rates or other demand-side options could be more cost effective.

Q. DO YOU HAVE OTHER CONCERNS REGARDING EPE'S ANALYSIS SUPPORTING THE NEED FOR NEWMAN 6?

A. Yes. EPE's economic analysis supporting the selection of Newman 6 does not account for the fact that the Energy Transition Act ("ETA") legislation recently enacted in New Mexico would require the Company to supply 100% of its New Mexico system energy requirement from carbon-free generating resources by 2045.[23] While this change may

[21] See Exhibit SN-5.
[22] See Exhibit SN-6.
[23] See Direct Testimony of EPE Witness Gallegos, Exhibit OG-4, footnote 4.

not bind EPE's actions regarding services and charges for its Texas service area, it is likely to reduce the economic value of Newman 6 since it essentially would limit future operations of the unit for service provided to New Mexico customers, and potentially would increase the future energy production and investment costs of Newman 6 that EPE would propose to assign to customers in its Texas jurisdiction.

Q. SHOULD EPE HAVE FORESEEN THE ADOPTION OF INCREASED RESTRICTIONS ON FUTURE CARBON EMISSIONS IN NEW MEXICO OR AT THE FEDERAL LEVEL AND EVALUATED THESE RISKS AS PART OF ITS OVERALL ANALYSIS OF NEWMAN 6?

A. Yes. While I do not know whether EPE could have foreseen the adoption of increased limits on carbon emissions in its New Mexico service area before it selected Newman 6 and certain solar and battery storage contracts in December of 2018, the Company should have foreseen and evaluated the risk that EPE would face new federal or state regulations that could further limit carbon emissions from the Company's generating resources. This factor should have been evaluated since higher carbon compliance costs for Newman 6 in the future could potentially eliminate any economic advantage that EPE forecasted the Project to provide over solar energy or other renewable energy alternatives.

Q. DID EPE EVALUATE THE RISK OF MORE STRINGENT FUTURE LIMITS ON CARBON EMISSIONS AS PART OF ITS EVALUATION OF NEWMAN 6?

A. No. EPE's failure to evaluate risks of increased limits on future carbon emissions, such as the new limits under New Mexico's ETA, lead to the Company's overstatement of the economic value of Newman 6 to the extent that it ignored the increased cost of

compliance with future carbon regulations, as well as the limits such regulations could place on energy production from gas-fired generating facilities.

V. COST EFFECTIVENESS OF NEWMAN 6

Q. WHAT STANDARD IS NORMALLY APPLIED TO EVALUATE THE COST-EFFECTIVENESS OF MAJOR RESOURCE INVESTMENTS SUCH AS NEWMAN 6?

A. To the extent a utility demonstrates that a generating resource is needed to supply forecasted peak demand and reserve requirements, the normal cost-effectiveness standard applied by the Commission in deciding whether approval of the resource investment should be granted is whether the resource was expected to be the lowest reasonable cost alternative available at the time the utility investment decision was made.

Q. HAS EPE DEMONSTRATED THAT NEWMAN 6 IS NEEDED FOR RELIABLE SERVICE AND TO MEET THE LOWEST REASONABLE COST STANDARD?

A. No. As discussed earlier in my testimony, EPE would be able to reliably serve customers for several years beyond the planned in-service date of Newman 6 simply by delaying EPE's plans to retire existing gas units in 2022 and taking advantage of short-term market purchase options. Given this flexibility, and the significant uncertainty regarding impacts of the COVID-19 pandemic and the new ETA limits on future carbon emissions on EPE's future resource needs, it would be imprudent for the Company to proceed with the Project until those impacts are more certain and can be evaluated.

Q. HAS EPE DEMONSTRATED THAT NEWMAN 6 WAS THE LOWEST REASONABLE COST RESOURCE AVAILABLE AT THE TIME THE COMPANY SELECTED THE PROJECT IN DECEMBER OF 2018?

A. No. Due to EPE's failure to evaluate potential impacts of more stringent future carbon regulations, options for delay of planned retirements of older gas-fired generating units at the Newman and Rio Grande generating stations, the potential use of short-term market purchases to supply near-term capacity requirements, and scenarios that assumed a higher firm capacity value or greater purchase levels for solar or wind energy resources, the Company's economic analyses do not demonstrate that Newman 6 was the lowest reasonable cost resource available at the time it selected the project in December of 2018.

Q. IS EPE OBLIGATED TO DEMONSTRATE THAT CHANGES THAT HAVE OCCURRED SINCE DECEMBER OF 2018 WOULD NOT CHANGE THE COMPANY'S ORIGINAL DETERMINATIONS THAT NEWMAN 6 IS NEEDED BY 2023 AND REPRESENTS THE LOWEST AVAILABLE COST RESOURCE FOR SUPPLYING THAT NEED?

A. Yes. The Commission has previously determined that utilities are obligated to re-evaluate major resource investment decisions when changing conditions alter the need for or cost effectiveness of a selected resource, even after a CCN has been granted.[24] However, due to EPE's failures to re-evaluate the need for and cost-effectiveness of Newman 6 to account for potential impacts of the COVID-19 pandemic, the ETA and potentially more stringent future regulations of carbon emissions from power plants, and

[24] See PUCT Docket No. 40443, Order on Rehearing, Finding of Facts 34-36a and 46-54.

other flaws in the Company's analysis of the Project, serious unresolved questions remain regarding the prudence of the Company's decision to construct Newman 6.

VI. CONCLUSIONS AND RECOMMENDATIONS

Q. PLEASE SUMMARIZE YOUR PRIMARY CONCLUSIONS AND RECOMMENDATIONS REGARDING EPE'S REQUEST FOR APPROVAL TO CONSTRUCT NEWMAN 6.

A. EPE has not analyzed the potential impacts of the COVID-19 pandemic or the recently adopted New Mexico ETA regulations on carbon emissions on the need for or cost-effectiveness of the proposed Newman 6 gas-fired generating facility. The Company has the flexibility to supply its forecasted system capacity requirements for several years beyond the planned 2023 in-service date without the addition of Newman 6, by delaying retirements of existing gas units and making short-term market capacity purchases if needed. It would be imprudent for the Company to proceed with Newman 6 until it has a better understanding of impacts of the COVID-19 pandemic and the ETA on its future resource requirements. For these reasons, I recommend that the Commission deny EPE's request for approval to amend the Company's CCN to construct Newman 6.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes.

EXHIBIT SN-1

NORWOOD BACKGROUND AND EXPERIENCE

DON SCOTT NORWOOD

Norwood Energy Consulting, L.L.C.

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SUMMARY

Scott Norwood is an energy consultant with over 37 years of utility industry experience in the areas of regulatory consulting, resource planning and energy procurement. His clients include government agencies, publicly-owned utilities, public service commissions, municipalities and various electric consumer interests. Over the last 15 years Mr. Norwood has presented expert testimony on electric utility ratemaking, resource planning, and electric utility restructuring issues in over 200 regulatory proceedings in Arkansas, Georgia, Iowa, Illinois, Michigan, Missouri, New Jersey, Oklahoma, South Dakota, Texas, Virginia, Washington and Wisconsin.

Prior to founding Norwood Energy Consulting in January of 2004, Mr. Norwood was employed for 18 years by GDS Associates, Inc., a Marietta, Georgia based energy consulting firm. Mr. Norwood was a Principal of GDS and directed the firm's Deregulated Services Department which provided a range of consulting services including merchant plant due diligence studies, deregulated market price forecasts, power supply planning and procurement projects, electric restructuring policy analyses, and studies of power plant dispatch and production costs.

Before joining GDS, Mr. Norwood was employed by the Public Utility Commission of Texas as Manager of Power Plant Engineering from 1984 through 1986. He began his career in 1980 as Staff Electrical Engineer with the City of Austin's Electric Utility Department where he was in charge of electrical maintenance and design projects at three gas-fired power plants.

Mr. Norwood is a graduate of the college of electrical engineering of the University of Texas.

EXPERIENCE

The following summaries are representative of the range of projects conducted by Mr. Norwood over his 30-year consulting career.

Regulatory Consulting

Oklahoma Industrial Energy Consumers - Assisted client with technical and economic analysis of proposed EPA regulations and compliance plans involving control of air emissions and potential conversion of coal-to-gas conversion options.

Cities Served by Southwestern Electric Power Company – Analyzed and presented testimony regarding the prudence of a $1.7 billion coal-fired power plant and related settlement agreements with Sierra Club.

New York Public Service Commission - Conducted inter-company statistical benchmarking analysis of Consolidated Edison Company to provide the New York Public Service Commission with guidance in determining areas that should be reviewed in detailed management audit of the company.

Oklahoma Industrial Energy Consumers - Analyzed and presented testimony on affiliate energy trading transactions by AEP in ERCOT.

Virginia Attorney General – Analyzed and presented testimony regarding distribution tap line undergrounding program proposed by Dominion Virginia Power Company.

Cities Served by Southwestern Electric Power Company – Analyzed and presented testimony regarding the prudence of the utility's decision to retire the Welsh Unit 2 coal-fired generating unit in conjunction with a litigation settlement agreement with Sierra Club.

Georgia Public Service Commission - Presented testimony before the Georgia Public Service Commission in Docket 3840-U, providing recommendations on nuclear O&M levels for Hatch and Vogtle and recommending that a nuclear performance standard be implemented in the State of Georgia.

Oklahoma Industrial Energy Consumers - Analyzed and presented testimony addressing power production and coal plant dispatch issues in fuel prudence cases involving Oklahoma Gas and Electric Company.

Georgia Public Service Commission - Analyzed and provided recommendations regarding the reasonableness of nuclear O&M costs, fossil O&M costs and coal inventory levels reported in GPC's 1990 Surveillance Filing.

City of Houston - Analyzed and presented comments on various legislative proposals impacting retail electric and gas utility operations and rates in Texas.

New York Public Service Commission - Conducted inter-company statistical benchmarking analysis of Rochester Gas & Electric Company to provide the New York Public Service Commission with guidance in determining areas which should be reviewed in detailed management audit of the company.

Virginia Attorney General – Analyzed and presented testimony regarding an accelerated vegetation management program and rider proposed by Appalachian Power Company.

Oklahoma Attorney General – Analyzed and presented testimony regarding fuel and purchased power, depreciation and other expense items in Oklahoma Gas & Electric Company's 2001 rate case before the Oklahoma Corporation Commission.

City of Houston - Analyzed and presented testimony regarding fossil plant O&M expense levels in Houston Lighting & Power Company's rate case before the Public Utility Commission of Texas.

City of El Paso - Analyzed and presented testimony regarding regulatory and technical issues related to the Central & Southwest/El Paso Electric Company merger and rate proceedings before the PUCT, including analysis of merger synergy studies, fossil O&M and purchased power margins.

Residential Ratepayer Consortium - Analyzed Fermi 2 replacement power and operating performance issues in fuel reconciliation proceedings for Detroit Edison Company before the Michigan Public Service Commission.

Residential Ratepayer Consortium - Analyzed and prepared testimony addressing coal plant outage rate projections in the Consumer's Power Company fuel proceeding before the Michigan Public Service Commission.

City of El Paso - Analyzed and developed testimony regarding Palo Verde operations and maintenance expenses in El Paso Electric Company's 1991 rate case before the Public Utility Commission of Texas.

City of Houston - Analyzed and developed testimony regarding the operations and maintenance expenses and performance standards for the South Texas Nuclear Project, and operations and maintenance expenses for the Limestone and Parish coal-fired power plants in HL&P's 1991 rate case before the PUCT.

City of El Paso - Analyzed and developed testimony regarding Palo Verde operations and maintenance expenses in El Paso Electric Company's 1990 rate case before the Public Utility Commission of Texas. Recommendations were adopted.

Energy Planning and Procurement Services

Virginia Attorney General – Review and provide comments or testimony regarding annual integrated resource plan filings made by Dominion Virginia Power and Appalachian Power Company.

Dell Computer Corporation – Negotiated retail power supply agreement for Dell's Round Rock, Texas facilities producing annual savings in excess of $2 million.

Texas Association of School Boards Electric Aggregation Program – Serve as TASB's consultant in the development, marketing and administration of a retail electric aggregation program consisting of 2,500 Texas schools with a total load of over 300 MW. Program produced annual savings of more than $30 million in its first year.

Oklahoma Industrial Energy Consumers - Analyzed and drafted comments addressing integrated resource plan filings by Public Service Company of Oklahoma and Oklahoma Gas and Electric Company.

S.C. Johnson - Analyzed and presented testimony addressing Wisconsin Electric Power Company's $4.1 billion CPCN application to construct three coal-fired generating units in southeast Wisconsin.

Oklahoma Industrial Energy Consumers - Analyzed wind energy project ownership proposals by Oklahoma Gas and Electric Company and presented testimony addressing project economics and operational impacts.

City of Chicago, Illinois Attorney General, Illinois Citizens' Utility Board - Analyzed Commonwealth Edison's proposed divestiture of the Kincaid and State Line power plants to SEI and Dominion Resources.

Georgia Public Service Commission - Analyzed and presented testimony on Georgia Power Company's integrated resource plan in a certification proceeding for an eight unit, 640 MW combustion turbine facility.

South Dakota Public Service Commission - Evaluated integrated resource plan and power plant certification filing of Black Hills Power & Light Company.

Shell Leasing Co. - Evaluated market value of 540 MW western coal-fired power plant.

Community Energy Electric Aggregation Program – Served as Community Energy's consultant in the development, marketing and start-up of a retail electric aggregation program consisting of major charitable organizations and their donors in Texas.

Austin Energy – Conducted competitive solicitation for peaking capacity. Developed request for proposal, administered solicitation and evaluated bids.

Austin Energy - Provided technical assistance in the evaluation of the economic viability of the City of Austin's ownership interest in the South Texas Project.

Austin Energy - Assisted with regional production cost modeling analysis to assess production cost savings associated with various public power merger and power pool alternatives.

Sam Rayburn G&T Electric Cooperative - Conducted competitive solicitation for peaking capacity. Developed request for proposal, administered solicitation and evaluated bids.

Rio Grande Electric Cooperative, Inc. - Directed preparation of power supply solicitation and conducted economic and technical analysis of offers.

Virginia Attorney General – Review and provide comments or testimony regarding annual demand-side management program programs and rider proposals made by Dominion Virginia Power and Appalachian Power Company.

Austin Energy – Conducted modeling to assess potential costs and benefits of a municipal power pool in Texas.

Electric Restructuring Analyses

Electric Power Research Institute - Evaluated regional resource planning and power market dispatch impacts on rail transportation and coal supply procurement strategies and costs.

Arkansas House of Representatives – Critiqued proposed electric restructuring legislation and identified suggested amendments to provide increased protections for small consumers.

Virginia Legislative Committee on Electric Utility Restructuring – Presented report on status of stranded cost recovery for Virginia's electric utilities.

Georgia Public Service Commission – Developed models and a modeling process for preparing initial estimates of stranded costs for major electric utilities serving the state of Georgia.

City of Houston – Evaluated and recommended adjustments to Reliant Energy's stranded cost proposal before the Public Utility Commission of Texas.

Oklahoma Attorney General – Evaluated and advised the Attorney General on technical, economic and regulatory policy issues arising from various electric restructuring proposals considered by the Oklahoma Electric Restructuring Advisory Committee.

State of Hawaii Department of Business, Economics and Tourism – Evaluated electric restructuring proposals and developed models to assess the potential savings from deregulation of the Oahu power market.

Virginia Attorney General - Served as the Attorney General's consultant and expert witness in the evaluation of electric restructuring legislation, restructuring rulemakings and utility proposals addressing retail pilot programs, stranded costs, rate unbundling, functional separation plans, and competitive metering.

Western Public Power Producers, Inc. - Evaluated operational, cost and regional competitive impacts of the proposed merger of Southwestern Public Service Company and Public Service Company of Colorado.

Iowa Department of Justice, Consumer Advocate Division - Analyzed stranded investment and fuel recover issues resulting from a market-based pricing proposal submitted by MidAmerican Energy Company.

Cullen Weston Pines & Bach/Citizens' Utility Board - Evaluated estimated costs and benefits of the proposed merger of Wisconsin Energy Corporation and Northern States Power Company (Primergy).

City of El Paso - Evaluated merger synergies and plant valuation issues related to the proposed acquisition and merger of El Paso Electric Company and Central & Southwest Company.

Rio Grande Electric Cooperative, Inc. - Analyzed stranded generation investment issues for Central Power & Light Company.

Power Plant Management

City of Austin Electric Utility Department - Analyzed the 1994 Operating Budget for the South Texas Nuclear Project (STNP) and assisted in the development of long-term performance and expense projections and divestiture strategies for Austin's ownership interest in the STNP.

City of Austin Electric Utility Department - Analyzed and provided recommendations regarding the 1991 capital and O&M budgets for the South Texas Nuclear Project.

Sam Rayburn G&T Electric Cooperative - Developed and conducted operational monitoring program relative to minority owner's interest in Nelson 6 Coal Station operated by Gulf States Utilities.

KAMO Electric Cooperative, City of Brownsville and Oklahoma Municipal Power Agency - Directed an operational audit of the Oklaunion coal-fired power plant.

Sam Rayburn G&T Electric Cooperative - Conducted a management/technical assessment of the Big Cajun II coal-fired power plant in conjunction with ownership feasibility studies for the project.

Kamo Electric Power Cooperative - Developed and conducted operational monitoring program for client's minority interest in GRDA Unit 2 Coal Fired Station.

Northeast Texas Electric Cooperative - Developed and conducted operational monitoring program concerning NTEC's interest in Pirkey Coal Station operated by Southwestern Electric Power Company and Dolet Hills Station operated by Central Louisiana Electric Company.

Corn Belt Electric Cooperative/Central Iowa Power Cooperative - Perform operational monitoring and budget analysis on behalf of co-owners of the Duane Arnold Energy Center.

PRESENTATIONS

Quantifying Impacts of Electric Restructuring: Dynamic Analysis of Power Markets, 1997 NARUC Winter Meetings, Committee on Finance and Technology.

Quantifying Costs and Benefits of Electric Utility Deregulation: Dynamic Analysis of Regional Power Markets, International Association for Energy Economics, 1996 Annual North American Conference.

Railroad Rates and Utility Dispatch Case Studies, 1996 EPRI Fuel Supply Seminar.

EXHIBIT SN-2
EPE RESPONSE TO RFI CEP-2-3

DOCKET NO. 50277

APPLICATION OF EL PASO	§	
ELECTRIC COMPANY TO AMEND	§	BEFORE THE
ITS CERTIFICATE OF	§	
CONVENIENCE AND NECESSITY	§	PUBLIC UTILITY COMMISSION
FOR AN ADDITIONAL	§	
GENERATING UNIT AT THE	§	OF TEXAS
NEWMAN GENERATING STATION	§	

EL PASO ELECTRIC COMPANY'S RESPONSE TO
CITY OF EL PASO'S SECOND REQUEST FOR INFORMATION
QUESTION NOS. CEP 2-1 THROUGH CEP 2-23

CEP 2-3:

Has EPE evaluated the need for and cost-effectiveness of adding Newman 6 in light of the increased economic and energy market price uncertainty related to the coronavirus pandemic. If not, explain why not. If so, provide the results and supporting calculations and assumptions for these analyses.

RESPONSE:

No. The selection of Newman Unit 6 as part of the 2017 All-Source RFP pre-dates the current coronavirus pandemic, which thus was not taken into consideration during the selection process. The long-term economic impact of coronavirus pandemic is not known at this time and it is too early in the pandemic timeline to assess if it may impact long-term peak demand. More specifically, EPE cannot predict at this time that the pandemic will depress demand to the extent that EPE can determine that it will not need the proposed unit in 2023 and thereafter to meet demand.

Preparer: Omar Gallegos — Title: Director – Resource Planning and Management

Sponsor: Omar Gallegos — Title: Director – Resource Planning and Management

EXHIBIT SN-3
EPE RESPONSE TO RFI CEP-1-16

DOCKET NO. 50277

APPLICATION OF EL PASO ELECTRIC COMPANY TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR AN ADDITIONAL GENERATING UNIT AT THE NEWMAN GENERATING STATION	§ § § § § § §	BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS

EL PASO ELECTRIC COMPANY'S RESPONSE TO
CITY OF EL PASO'S FIRST REQUEST FOR INFORMATION
QUESTION NOS. CEP 1-1 THROUGH CEP 1-26

CEP 1-16:

Provide the following information for each EPE generating unit:

a. Net generation for each of the last five years

b. Average capacity factor for each of the last five years

c. Average net heat rate for each of the last five years

d. Average annual equivalent availability factor for each of the last five years

e. Average equivalent availability during summer peak daily hours for each of the last five years

f. Average variable production cost ($/MWh) for each of the last five years

g. Total fuel cost for each of the last five years

h. Total O&M cost for each of the last five years

i. Total capital additions for each of the last five years

j. Average cost of fuel burned ($/MMBtu) for each of the last five years

k. Total starts for each of the last five years

l. Equivalent forced outage hours for each of the last five years

m. Planned outage hours for each of the last five years

106

Average Equivalent Availability during summer peak months (May - Sept) (%)

	YEAR				
UNIT	**2015**	**2016**	**2017**	**2018**	**2019**
Rio Grande 6	100.0	99.7	98.9	98.6	-
Rio Grande 7	99.0	97.4	96.7	96.1	95.7
Rio Grande 8	92.9	89.0	99.3	82.1	98 9
Rio Grande 9	95.7	43.3	96.8	95.0	89.6
Newman Unit 1	88.0	100.0	38.5	84.0	99.4
Newman Unit 2	95.8	96.8	85.9	37.6	97.5
Newman Unit 3	98.5	92.1	98.3	92.5	88.4
Newman Unit 4	95.0	35.4	97.6	86.9	84 3
Newman Unit 5	75.3	77.8	64 8	97.0	91 5
Copper	98 1	96.0	98 1	95.1	94 5
Montana Unit 1	93.6	94.5	99.8	80 0	97 8
Montana Unit 2	96.3	99.7	93.3	96.4	94.3
Montana Unit 3	-	99.7	91.1	96.7	98.7
Montana Unit 4	-	-	99 3	94.2	97.1
Palo Verde 1	98.4	81.4	96.7	99.4	92.4
Palo Verde 2	98 7	100.0	92.6	95 3	96.0
Palo Verde 3	94.2	97.7	92.2	91.0	97.9
Four Corners 4	71.8	55.6	-	-	-
Four Corners 5	79.4	58.9	-	-	-

Notes:

Rio Grande 6 on inactive reserve for all of 2019
Montana Unit 3 COD 5/3/2016
Montana Unit 4 COD 9/15/2016
Equivalent Availability during summer peak daily hours is not tracked by EPE
EPE sold its share in the Four Corners plant in July 2016
Four Corners 4&5 Average Equivalent Availability during summer peak months May -June 2016

EXHIBIT SN-4
EPE RESPONSE TO RFI CEP-2-13

DOCKET NO. 50277

APPLICATION OF EL PASO ELECTRIC COMPANY TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY FOR AN ADDITIONAL GENERATING UNIT AT THE NEWMAN GENERATING STATION	§ § § § § § §	BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS

EL PASO ELECTRIC COMPANY'S RESPONSE TO
CITY OF EL PASO'S SECOND REQUEST FOR INFORMATION
QUESTION NOS. CEP 2-1 THROUGH CEP 2-23

CEP 2-13:

Provide the number and total customer minutes of interruption due to generation supply shortages or generation outages during each of the last 10 years.

RESPONSE:

This question is understood to ask about interruption of firm customers rather than interruptible customers.

On February 2nd, 3rd, and 4th, 2011, the Southwest Region of the United States experienced unusually low temperatures that affected numerous entities in Arizona, New Mexico, and Texas. During this event, EPE experienced outages to numerous local generating units that resulted in approximately 361 hours and 23 minutes of total interruption to customers due to rolling managed outages. This was the only incident in the past 10 years where an interruption of generation supply directly caused customer interruptions.

Preparer: Abel Bustillos Title: Manager Grid Operations

Sponsor: David C. Hawkins Title: Vice President – Generation, System Planning and Dispatch

EXHIBIT SN-5
ERCOT SOLAR CAPACITY CREDIT

Seasonal Assessment of Resource Adequacy for the ERCOT Region
Summer 2020 - Preliminary
Release Date: March 5, 2020

Forecasted Capacity and Demand

Operational Resources (thermal and hydro), MW	65,099	Based on current Seasonal Maximum Sustainable Limits reported through the unit registration process
Switchable Capacity Total, MW	3,490	Installed capacity of units that can interconnect with other Regions and are available to ERCOT
Less Switchable Capacity Unavailable to ERCOT, MW	(734)	Based on survey responses of Switchable Resource owners
Available Mothballed Capacity, MW	483	Based on seasonal Mothball units plus Probability of Return responses of Mothball Resource owners
Capacity from Private Use Networks, MW	3,366	Average grid injection during the top 20 summer peak load hours over the last three years, plus the forecasted net change in generation capacity available to the E
Coastal Wind, Peak Average Capacity Contribution, MW	2,073	Based on 63% of installed capacity for coastal wind resources (summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Panhandle Wind, Peak Average Capacity Contribution, MW	1,279	Based on 29% of installed capacity for panhandle wind resources (summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Other Wind, Peak Average Capacity Contribution, MW	2,587	Based on 16% of installed capacity for other wind resources (summer season) per ERCOT Nodal Protocols Section 3.2.6.2.2
Solar Utility-Scale, Peak Average Capacity Contribution, MW	1,728	Based on 76% of rated capacity for solar resources (summer season) per Nodal Protocols Section 3.2.6.2 2
Storage, Peak Average Capacity Contribution, MW	-	Based on 0% of rated capacity (summer season), resources assumed to provide regulation reserves rather than sustained capacity available to meet peak loads
RMR Capacity to be under Contract	-	
Capacity Pending Retirement, MW	-	Announced retired capacity that is undergoing ERCOT grid reliability reviews pursuant to Nodal Protocol Section 3.14.1.2
Non-Synchronous Ties, Capacity Contribution, MW	850	Based on import flows during most recent Energy Emergency Alert (EEA) intervals for the summer season.
Planned Thermal Resources with Signed IA, Air Permits and Water Rights, MW	101	Based on in-service dates provided by developers
Planned Coastal Wind with Signed IA, Peak Average Capacity Contribution, MW	468	Based on in-service dates provided by developers and 63% summer capacity contribution for coastal wind resources
Planned Panhandle Wind with Signed IA, Peak Average Capacity Contribution, MW	-	Based on in-service dates provided by developers and 29% summer capacity contribution for panhandle wind resources
Planned Other Wind with Signed IA, Peak Average Capacity Contribution, MW	518	Based on in-service dates provided by developers and 16% summer capacity contribution for other wind resources
Planned Solar Utility-Scale, Peak Average Capacity Contribution, MW	1,111	Based on in-service dates provided by developers and 76% summer capacity contribution for solar resources
Planned Storage, Peak Average Capacity Contribution, MW	-	Based on in-service dates provided by developers and 0% summer capacity contribution for storage resources
[a] Total Resources, MW	82,417	
[b] Peak Demand, MW	76,696	Based on average weather conditions at the time of the summer peak for 2004-2018
[c] Reserve Capacity [a - b], MW	5,721	

EXHIBIT SN-6
EPE HISTORICAL PEAK DEMAND DATA

2015-2019 EPE Historical Peak Demands (MW)

	Annual Peak Hour	100th Highest Peak Hour	MW Difference Peak vs 100th Highest Hour
2015	1,794	1,635	159
2016	1,892	1,704	188
2017	1,935	1,683	252
2018	1,929	1,767	162
2019	1,977	1,798	179
			188

Data Source is EPE's response to CEP 1-6.