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## SOAH DOCKET NO. 473-22-04394 PUC DOCKET NO. 53719

APPLICATION OF ENTERGY \$ BEFORE THE STATE OFFICE TEXAS, INC. FOR AUTHORITY TO \$ OF CHANGE RATES \$ ADMINISTRATIVE HEARINGS

REBUTTAL TESTIMONY

OF

ANASTASIA R. MEYER

ON BEHALF OF

ENTERGY TEXAS, INC.

**NOVEMBER 2022** 

# ENTERGY TEXAS, INC. REBUTTAL TESTIMONY OF ANASTASIA R. MEYER SOAH DOCKET NO. 473-22-04394 PUC DOCKET NO. 53719

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## **EXHIBIT**

Exhibit ARM-R-1 Nelson 6 Analysis (HSPM)

## 1 I. <u>INTRODUCTION AND PURPOSE</u>

- 2 Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION.
- 3 A. My name is Anastasia R. Meyer. My business address is 2107 Research Forest
- Drive, The Woodlands, TX 77380. I am employed by Entergy Texas, Inc. ("ETI"
- or the "Company") as Manager of Resource Planning.

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- 7 Q2. ARE YOU THE SAME ANASTASIA R. MEYER WHO FILED DIRECT
- 8 TESTIMONY IN THIS CASE ON BEHALF OF ETI?
- 9 A. Yes.

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- 11 Q3. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?
- 12 A. My testimony responds to certain arguments raised by Office of Public Utility
- 13 Counsel ("OPUC") witness Constance T. Cannady; the Cities of Anahuac,
- Beaumont, Bridge City, Cleveland, Dayton, Groves, Houston, Huntsville, Liberty,
- Montgomery, Navasota, Nederland, Oak Ridge North, Orange, Pine Forest,
- Pinehurst, Port Arthur, Port Neches, Roman Forest, Rose City, Shenandoah,
- 17 Silsbee, Sour Lake, Splendora, Vidor, West Orange, and Willis ("Cities")
- witnesses Mark E. Garrett and David J. Garrett; Texas Industrial Energy
- 19 Consumers ("TIEC") witness Jeffry Pollock; and Sierra Club witness Devi Glick
- regarding ETI's deactivation date assumptions or depreciation expense. I also
- address the capacity benefits of the HEB pilot projects for meeting customers'
- needs in the Midcontinent Independent System Operator, Inc. ("MISO") market in

response to the direct testimony of Mr. Pollock and OPUC witness Evan D.

Evans.

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## II. DEACTIVATION DATE ASSUMPTIONS

5 Q4. IS ETI USING DEACTIVATION DATE ASSUMPTIONS IN THIS CASE 6 THAT DIFFER FROM THOSE USED IN ITS LAST DEPRECIATION 7 STUDY? 8 A. Yes. First, ETI is seeking to update the useful lives of Nelson 6 and Big Cajun 2 9 Unit 3 to reflect its most current deactivation date assumptions for these facilities. 10 Nelson 6 and Big Cajun 2 are the only two coal power plants left in Louisiana. 11 and ETI estimates that the owners will have to spend at least \$486.6 million in 12 2020 dollars in environmental compliance costs to continue to operate these units 13 beyond 2030. This value is comprised of \$430.8 million for Dry Flue Gas 14 Desulfurization sulfur dioxide ("SO<sub>2</sub>") controls at Nelson 6, \$12.3 million for the 15 Selective Non-Catalytic Reduction ("SNCR") nitrogen oxides ("NOx") controls at 16 Nelson 6, and \$25.5 million for Dry Sorbent Injection SO<sub>2</sub> controls at Big Cajun 2 17 Unit 3. However, under the Regional Haze Program and absent a deactivation of 18 Nelson 6 in the 2028-2030 time period, there is the possibility that a Selective 19 Catalytic Reduction ("SCR") retrofit could be required as opposed to an SNCR 20 retrofit. If that is the case, the estimated cost for the NOx controls would be \$214 21 million for the SCR retrofit rather than the \$12.3 million for the SNCR retrofit. 22 ETI's anticipated spend based on its ownership percentage is estimated to be

approximately \$136 million if a SNCR is required or approximately \$192 million if a SCR is required.

The recently-proposed revisions to the Cross-State Air Pollution Rule identified both Nelson 6 and Big Cajun 2 Unit 3 as units for which SCR NOx control retrofits were presumed by the U.S. Environmental Protection Agency ("EPA") to occur prior to the 2026 ozone season. Should the EPA finalize these revisions as proposed, an additional investment of approximately \$443.7 million could be required to complete SCR retrofits on these two coal-fired units.

ETI conducted deactivation analyses and determined that it was more economic to deactivate these units earlier than the dates included in ETI's last depreciation study from Docket No. 48371. The deactivation date assumption for Nelson 6 changed from 2042 to 2028, and Big Cajun 2 Unit 3 changed from 2043 to 2025.

Next, the deactivation date assumption for Sabine 1 was extended by one year, from 2022 to 2023. This was based on ETI's long-term resource planning process that determined that ETI customers could save several hundred million dollars on transmission upgrades associated with Orange County Advanced Power Station ("OCAPS") with the transfer of ETI's network transmission service from Sabine 1, 3, and 4 to the new unit. However, MISO's rules for this transfer place a three-year limit on the amount of time the deactivating units can be out of service prior to being replaced. I discussed this is more detail in my direct testimony.

- 1 Q5. WHY DID THE DEPRECIATION EXPENSE CHANGE FOR GENERATION
- 2 PLANTS THAT DO NOT HAVE CHANGED DEACTIVATION DATE
- 3 ASSUMPTIONS?
- 4 A. The deactivation date assumptions for Sabine 3 and 4 remained the same as
- 5 reflected in the Docket No. 48371 depreciation study. However, in order to keep
- those units running in a safe and reliable manner, ETI has invested additional
- 7 capital in these units over recent years which result in increases to ETI's
- 8 depreciation expense, as discussed in more detail by Company witness Dane A.
- 9 Watson.

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- Q6. WHICH INTERVENOR WITNESSES ADDRESS THE DEPRECIATION
- 12 EXPENSE AND DEACTIVATION DATE ASSUMPTIONS?
- 13 A. Ms. Glick essentially agrees with ETI's deactivation date assumptions of 2028
- and 2025 for Nelson 6 and Big Cajun 2 Unit 3, but takes it one step further in
- arguing that ETI should commit to retiring the units by those dates.<sup>1</sup> Mr. Pollock
- asserts that the Public Utility Commission of Texas ("Commission" or "PUCT")
- should reject ETI's proposed deactivation dates for Nelson 6 and Big Cajun 2
- 18 Unit 3, but concedes that it is reasonable to reduce the lifespan for Big Cajun 2
- 19 Unit 3 to 2032 since the majority owners have committed to retiring that unit by
- 20 that date.<sup>2</sup> Mr. Pollock also makes arguments about the depreciation rate for

Direct Testimony of Devi Glick at 7 (Oct. 26, 2022) ("Glick Direct").

Direct Testimony of Jeffry Pollock at 8 (Oct. 26, 2022) ("Pollock Direct").

Sabine 4 and the useful life of the Montgomery County Power Station

("MCPS").3

While Ms. Cannady does not dispute the Company's analyses supporting its deactivation date assumptions, she suggests a "Retiring Plant Rate Rider" for Big Cajun 2 Unit 3 and Sabine Units 1, 3, and 4, referencing SWEPCO Docket Nos. 46449 and 51415, and argues that the current depreciation rates should apply. Likewise, Mr. Mark Garrett and Mr. David Garrett argue that the useful lives for Nelson 6, Big Cajun 2 Unit 3, and Sabine Units 1, 3, and 4 should be the same as those approved in Docket No. 48371 based on Docket Nos. 46449 and 51415.6

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12 Q7. ARE THERE OTHER ETI WITNESSES THAT PROVIDE REBUTTAL
13 TESTIMONY RELATING TO THESE ISSUES?

14 A. Yes. Mr. Watson discusses the Company's various service life selections and
15 setting the depreciation rates, and Company witness Jess K. Totten addresses
16 certain intervenors' suggested ratemaking treatment from a policy perspective, as
17 well as the Commission decisions in Docket Nos. 51415 and 46449.

Pollock Direct at 7-10 and 16-17.

Direct Testimony and Workpapers of Constance T. Cannady at 12-13 (Oct. 26, 2022) ("Cannady Direct").

Mr. Mark Garrett incorrectly refers to Big Cajun 2 Unit 3 as "Big Cajun Units 2 and 3" in his testimony. Direct Testimony of Mark E. Garrett at 65-66 (Oct. 26, 2022) ("Mark Garrett Direct"). To clarify, ETI is a minority owner of only one unit at Big Cajun 2—Big Cajun 2 Unit 3.

Direct Testimony of David J. Garrett at 5 (Oct. 26, 2022) ("David Garrett Direct"); Mark Garrett Direct at 64–75.

## Nelson 6 and Big Cajun 2 Unit 3 1 Α. FOR SOME OF THEIR ARGUMENTS REGARDING THE COAL PLANT 2 Q8. 3 RETIREMENTS, MS. CANNADY, MR. POLLOCK, AND MR. MARK GARRETT RELY ON THE COMMISSION'S DECISIONS IN DOCKET NOS. 4 5 51415 AND 46449. ARE YOU FAMILIAR WITH THOSE DECISIONS? 6 A. Yes. It is my understanding that SWEPCO retired Welsh Unit 2 in April 2016, 7 which occurred before the end of its test year ending June 30, 2016 in Docket No. 46449.7 In Docket No. 51415, while SWEPCO's retirement of Dolet Hills on 8 9 December 31, 2021 did not fall within its historical test year, the plant was retired 10 before the Commission issued its final order on January 14, 2022.8 11 HOW ARE ETI'S DEACTIVATION DATE ASSUMPTIONS FOR ITS COAL 12 **Q**9. 13 PLANTS DIFFERENT? 14 A. Unlike Docket Nos. 51415 and 46449, the deactivation dates of 2028 for Nelson 6 and 2025 for Big Cajun 2 Unit 3 do not fall within ETI's test year ending 15 December 31, 2021, or before the Company expects a final order from the 16 17 Commission in this case. ETI witness Jess K. Totten further explains why the 18 SWEPCO precedent is inapplicable under the facts present here.

<sup>7</sup> Application of Southwestern Electric Power Company for Authority to Change Rates, Docket No. 46449, Order on Rehearing at Finding of Fact Nos 7 and 65 (Mar. 19, 2018).

<sup>&</sup>lt;sup>8</sup> Application of Southwestern Electric Power Company for Authority to Change Rates, Docket No. 51415 Order at Finding of Fact No. 51 (Jan. 14, 2022).

- 1 Q10. AT PAGES 13-14 OF HER DIRECT TESTIMONY, MS. CANNADY
- 2 SUGGESTS THAT A PLANT DEACTIVATION IS THE SAME AS A
- 3 RETIREMENT. HOW DO YOU RESPOND?
- 4 A. A deactivation decision does not necessarily mean that the unit is shut down 5 permanently. Once a deactivation decision is made, the Company will then look at whether a permanent retirement of the plant is in the best interest of its 6 7 customers based on market conditions. A retirement decision means that the unit is shut down completely and is not expected to return to service in the future. For 8 9 example, as was discussed in my direct testimony in Docket No. 48371, ETI first 10 decided to deactivate Sabine 2 effective June 1, 2016, and then later that year 11 decided it was in the best interest of customers to retire the unit effective October

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- 14 Q11. MR. POLLOCK SUGGESTS THAT ETI'S DEACTIVATION STUDIES DO
- 15 NOT ESTABLISH THAT IT IS ECONOMIC FOR THESE RESOURCES TO
- BE RETIRED. DO YOU AGREE?

1, 2016.<sup>9</sup>

17 A. No, I do not. Mr. Pollock's assertion that the projected economic benefits are

marginal and indicate no clear benefit to deactivation also implies there is no clear

benefit to ETI customers of continued operation. Mr. Pollock's argument ignores

the certain and impending environmental compliance costs faced by ETI in

connection with co-owning and operating these coal units. Indeed, Mr. Pollock

Direct Testimony of Anastasia R. Meyer at 9-10 (Jul. 1, 2022) ("Meyer Direct").

recognizes the fact that ETI cannot avoid these costs if it continues to operate Nelson 6 and Big Cajun 2 Unit 3.10

Assuming the analyses are neutral, for the sake of argument, the high risks of substantial environmental compliance costs in 2030 weigh in favor of deactivating the units. These risks are heightened by the fact that the Company could face even higher environmental costs than currently anticipated (e.g., needing the \$214 million SCR retrofit for Nelson 6 as opposed to the \$12.3 million SNCR retrofit) and the capital and operation and maintenance ("O&M") costs associated with maintaining aging units. As stated in my direct testimony, Nelson 6 is 40 years old and Big Cajun 2 Unit 3 is 39 years old.

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- 12 Q12. DOES MR. POLLOCK ACKNOWLEDGE THE MAJORITY OWNERS'
  13 PUBLIC ANNOUNCEMENT TO RETIRE BIG CAJUN 2 UNIT 3?
- 14 A. Yes. Because the majority owners committed to retiring Big Cajun 2 Unit 3 no 15 later than December 31, 2032, he recommends reducing the useful life for that 16 unit by 10 years in determining the appropriate depreciation expenses.<sup>11</sup>

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18 Q13. IS IT NECESSARY TO CONDUCT DEACTIVATION ANALYSES OUT
19 THROUGH THE ORIGINAL 60-YEAR USEFUL LIVES TO DETERMINE

<sup>&</sup>lt;sup>10</sup> TIEC Response to ETI 3-10 (Nov. 10, 2022).

<sup>11</sup> Pollock Direct at 16.

## THAT THE REVISED DEACTIVATION DATE ASSUMPTIONS BENEFIT

### CUSTOMERS?

A.

No. The economic analyses are intended to measure the economics of continued operation of the units versus other reasonable alternatives. The condition of the units, their ability to remain operational, and environmental compliance investments are factors considered in determining the units' potential remaining useful lives.

In the case of Nelson 6, an earlier analysis evaluated whether it was economic to operate Nelson 6 as a coal unit long-term through 2042 or repower to a gas resource. This repower analysis concluded it was not economic for customers to continue burning coal long term at Nelson 6. Thus, the Nelson 6 analyses provided as Exhibits ARM-3 and ARM-4 to my direct testimony only evaluated shorter-term alternatives through 2030. While these analyses supported a deactivation date as early as 2026 as being beneficial for customers, ETI assigned the unit with a deactivation date of 2028 to provide it with adequate time to procure replacement capacity.

For Big Cajun 2 Unit 3, Cleco has committed to retiring that unit by 2032, and ETI's analysis assumed a range of short-term dates between 2025 and the 2032 commitment. It is reasonable for ETI to assume that Cleco could retire the unit earlier than 2032 given the increasing environmental compliance

<sup>&</sup>lt;sup>12</sup> See Exhibit ARM-R-1 (HSPM).

1		requirements, as opposed to investing the capital to operate the unit through that
2		time.
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4	Q14.	WERE THE ASSUMPTIONS USED IN THE NELSON 6 AND BIG CAJUN 2
5		UNIT 3 DEACTIVATION ASSESSMENTS REASONABLE?
6	A.	Yes. ETI relied upon subject matter experts from the Power Generation and
7		Environmental Services teams to assess the cost of continued operation of the
8		units, including the cost to comply with environmental regulations. ETI relied
9		upon a range of reasonable commodity and capacity value assumptions and found
10		that deactivating Nelson 6 prior to 2030 was economic for ETI's customers.
11		Similarly, for the Big Cajun 2 Unit 3 assessment, ETI analyzed the
12		benefits to ETI customers should the unit deactivate in 2025 relative to 2028 and
13		2032 across a range of reasonable assumptions including:
14		• coal prices based on prices from Energy Ventures Analysis, Inc. and those
15		assumed for Nelson 6,
16		• ongoing capital and O&M cost assumptions, and
17		replacement capacity value.
18		The range showed how the economics could change across varying drivers and
19		indicated the 2025 deactivation scenarios are economically favorable for ETI
20		customers.

1	Q15.	MS. GLICK CONTENDS THAT NELSON 6 AND BIG CAJUN 2 UNIT 3
2		SHOULD BE DEACTIVATED EXPEDITIOUSLY BECAUSE EACH
3		INCURRED COSTS IN EXCESS OF THEIR MARKET ENERGY AND
4		CAPACITY VALUE FROM 2015 TO 2021. HOW DO YOU RESPOND?
5	A.	Ms. Glick's analysis is misguided and not based on sound resource planning for a
6		regulated utility. Regulated utilities, such as ETI, have an obligation to serve their
7		customers reliably at the lowest reasonable cost, while considering other
8		important planning factors such as risk and sustainability. Comparing a long-term
9		resource's cost to short-term market energy and capacity prices fails to account
10		for the long-term benefits the resource provides. Ms. Glick's approach is similar
11		to a merchant generator's in determining profitability, as opposed to a regulatory
12		utility that is obligated to reliably serve its customers.
13		If utilities such as ETI were to adopt Ms. Glick's faulty proposal and
14		deactivate units that incurred costs in excess of short-term market energy and
15		capacity value, then thousands of megawatts of capacity would be deactivated
16		beyond just Nelson 6 and Big Cajun 2 Unit 3, raising the need for additional
17		capacity and increasing the risk around system reliability.
18		
19	Q16.	MS. GLICK SUGGESTS THAT BY DELAYING NELSON 6'S RETIREMENT
20		FROM 2026 TO 2028, THE COMPANY WILL INCUR AN ADDITIONAL
21		\$22 MILLION IN OTHERWISE AVOIDABLE FIXED COSTS IN NET

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1		PRESENT VALUE TERMS. DO YOU HAVE ANY CONCERNS WITH HER
2		ANALYSIS?
3	A.	Yes, I do. Ms. Glick's calculation only measures the Nelson 6 capital and O&M
4		costs. It does not factor in changes in variable supply cost or the fixed cost to
5		procure alternative power supply. In other words, her analysis shows only how
6		much capital and O&M costs the utility would save by retiring the unit, while
7		completely ignoring ETI's obligation to provide reliable service to customers and
8		the cost of procuring substitute power from other sources. This one-sided
9		analysis is flawed and unreliable.
10		ETI's economic analysis, on the other hand, properly considers costs and
11		benefits relevant to evaluate customer economics across a range of reasonable
12		assumptions. Additionally, depending on market prices, with the deactivation of
13		resources earlier than ETI is currently forecasting, the replacement capacity that
14		would be needed to meet ETI's obligations in the MISO market could exceed the
15		\$22 million that Ms. Glick claims customers could save.
16		
17	Q17.	MS. GLICK SUGGESTS THAT ETI WAS NOT PROACTIVE IN
18		EVALUATING REPLACEMENT RESOURCES FOR NELSON 6. DO YOU
19		AGREE?
20	A.	No, I do not. While ETI has known about the technology and potential need for

these environmental upgrades, the timing for these retrofits has been a moving

target. ETI has continued to monitor this potential timing as part of its ongoing resource planning.

ETI is continually assessing its existing units and looking at various resource alternatives to meet the capacity needs of its customers. This led to ETI changing its deactivation assumption for Nelson 6 from 2042 to 2028 when the market conditions and environmental compliance requirement risks outweighed the benefits of continued operations of that resource for customers. The Nelson 6 analysis evaluated the deactivation of the unit relative to a combustion turbine ("CT"), which is an alternative generation resource with similar attributes as Nelson 6. However, simply because ETI compared it to a CT for purposes of the economic analysis, does not mean that Nelson 6's capacity will be replaced with only that resource. Rather, the deactivation date assumptions are an important aspect in ETI's overall resource planning, as described in more detail below.

Q18. AT PAGE 20 OF HER DIRECT TESTIMONY, MS. GLICK ASSERTS THAT

THE DEACTIVATION ANALYSES DID NOT COMPARE THE COSTS OF

RETIREMENT OF EACH UNIT TO ALTERNATIVE RESOURCES. HOW

DO YOU RESPOND?

A. While true with respect to the analyses themselves, ETI's deactivation date

assumptions are a factor for consideration in its resource planning process, which does consider alternative resources. Specifically, if and when there is any projected short position as ETI anticipates in the near future, the Company

analyzes and determines the optimal resource mix that best meets its customers' needs to address that shortfall. Such resources include not only CT resources, but also solar, wind, and battery storage resources as well as potential existing resource extensions, if possible. Thus, it is likely that there will be a mix of alternative resources that will replace the coal unit capacity for Nelson 6 and Big Cajun 2 Unit 3.

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8 Q19. MS. GLICK RECOMMENDS THAT ETI COMMIT TO RETIREMENT

9 DATES FOR NELSON 6 AND BIG CAJUN 2 UNIT 3 OF 2028 AND 2025,

RESPECTIVELY. DOES ETI HAVE THE ABILITY TO RETIRE THESE

UNITS UNILATERALLY?

No. ETI is a minority co-owner in both Nelson 6 and Big Cajun 2 Unit 3, and therefore, cannot unilaterally commit to deactivating or retiring those units by a specific date. For Big Cajun 2 Unit 3, ETI is subject to the decision of the majority owner and operator Cleco as to the exact retirement date of that resource.

As stated in my direct testimony, Nelson 6 is jointly owned by ETI (29.75%), Entergy Louisiana, LLC (40.25%), EAM Nelson Holding, LLC (10.9%), Sam Rayburn G&T, Inc. (10%), and East Texas Electric Cooperative, Inc. (10.90%). The Joint Ownership Participation and Operating Agreement requires a vote of the representatives of one or more co-owners having in excess of 50% of the ownership interests to deactivate the unit but each of the

representatives representing 100% of the ownership interests to decommission the unit.<sup>13</sup> Thus, ETI cannot commit to deactivating or retiring the unit on its own.

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Q20. DO YOU HAVE CONCERNS WITH MS. GLICK'S PROPOSAL TO LIMIT ETI'S SPENDING AT NELSON 6 AND BIG CAJUN 2 UNIT 3 TO ONLY WHAT IS REQUIRED TO MAINTAIN RELIABLE OPERATIONS

THROUGH 2026 AND 2025, RESPECTIVELY?

Yes. I have several concerns with limiting the spend at these facilities as Ms. Glick suggests. First, ETI has an obligation to reliably serve its customers. In order to do so, ETI needs to be able to make the appropriate investments in the units to ensure the safe operations and compliance with all federal, state, and local regulatory requirements until the units are actually retired from service. Additionally, ETI is subject to the contractual provisions relating to its share of the capital investments and O&M under the co-ownership agreements. Further, it is unnecessary and would be a waste of time, money, and judicial resources to require ETI to seek pre-approval for any investments at these plants above \$1 million between now and when they retire. ETI's capital investment in these units would be subject to a prudence review in its next base rate case.

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ETI Response to TIEC 4-2, TP-53719-00TIE004-X002-003 (HSPM) at Sections 4.1.3 and 4.1.5 (Oct. 13, 2022).

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#### B. Sabine 4

WHAT IS MR. POLLOCK'S PROPOSAL WITH RESPECT TO SABINE 4? 2 Q21.

A. Mr. Pollock argues that the current depreciation rate should remain in effect because the retirement decision is contingent on the receipt of a Certificate of 4 5 Convenience and Necessity ("CCN") for OCAPS, placing OCAPS into

6 commercial operation in 2026, and MISO approval to retire the unit in 2026. 14

#### WHAT IS YOUR RESPONSE? Q22.

First, it would be inappropriate to retain the depreciation rate for Sabine 4 from Docket No. 48371 because ETI has made capital investment in the unit during the four years that have elapsed since then. While the 2026 deactivation date assumption for Sabine 4 is the same as the date included in ETI's last depreciation study in Docket No. 48371, the depreciation rates in ETI's last base rate case were based on the test year ending December 31, 2017. Given the four years between that test year and the test year ending December 31, 2021 in the current case, the depreciation rates should be updated to account for the recent capital additions that were needed in order to ensure the safe and reliable operations of the unit.

Second, at the November 10, 2022 PUCT Open Meeting, the Commission approved ETI's CCN application for OCAPS. Third, while the retirement decision is contingent on the commercial operation of OCAPS pursuant to the Generator Interconnection Agreement ("GIA") negotiated with MISO, it is not

Pollock Direct at 17.

contingent on OCAPS achieving a particular commercial operation date in 2026 or MISO's approval to retire the unit. MISO has already approved Sabine 4's retirement through its generator replacement process, which was used to negotiate the GIA for OCAPS. MISO will not be performing an Attachment Y reliability study for Sabine 4, and therefore, the retirement is dependent solely on OCAPS achieving commercial operation. Finally, the ALJs and Commissioner Glotfelty have indicated that the useful life of Sabine 4 is shorter than 60 years<sup>15</sup> and "should be deactivated as soon as a replacement can be found." For these reasons, the Commission should adopt ETI's proposed

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12 **C.** <u>MCPS</u>

depreciation rate for Sabine 4.

13 Q23. WHICH INTERVENOR'S TESTIMONY DO YOU ADDRESS IN THIS

14 SECTION OF YOUR TESTIMONY?

15 A. I am responding to Mr. Pollock's suggestion to extend the useful life for MCPS to 40 years.

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Open Meeting Tr. at 20:16-21 (Nov. 10, 2022) ("In an industrial heavy area, you need a lot of voltage support, and I think the Sabine plant – with the shutting down of Sabine 4, which I don't think 60-year useful life is worth – is accurate. I think it is a shorter useful life. And, therefore, I think that adding [OCAPS] is valuable for reliability.").

Application of Entergy Texas, Inc. to Amend its Certificate of Convenience and Necessity to Construct Orange County Advanced Power Station, Docket No. 52487, Proposal for Decision at 20 (Sept. 26, 2022).

- 1 Q24. PLEASE DESCRIBE THE BASIS FOR THE 30-YEAR USEFUL LIFE
- 2 ASSIGNED TO MCPS.
- 3 The determination to adopt a 30-year useful life for MCPS is based on the A. 4 equipment manufacturer Mitsubishi's position on the lifespan of its combined 5 cycle units, the Electric Power Research Institute's ("EPRI") Technology Summary Report for Combined Cycle Gas Turbine ("CCGT") technologies 6 (including the 2x1 Mitsubishi 501GAC technology used at MCPS), <sup>17</sup> and 7 Entergy's experience with owning and operating natural gas plants. <sup>18</sup> In addition 8 9 to MCPS, the Entergy Operating Companies have built three other combined cycle 10 gas turbine plants (Ninemile 6, J. Wayne Leonard, and Lake Charles), all of which are assumed to have 30-year lives. 19 The operating performance (e.g., reliability and 11 12 plant utilization) of each plant has been and continues to be consistent with this 13 assumption.<sup>20</sup>

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- 15 Q25. IS THE 30-YEAR LIFE WITHIN THE RANGE OF LIFESPANS IDENTIFIED
- 16 BY MR. POLLOCK?
- 17 A. Yes, as demonstrated in Mr. Pollock's Exhibit JP-3, CCGTs have used 30-year
- lifespans.<sup>21</sup> Moreover, Mr. Pollock has previously offered testimony

<sup>&</sup>lt;sup>17</sup> This report is included in my HSPM workpapers.

<sup>&</sup>lt;sup>18</sup> ETI Response to TIEC 2-2 (Oct. 3, 2022).

<sup>&</sup>lt;sup>19</sup> ETI Response to TIEC 2-3 (Oct. 3, 2022).

<sup>&</sup>lt;sup>20</sup> *Id*.

Pollock Direct at Exhibit JP-3; TIEC Response to ETI 3-5 (Nov. 11, 2022).

recommending that the useful life for assets should be based on a manufacturer's 1 warranty, including in Docket No. 51215.<sup>22</sup> As stated above, the manufacturer's 2 3 warranty in this case supports the assigned 30-year life for MCPS.

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#### DO YOU HAVE ADDITIONAL SUPPORT FOR THE 30-YEAR USEFUL 5 Q26.

#### 6 LIFE FOR MCPS?

7 A. Yes. In addition to the EPRI report mentioned above, there are other third-party 8 sources that provide additional support for a lifespan of 30 years or less for 9 CCGTs. Specifically, Lazard's Levelized Cost of Energy Analysis dated October 10 20 assumes lifespans of 20 years for CCGTs.<sup>23</sup> The National Renewable Energy 11 Laboratory 2022 Electricity Annual Technology Baseline also assumes a lifespan of 20 years for CCGTs.<sup>24</sup> And Sargent & Lundy's Combined-Cycle Plant Life 12 Assessments provides, "25 to 30 years is a typical expected operating life for a 13 combined-cycle power plant."25 14

TIEC Response to ETI 3-2 (Nov. 11, 2022).

Lazard's Levelized Cost of Energy Analysis—Version 15.0 at 18-19 (Oct. 2021), available at https://www.lazard.com/media/451881/lazards-levelized-cost-of-energy-version-150-vf.pdf.

See 2022 v1 Annual Technology Baseline Workbook Original 6-14-22 at "Natural Gas FE" tab row 18 columns J through O provided with my public workpapers.

Combined-Cycle Plant Life Assessments, Sargent & Lundy, available at https://sargentlundy.com/wpcontent/uploads/2017/05/Combined-Cycle-PowerPlant-LifeAssessment.pdf.

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## Q27. HOW DO YOU RESPOND TO MR. POLLOCK'S SUGGESTION THAT ETI

## 2 WOULD BE SHORTENING THE LIFESPAN OF MCPS?

ETI has assumed a 30-year life assumption for MCPS since it first began studying 3 A. 4 the 2021 capacity needs of its customers. The CCN amendment ETI received for 5 MCPS in Docket No. 46416 is based on that 30-year life. Mr. Pollock's contention that ETI is proposing to shorten the lifespan to 30 years is based on the 6 7 lifespan included in the stipulation agreement in Docket No. 51381, ETI's proceeding to establish a Generation Cost Recovery Rider ("GCRR") for 8 MCPS.<sup>26</sup> He fails to mention that: (1) ETI proposed a 30-year useful life for 9 MCPS in the GCRR proceeding and only agreed to a longer lifespan as part of the 10 overall settlement of that specific case, and (2) the stipulation was limited to 11 Docket No. 51381 "and any GCRR proceeding prior to ETI's next base rate 12 case."<sup>27</sup> As part of Docket No. 51381, ETI explained that a 30-year life is 13 standard, appropriate, and reasonable for a CCGT unit and the depreciation 14 expense would be addressed in ETI's next full base rate case.<sup>28</sup> The stipulation 15 16 reflected a compromise in Docket No. 51381 and contemplated ETI's opportunity

Application of Entergy Texas, Inc. to Establish a Generation Cost Recovery Rider related to the Montgomery County Power Station, Docket No. 51381, Unopposed Stipulation and Settlement Agreement at 2-3 (Oct. 13, 2021).

<sup>&</sup>lt;sup>27</sup> *Id*.

See Docket No. 51381, Direct Testimony of Allison P. Lofton at 10-11 ("The Engineering, Procurement, and Construction agreement, pursuant to which MCPS was constructed, expressly states as a Project Objective that the MCPS facility is constructed to achieve a 30-year useful life. It is also my understanding that a 30-year useful life has been a standard assumption for many years in ESL's economic analyses for combined-cycle-gas turbine ('CCGT') units, including those conducted for ETI... I note that the depreciation expense issue will also be addressed in the full base rate proceeding...") (Oct. 5, 2020).

1		to correct the useful life for MCPS in its next base rate case. In addition, it is my
2		understanding that settled cases are not binding or regarded as precedent.
3		
4	Q28.	DO YOU HAVE CONCERNS WITH MR. POLLOCK'S PROPOSAL TO
5		INCREASE THE USEFUL LIFE FOR MCPS TO 40 YEARS?
6	A.	Yes. It is my understanding that the useful life should reflect ETI's expectation or
7		how long the asset will be in service. When intervenors like TIEC attempt to
8		artificially inflate the useful lives of assets to reduce the depreciation expense, i
9		can lead to substantial undepreciated plant when the asset is retired causing a
10		mismatch between when the plant is used and useful and when the costs are
11		included in customers' rates.
12		
13		III. <u>HEB BACKUP GENERATORS</u>
14	Q29.	WHAT IS THE PURPOSE OF THIS SECTION OF YOUR REBUTTAL
15		TESTIMONY?
16	A.	This section of my testimony addresses Mr. Pollock's assertions that the HEE
17		Backup Generators do not offer any capacity benefits to ETI's customers beyond
18		the host customer HEB.
19		
20	Q30.	WHAT IS THE PURPOSE OF THE HEB PILOTS?
21	A.	As discussed in the rebuttal testimony of Company witness Stuart Barrett, the

ability to: (a) meet a critical and demonstrated host customer need for enhanced reliability and resiliency, and (b) expand the breadth of available ETI resources for use in meeting incremental capacity and energy needs while diversifying the grid's operational flexibility and resiliency for the broader customer base.

A.

## Q31. PLEASE ELABORATE ON THE CAPACITY BENEFIT.

Mr. Barrett discusses the other benefits of the HEB Backup Generators. As discussed in both my direct and rebuttal testimonies, ETI undertakes long-term planning and commitments to long-term resources to fulfill its obligations to provide sufficient resources to serve customers reliably and economically while mitigating exposure to market and reliability risks. ETI's projected load exceeds its long-term resources, including peaking and reserve capacity. These DG resources, as well as the proposed future utility-owned DG, meet a portion of ETI's long-term capacity needs and the value of that capacity is the same as a long-term supply-side resource that would otherwise satisfy ETI's capacity needs. That value is best represented by the levelized fixed cost of a new-build CT, which is currently a standard planning assumption for the lowest-cost known option for adding long-term capacity that will serve in a peaking and reserve supply role.

Q32. DO YOU AGREE WITH MR. POLLOCK THAT THE MISO PLANNING RESOURCE AUCTION ("PRA") CLEARING PRICE IS THE APPROPRIATE

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## AVOIDED COST PROXY FOR EVALUATING THE VALUE OF THE DG CAPACITY?

No. MISO relies on Load Serving Entities ("LSEs") like ETI to engage in longterm generation planning.<sup>29</sup> According to MISO, LSEs "bear responsibility for ensuring resource adequacy."<sup>30</sup> This means that LSEs such as ETI, subject to the oversight of their retail regulators, are responsible for planning enough generation to meet their expected needs and for supporting the construction and ongoing operation of that generation by making long-term financial commitments through ownership and/or long-term bilateral contracts. The market price of capacity in MISO does not reflect ETI's avoided cost of long-term capacity. While MISO relies on LSEs to plan enough generation to meet their expected capacity needs, its resource adequacy construct recognizes that some LSEs will have a surplus and others will have a shortfall on a short-term basis. This may be due to the lumpiness of capacity additions, the need to accelerate a unit retirement, differences between actual and expected demand, etc. Accordingly, MISO's PRA allows LSEs to "balance" their capacity positions on a short-term basis—those with a surplus may sell their excess, and those with a shortfall may purchase their residual needs. Because the DG resources at issue here offset ETI's long-term

<sup>&</sup>quot;A fundamental assumption of the [Resource Adequacy] construct is that all LSEs are appropriately planning long-term." RAN Reliability Requirements and Sub-Annual Construct, a presentation by MISO to the Resource Adequacy Subcommittee at 26 (Mar. 10, 2021).

<sup>&</sup>quot;The majority of States representing 90 percent of load in the footprint operate under a traditional regulatory structure. In these areas, Load Serving Entities ("LSEs"), with oversight by State regulatory authorities, bear responsibility for ensuring resource adequacy." *Midcontinent Independent System Operator, Inc.*, FERC Docket No. ER17-284, Prepared Direct Testimony of Richard Doying on behalf of MISO at 3 (filed Nov. 1, 2016).

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A.

Yes.

1		capacity need, it is not appropriate to use short-term PRA prices as the basis for
2		evaluating the DG capacity value. As further support of ETI's approach not to
3		use short-term PRA prices, the ALJs, in Docket No. 52487, recently stated the
4		following in their Proposal for Decision:
5		The ALJs find that it was reasonable for ETI to value OCAPS'
6		capacity by comparing its cost to an alternative long-term source of
7		physical capacity, i.e., the levelized cost of new CTs. The
8		evidence conclusively shows that PRAs are not a long-term
9		planning solution Because the PRA is only a short-term solution
10		to meet resource adequacy requirements, it is not an equivalent
11		alternative to the capacity provided by a long-term resource in its
		· · · · · · · · · · · · · · · · · · ·
12		early years or otherwise. Therefore, PRA prices are not an
13		appropriate proxy for the value of OCAPS' capacity. <sup>31</sup>
14		
15		IV. <u>CONCLUSION</u>
16	Q33.	DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

<sup>31</sup> Docket No. 52487, Proposal for Decision at 133-34 (Sept. 26, 2022).

## **AFFIDAVIT OF ANASTASIA R. MEYER**

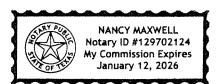
THE STATE OF TEXAS	)
COUNTY OF Montgo mery	)

This day, Anas has ick Meye, the affiant, appeared in person before me, a notary public, who knows the affiant to be the person whose signature appears below. The affiant stated under oath:

My name is Anastasia R. Meyer. I am of legal age and a resident of the State of Texas. The foregoing testimony and exhibits offered by me are true and correct, and the opinions stated therein are, to the best of my knowledge and belief, accurate, true and correct.

Anastasia R. Meyer

SUBSCRIBED AND SWORN TO BEFORE ME, notary public, on this the Hand day of November 2022.



Notary Public, State of Texas

My Commission expires:

1-12-2026e

Exhibit ARM-R-1 Docket No. 53719 Page 1 of 33 through 33 of 33 (Public Version)

This exhibit contains information that is highly sensitive and will be provided under the terms of the Protective Order (Confidentiality Disclosure Agreement) entered in this case.