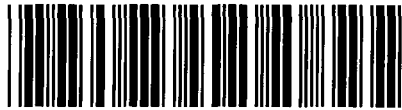




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APPLICATION OF SOUTHWESTERN	§	
ELECTRIC POWER COMPANY FOR	§	BEFORE THE PUBLIC UTILITY
CERTIFICATE OF CONVENIENCE	§	
AND NECESSITY AUTHORIZATION	§	
AND RELATED RELIEF FOR THE	§	COMMISSION OF TEXAS
ACQUISITION OF WIND	§	
GENERATION FACILITIES	§	

**SOUTHWESTERN ELECTRIC POWER COMPANY'S EXCEPTIONS TO THE
PROPOSAL FOR DECISION**

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**SOUTHWESTERN ELECTRIC POWER COMPANY'S EXCEPTIONS TO THE
PROPOSAL FOR DECISION**

Southwestern Electric Power Company (SWEPCO or the Company) files these exceptions to the Proposal for Decision (PFD).

I. INTRODUCTION

What is largely absent from the PFD is consideration of what is in the best interest of SWEPCO's Texas customers. Because the facilities at issue will provide energy to customers with no fuel cost and simultaneously earn federal Production Tax Credits (PTCs) for the benefit of customers, SWEPCO's acquisition of the Selected Wind Facilities will provide customers with largely fixed-price, low-cost clean energy for 30 years. The issue in this case is whether Texas customers are better served by this largely fixed-price, low-cost energy or by being left exposed to the inevitable swings in energy prices that will occur over the next 30 years.

Two simple facts underpin the value of the Selected Wind Facilities:

- (1) These facilities will incur no fuel cost at all. Therefore, the cost of providing energy to customers for the next 30 years is driven primarily by the capped, fixed-price investment SWEPCO will make in the Selected Wind Facilities.
- (2) With the production of energy, these facilities will earn PTCs, the value of which is determined by law.

Using these two facts alone, a couple of calculations demonstrate the value of the Selected Wind Facilities. The revenue requirement of the facilities and the value of the PTCs that will be earned with production from those facilities are shown in the direct testimony of SWEPCO witness John

Torpey.¹ In the first full year of operation of all three facilities (2022), the revenue requirement will be \$132 million (total Company) and the value of the PTCs earned is expected to be \$88 million (total Company). Considering the revenue requirement net of the PTCs earned – \$44 million – in 2022, the Selected Wind Facilities will produce energy at the facilities’ bus bar for a net cost of \$14.09/MWh or 1.41 cents per kWh.² Over the following several years, this net cost of energy gets even lower as the revenue requirement decreases over time, due to accumulated depreciation of the facilities, and the value of the PTCs increases over time as determined by law.³ While the facilities will earn PTCs during only the first ten years of operation, when considered on a nominal basis over the total life of the facilities, the Selected Wind Facilities will lock in for customers \$24.23/MWh or 2.42 cents per kWh energy at the facilities’ bus bar for 30 years.⁴ Because the Selected Wind Facilities do not incur any fuel costs, customers will not pay SWEPCO’s average fuel price for the energy generated by the facilities. Texas customers can either receive the benefit of this largely fixed-price, low-cost energy or be left exposed to swings in energy prices for the next 30 years.

Customers and regulatory commissions in Louisiana, Arkansas, and Oklahoma have come to the conclusion that customers are better served by the largely fixed-price, low-cost energy provided by the Selected Wind Facilities – so much so that the Louisiana and Arkansas commissions have opted to subscribe to the capacity of the Selected Wind Facilities proposed for SWEPCO’s Texas customers if this Commission chooses not to have Texas customers participate in the benefits and cost of the facilities. These commissions have come to this conclusion by examining the probable range of conditions that may prevail in the future and considering what is in the best interest of their customers. In contrast, the PFD does not provide the Commission with an examination of the probable range of conditions that may prevail in the future or a balanced

¹ Direct Testimony of John Torpey, SWEPCO Ex. 8, Errata Exhibit JFT-3 at 1-5 (each of these five pages shows the same revenue requirement and the same PTC value earned at the P50 level of production.).

² The 2022 revenue requirement net of the PTCs is divided by the product of (8760 hours/year) x (.4401 “P50” capacity factor) x (810 MW) as expressed by the following formula: $\frac{(132,000,000 - 88,000,000)}{(8760) \times (.4401) \times (810)}$. Even considering expected congestion and line losses to deliver the energy to load in the P50, Low Gas No Carbon case, the facilities are expected to provide energy to customers in 2022 for \$19.22/MWh or 1.92 cents per kWh.

³ When grossed up for taxes in cost of service, customers will receive PTC value of \$34/MWh in 2022 growing to \$41/MWh in 2031.

⁴ $\frac{(3,233,000,000 - 963,000,000)}{(8760) \times (.4401) \times (810) \times (30)}$

consideration of what is in the best interest of Texas customers.

The Legislature has directed the Commission to consider what is in the best interest of Texas customers when weighing a utility's request to acquire new facilities. The PFD recognizes the proper statutory standard applicable to this proceeding but then does not apply it. The PFD concludes that the controlling statutory provision – and “the determinative issue” – is whether SWEPCO's acquisition of the Selected Wind Facilities would result in the probable lowering of costs for SWEPCO's Texas customers.⁵ The Fifth Circuit citing the Texas Supreme Court has explained that the term “probable” means “more likely than not.” *Frederking v. Cincinnati Ins. Co.*, 929 F.3d 195, 200 (5th Cir. 2019) (citing *Parker v. Employers Mut. Liab. Ins. Co. of Wis.*, 440 S.W.2d 43, 47 (Tex. 1969)). Instead of presenting a balanced analysis of whether SWEPCO's acquisition of the Selected Wind Facilities will, more likely than not, lower costs for Texas customers, the PFD evaluates SWEPCO's acquisition of the Selected Wind Facilities under circumstances that are unlikely to prevail, applying a standard that is far more stringent than the statutory “probable” standard. What is missing is an analysis of what is in the best interest of Texas customers considering the probable range of conditions that may prevail in the future.

In this regard, the most obvious failure of the PFD is its recommendation that the Commission evaluate the acquisition of the Selected Wind Facilities under the assumption that the facilities will produce energy and earn PTCs at only the P95 level rather than the probable P50 level of production.⁶ The PFD recognizes that “the likelihood is high that the wind facilities will produce at the P50 level” and that it is a “near certainty” they will produce at the P95 level.⁷ Yet, the PFD inexplicably proposes a *near certainty* standard in evaluating the wind facilities' capacity factor, rather than the *probable* lowering of costs standard that is mandated by the statute and is in customers' best interests. The fact is that Texas customers bear energy price risk whether or not they participate in the benefits and cost of the Selected Wind Facilities. If Texas customers participate in the Selected Wind Facilities, they bear the risk that the market will produce sustained energy prices that are so low for the next 30 years that they are lower than the largely fixed-price, low-cost energy produced by the Selected Wind Facilities. If Texas customers do not participate

⁵ Proposal for Decision (PFD) at 11 (May 26, 2020).

⁶ PFD at 52-53. In other words, it is equally likely that production will be above or below the P50 level while there is a 95% probability that the production from the facilities will exceed the P95 amount.

⁷ PFD at 52.

in the Selected Wind Facilities, they bear the very real risk of upward swings in energy prices for the next 30 years. If the Commission does not evaluate the Selected Wind Facilities at their most probable production level, customers are needlessly exposed to greater risk.

The PFD's failure to consider whether SWEPCO's acquisition of the Selected Wind Facilities will probably lower costs for Texas customers may stem from its excessive focus on SWEPCO's previous request to acquire the Wind Catcher wind generation facilities. In Docket No. 47461,⁸ the Commission declined to certify the acquisition of those facilities. The PFD uses the term "Wind Catcher" a dozen times in its two page Executive Summary and seems to be written from the perspective that the Commission's decision in Wind Catcher somehow precludes approval of the acquisition of the Selected Wind Facilities. It does not. The Commission should judge the Selected Wind Facilities on their own merit and determine if SWEPCO's acquisition of those facilities is in the best interest of Texas customers. The Selected Wind Facilities and the assumptions used to evaluate them are quite different from the facilities and assumptions used in the Wind Catcher case. To highlight a few:

- SWEPCO identified the Selected Wind Facilities as the best available alternative for customers through a robust Request for Proposals (RFP) process (35 bids representing 19 unique wind projects totaling 5,896 MW)⁹;
- The value of the Selected Wind Facilities is not dependent on the building of an extended generation tie line, and SWEPCO would seek approval to construct such a generation tie line in the future only if transmission congestion costs reach unanticipated levels that justify the cost of the tie line; and
- The projected energy and natural gas prices SWEPCO used to evaluate the production cost savings of the Selected Wind Facilities are significantly lower than those used in the Wind Catcher case and, in fact, the energy prices used by SWEPCO in this case are 34% lower than those used in the Wind Catcher case.¹⁰

SWEPCO has received sufficient regulatory approvals to acquire its proposed share of the Selected Wind Facilities on behalf of its Arkansas and Louisiana customers and intends to do so even if this Commission chooses not to have Texas customers participate in the benefits and cost of those facilities. However, from SWEPCO's perspective, no matter what state a customer resides

⁸ *Application of Southwestern Electric Power Company for Certificate of Convenience and Necessity Authorization and Related Relief for the Wind Catcher Energy Connection Project in Oklahoma.*

⁹ Direct Testimony of Jay Godfrey, SWEPCO Ex. 3 at 13:2-3.

¹⁰ SWEPCO's response to CARD RFI 1-22, Staff Ex. 7.

in, all customers can benefit from the largely fixed-price, low-cost energy provided by the Selected Wind Facilities – 2.42 cents per kWh at the facilities bus bar on a nominal basis for 30 years. Current circumstances provide SWEPCO and the Commission with the opportunity to provide Texas customers, under a probable range of future conditions, with lower costs for the next 30 years. For this reason, SWEPCO respectfully requests that the Commission reject the PFD and allow Texas customers to participate in the benefits and cost of the Selected Wind Facilities.

V. CERTIFICATE OF CONVENIENCE AND NECESSITY STANDARD OF REVIEW

As noted above, the PFD correctly states the standard of review applicable to this case: “The ALJs conclude that PURA § 37.056 is the controlling statutory provision in this case and that the determinative issue is whether it is probable that the Project, if approved, would result in lowering costs to SWEPCO’s customers.”¹¹ The word “probable,” as used by the Legislature, acknowledges that whether costs will be lowered or not depends on evaluation of future conditions and circumstances. Moreover, as noted above, the term “probable” means more likely than not. Taken together, the statutory standard requires the Commission to consider a probable range of conditions that are likely to prevail in the future and determine if the acquisition of the Selected Wind Facilities on behalf of Texas customers is more likely than not to lower costs for Texas customers. At its heart, the Commission must determine what is in the best interest of Texas customers.

While stating the correct standard of review, the PFD quickly begins to evaluate SWEPCO’s acquisition of the Selected Wind Facilities under a much more stringent standard based on a series of unlikely future circumstances. For instance, the PFD finds that it is unreasonable to evaluate customer benefits of the Selected Wind Facilities at the P50 level because SWEPCO is “guaranteeing benefits only at the P95 level.”¹² At this point, the PFD is no longer applying a probability standard to consider what is in the best interest of Texas customers and seems to be under the misimpression that a utility must guarantee the most probable level of customer benefits before Texas customers will be allowed to participate in the benefits and cost of the facilities. If certainty is the standard, which it is not, no utility in Texas will propose

¹¹ PFD at 11.

¹² PFD at 52.

acquisitions based on probable benefits to customers. Such a standard, if accepted by the Commission, will disadvantage Texas customers.

The Administrative Law Judges (ALJs) seem to think they are constrained by the Commission's decision in the Wind Catcher case to focus on future conditions that would adversely impact customer benefits to the exclusion of conditions that would further enhance customer benefits. For instance, citing the Commission's finding in the Wind Catcher case that the lowest Energy Information Administration (EIA) natural gas price forecast side case has been the more accurate forecast in recent years, the ALJs then essentially ignored all other natural gas forecasts contained in the record that would enhance the customer benefits of the Selected Wind Facilities. As discussed below, nearly all of the 45 natural gas price forecasts contained in the record were higher than the breakeven natural gas price curve for the Selected Wind Facilities – with the glaring exception of the lowest EIA natural gas forecast side case, the one the ALJs felt constrained to use.

The standard of review is as the PFD states – is it probable that the acquisition of the Selected Wind Facilities will lower costs for Texas customers. SWEPCO requests that the Commission apply that standard and consider the probable range of conditions that may prevail in the future to determine what is in the best interest of Texas customers.

VI. ANALYSIS OF ECONOMICS OF SELECTED WIND FACILITIES

C. Economic Modeling

2. Projected Production Cost Savings

a. Natural Gas Prices (Exceptions to Findings of Fact No. 40, 41, 57, and 58)

The Selected Wind Facilities will produce energy while incurring no fuel costs. Therefore, the future price of natural gas does not directly impact the benefits that customers are expected to receive from acquisition of the Selected Wind Facilities. The Selected Wind Facilities will provide customers largely fixed-price, low-cost energy regardless of the future price of natural gas. Nonetheless, the future price of natural gas does play a role in calculating the benefits of the Selected Wind Facilities over their lives. As with other variables that impact the benefits customers are expected to receive from the Selected Wind Facilities, the Commission should not focus on any one forecast of future natural gas spot prices but, instead, on a reasonable range of such forecasts. The PFD fails the Commission in this respect. The record in this proceeding

contains many natural gas forecasts, almost all of which are above or significantly above the natural gas breakeven price of the Selected Wind Facilities. These long-term forecasts include publicly available third party forecasts, proprietary third party forecasts, and those developed by American Electric Power Company (AEP).

Instead of giving serious consideration to the range of natural gas price projections contained in the record, the PFD applies a much more stringent standard and purports to pick one “most accurate” forecast that is very nearly the lowest of all forecasts contained in the evidentiary record and the lowest of several forecasts issued by the EIA. At hearing, witnesses for both Texas Industrial Energy Consumers (TIEC) and the Office of Public Utility Counsel (OPUC) made clear that they were “stress testing” the benefits of the Selected Wind Facilities in a sustained, extremely low natural gas price environment. While there is nothing wrong with stress testing the benefits of the Selected Wind Facilities, to determine what is in the best interest of Texas customers, a *probable* range of future conditions must be considered. Both TIEC and OPUC fail in this respect and, unfortunately, the PFD does as well. At hearing, TIEC witness Pollock testified:

Q And let me be clear. When you say “stress test,” you didn’t stress test the benefits of the wind facilities in the event of a higher natural gas and energy price, did you?

A No.

Q It’s not in your testimony, is it?

A It’s not.

Q So you’re stress testing on the low side, to be clear?

A To -- yes. To be clear, to ensure there would be benefits even under the worst case scenarios or probable scenarios.¹³

OPUC witness Nalepa took a similar point of view, admittedly focusing on a “worst case scenario” in his pre-filed testimony.¹⁴ At hearing, though, Mr. Nalepa conceded that the Commission should consider the benefits under a reasonable range of outcomes when evaluating the acquisition of the Selected Wind Facilities:

¹³ Tr. at 608:16-609:2 (Pollock Cross) (Feb. 26, 2020).

¹⁴ Direct Testimony of Karl Nalepa, OPUC Ex. 1 at 29:4-10.

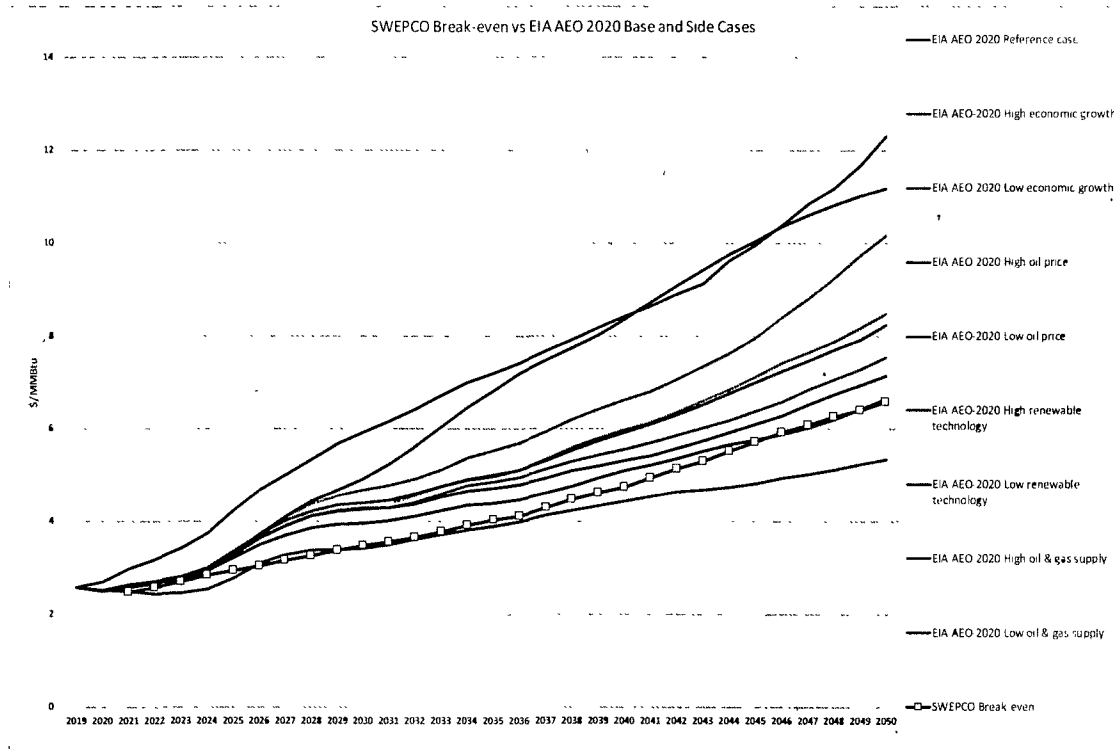
I think the whole range of outcome is something the Commission should consider. The problem is the low end is where ratepayers may not benefit from the project. I think that's where the focus should be. But I think the upside is useful information for the Commission.¹⁵

Rather than evaluating the acquisition of the Selected Wind Facilities under a range of potential future natural gas prices to assess what is probable, the PFD would have the Commission ignore nearly all long-term natural gas forecasts and focus on a single, lowest side case of the 2020 EIA AEO forecast. EIA's AEO 2020 Reference Case and the remaining other seven side cases are above the natural gas break-even price for the Selected Wind Facilities. Nonetheless, the PFD recommends that the Commission evaluate the Selected Wind Facilities under EIA's 2020 High Oil and Gas Supply side case, which is EIA's lowest side case and the only one that is lower than the breakeven natural gas price for the Selected Wind Facilities. Figure 11 of the rebuttal testimony of SWEPCO witness Mr. Bletzacker shown below graphs the range of EIA's AEO 2020 forecast cases relative to the break-even natural gas price curve for the proposed facilities.¹⁶

¹⁵ Tr. at 702:3-8 (Nalepa Cross) (Feb. 26, 2020).

¹⁶ The record contains approximately 40 natural gas forecasts, nearly all of which are higher than the breakeven natural gas price for the Selected Wind Facilities. Figure 11 depicts only those forecasts issued by the EIA in 2020.

Figure 11



The PFD recommends that the Commission rely on these EIA forecasts “to conclude that it is not probable that the [Selected Wind Facilities] will produce net benefits for SWEPSCO’s customers.”¹⁷ However, the figure above demonstrates just the opposite. Every one of the EIA 2020 forecasts, except for one, lie above the breakeven price for the Selected Wind Facilities, while even the lowest side case is only slightly below the breakeven. The figure above demonstrates where the majority of risk lies for customers – that is being exposed to higher natural gas and energy prices for the next 30 years.

Focusing on only a single, low long-term natural gas forecast side case to the exclusion of all others would be a disservice to Texas customers. The question is not whether there exists a scenario in which market energy prices could be so low for 30 years that they cost slightly less than the fixed-price, low-cost energy produced by the Selected Wind Facilities. The question is, after considering a reasonable range of conditions that may prevail in the future, will SWEPSCO’s acquisition of the facilities probably lower costs to customers? The PFD did not properly apply

¹⁷ PFD at 34.

that standard.

The PFD reasons that the EIA High Oil and Gas Supply side case has tracked actual natural gas spot prices more closely than the other EIA cases, “at least in recent years.”¹⁸ Having the Commission focus on a single, low natural gas price forecast side case because in hindsight it happens to have been the more accurate in recent years loses sight of the big picture. The expected useful life of the Selected Wind Facilities is 30 years. When the PFD states that EIA’s Reference Case “is still too high when viewed in retrospect,” the PFD ignores the longer term. Although prices have fallen in recent years due to hydraulic fracturing, the cost reductions available from that technology have likely been maximized and current prices may not be sustainable. The record evidence demonstrates that leading shale-focused companies are addressing current low prices by informing investors that capital investment is reaching a limit and that drilling activity will be reduced or stopped if prices do not allow those companies to meet key economic thresholds.¹⁹

In at least a couple of places, the PFD gives the Commission the impression that SWEPCO used in this proceeding the same forecast of natural gas and energy price forecasts that it did in the Wind Catcher proceeding. The PFD alleges that the forecasts used in the Wind Catcher proceeding are “strikingly similar to those presented in this case” and repeats OPUC’s inaccurate claim that SWEPCO used the same natural gas projections as in the Wind Catcher proceeding.²⁰ To be clear, the assumptions used in the modeling of the benefits associated with acquisition of the Selected Wind Facilities are different from those used in the Wind Catcher case. In fact, the energy prices SWEPCO used to evaluate the acquisition in this proceeding are 34% lower than those used in the Wind Catcher case.²¹ The fact is, because of their lower capital cost, the Selected Wind Facilities are able to deliver sizable benefits to SWEPCO customers at far lower market energy prices than Wind Catcher.²²

As natural gas and energy prices rise, so do the customer benefits associated with the acquisition of the Selected Wind Facilities. In other words, the Selected Wind Facilities provide the most customer benefit when customers need those benefits most – in a high natural gas and

¹⁸ PFD at 34.

¹⁹ See Rebuttal Testimony of Karl Bletzacker, SWEPCO Ex. 17 at 24:12-25:17.

²⁰ PFD at 5 and 23.

²¹ Staff Ex. 7.

²² Staff Ex. 7.

energy price environment. Once the hyperbole is swept to the side, what the PFD is positing is that the market price of natural gas and energy might be so low for the next 30 years that the market will produce energy prices lower than the net cost of power and PTC benefits from the Selected Wind Facilities. It cannot be disputed that acquisition of the Selected Wind Facilities will reduce the risk that customers will suffer from high natural gas and energy costs. The PFD would have the Commission consider only the risk that, in a persistent low natural gas and energy price environment, the market might produce energy prices slightly lower than the mostly fixed-price, low cost energy that will be produced by the Selected Wind Facilities. This is not a balanced look at what is probable, but is instead an evaluation of the Facilities under a stringent worst-case scenario. As noted above, Texas customers bear energy price risk whether or not they participate in the benefits and cost of the Selected Wind Facilities, but that risk is not symmetrical. If the Commission is to act in the best interest of Texas customers, it must evaluate the Selected Wind Facilities under a probable range of future conditions, not under a worst-case scenario.

b. Other Assumptions Affecting Locational Marginal Prices

i. Carbon Burden (Exception to Findings of Fact No. 62 – 64)

SWEPCO studied the expected customer benefits of the Selected Wind Facilities under a wide range of future circumstances. The potential of a future enforced carbon emission burden (beginning in 2028) was only one of the potential future circumstances studied. The potential that no such emission burden will exist over the 30-year life of the Selected Wind Facilities was also studied. The Commission does not have to choose one possible future circumstance over the other possible future circumstance any more than the Commission has to choose one forecast of natural gas prices to the exclusion of all others. Instead, the study of a future carbon emission burden is just one of the plausible circumstances that should be considered by the Commission in the evaluation of the Selected Wind Facilities. The PFD fails the Commission in this respect and seems to again cite the Commission's decision in the Wind Catcher case as foreclosing the consideration of a plausible future circumstance: "for purposes of assessing the probable lowering of costs, *and consistent with Commission precedent*, the ALJs find that it is unreasonable to assume a carbon tax, and recommend that the Project be evaluated without one."²³

²³ PFD at 39 (emphasis added).

As the PFD recognizes, the probability of a future carbon emission burden is greater than zero.²⁴ CARD witness Norwood testified that it is a risk that should be considered.²⁵ At the hearing, OPUC witness Nalepa agreed that the risk of a carbon emissions burden should be considered in this case,²⁶ although he did not do so in his pre-filed testimony. In 2008, TIEC witness Pollock filed testimony that assumed the imposition of a carbon emission burden was a given and even testified that the \$15/ton figure being used by SWEPCO then, as it is now, “is on the very low end of the range of possibilities.”²⁷ In 2018, the Commission found that SWEPCO’s analysis of environmental retrofits to its solid fuel generating units “appropriately captured the pertinent costs for the various scenarios it compared, and included reasonable forecasts of gas prices, lignite costs, and potential carbon dioxide costs.”²⁸

SWEPCO does not ask the Commission to determine whether a carbon emission burden will be imposed sometime over the next 30-years. Instead, SWEPCO asks the Commission to acknowledge the possibility of a future carbon emission burden and find that it is a possibility that should be considered in the evaluation of the Selected Wind Facilities. If the Commission also wants to evaluate the Selected Wind Facilities assuming no such burden is enforced for the next 30 years, there is plenty of record evidence that does just that.

ii. Future Renewable Generation (Exceptions to Findings of Fact No. 65 - 68)

SWEPCO excepts to the PFD’s conclusion that the Company’s modeling of the Selected Wind Facilities understates future renewable generation in the Southwest Power Pool (SPP) and that the Company did not adequately account for the impact of such future generation.²⁹ SWEPCO reasonably relied on the forecast of future generation developed by SPP and its stakeholders in the Integrated Transmission Planning (ITP) process and demonstrated that additional generation would not have a significant impact on the customer savings produced by the proposed facilities.

²⁴ PFD at 39.

²⁵ Tr. at 662:19-663:15 (Norwood Cross) (Feb. 26, 2020).

²⁶ Tr. at 682:15-684:15 (Nalepa Cross) (Feb. 26, 2020).

²⁷ Docket No. 33891 Supplemental Direct Testimony of Jeffrey Pollock, SWEPCO Ex. 36 at 20:9-21:11.

²⁸ *Application of Southwestern Electric Power Company for Authority to Change Rates*, Docket No. 46449, Order on Rehearing at Finding of Fact (FoF) No. 33 (Mar. 19, 2018).

²⁹ PFD at 48-49.

The PFD addresses this issue in five sections: wind generation in the AURORA model for 2020 and beyond; SPP's generation interconnection queue; EIA projections; locational marginal price (LMP) projections and implied heat rates; and the impact of additional renewable generation. SWEPCO will address each of those sections in turn.

(a) No New Wind Generation After 2020

The PFD's analysis in this section is flawed and difficult to understand, but ultimately it concludes that the Company was "unreasonable to assume that the rapid increase in renewables, and wind in particular, will stop abruptly in 2020"³⁰ and that the record is unclear whether the 2020 wind level in the Company's AURORA model already matches the 2029 forecast level in SPP's ITP transmission planning model.³¹ The PFD's analysis is mistaken and in fact shows that the wind level modeled by the Company for 2020 closely matches the SPP forecast for 2029, nine years later.

The PFD recognizes that the forecast wind level for 2029 in SPP's ITP model is 24,600 MW and that the forecast used in SWEPCO's AURORA model is contained in TIEC Exhibit 45 (SWEPCO's response to TIEC RFI 11-6).³² Despite the PFD's uncertainty about the issue, TIEC Exhibit 45 clearly shows that the Company's 2020 wind forecast is 24,403 MW, only slightly less than SPP's 2029 forecast of 24,600 MW. The following information is excerpted from TIEC Exhibit 45:³³

	Assumed (existing wind)	Assumed (new wind)
2020	21,359	3,044

In light of this information from TIEC Exhibit 45, the PFD is simply wrong in stating "[t]he record does not support SWEPCO's contention that the amount of wind assumed for 2020 (21,349 MW) is the approximate amount in the SPP ITP PROMOD model (24,600 MW) for 2029."³⁴

³⁰ PFD at 41.

³¹ PFD at 41-42.

³² PFD at 41.

³³ Although the table in TIEC Exhibit 45 contains data for several of the Company's sensitivity forecasts, the wind generation projections are the same for all forecasts.

³⁴ PFD at 42.

Inexplicably, the PFD does not include the assumed 3,044 MW of new wind plainly shown in TIEC Exhibit 45 for 2020, even though it was referenced in the preceding sentence of the PFD. In fact, the evidence cited by the PFD *does* clearly show that SWEPCO's assumed 2020 wind level is the approximate level forecast in the SPP ITP transmission planning process for 2029, nine years later.

The PFD's statement that SWEPCO assumed the increase in renewables would stop after 2020 is also wrong.³⁵ In fact, TIEC Exhibit 45 also clearly shows that assumed solar additions increase substantially after 2020. As discussed further below, this assumption is derived from SPP's ITP transmission planning forecast, which assumes that future renewable growth will be primarily solar. The footnote to TIEC Exhibit 45 also shows the Company assumed future wind additions in the form of repowering of existing facilities that would otherwise be retired. Not only did the Company assume wind levels in 2020 that SPP does not forecast until 2029, but it also assumed increasing solar additions after 2020 as well as addition of wind generation to replace wind generation that would otherwise be retired.³⁶ The PFD is simply wrong on these issues.

(b) The SPP Generation Interconnection Queue

The PFD concludes that SWEPCO should have included additional wind generation in its forecast due to the amount of wind in the SPP generation interconnection queue,³⁷ even though SWEPCO used the forecast developed by SPP and its stakeholders in the ITP process. It is not reasonable for the PFD to conclude that SWEPCO should have added more wind to the SPP's forecast when that forecast was developed by SPP and its stakeholders who were well aware of the interconnection queue. Although the PFD recognizes that "SPP and its stakeholders have more intimate knowledge of project development in the SPP,"³⁸ it nonetheless second-guesses the SPP forecast and concludes that SWEPCO should have included an unspecified amount of additional

³⁵ PFD at 41.

³⁶ See SWEPCO's response to TIEC RFI 11-5, TIEC Ex. 75; SWEPCO Ex. 17 at 28:18-23 ("Both Mr. Griffey's observation that the Company did not add any additional wind resources and Mr. Pollock's assertion that 'the amount of additional renewable energy resources is understated' after 2020 are incorrect. Existing wind resources can be retired after their life expectancy, however, repowering of the wind resources in situ (at a lower cost than a new facility) is the outcome indicated by the Company's modeling."); Tr. at 269:13-270:9 (Bletzacker Cross) (Feb. 24, 2020).

³⁷ PFD at 43-44.

³⁸ PFD at 45.

wind that the SPP and its stakeholders with more intimate knowledge of project development in the SPP did not include.

SPP's reference case (Future 1) developed by SPP staff and stakeholders for the 2019 ITP process reflects a continuation of current industry trends and environmental regulations. The ITP forecast includes a total of 24,200 MW of additional wind and 3,000 MW of additional solar by 2024 and a total of 24,600 MW of additional wind and 5,000 MW of additional solar by 2029, levels that SPP and its stakeholders have deemed feasible and realistic for development by those dates.³⁹ In November 2019, SPP released its 2019 ITP Assessment Report, reflecting a more in-depth analysis that reaffirmed its generation projections. Based on those projections, the SPP Board approved \$336.7 million in new transmission investment.⁴⁰ SWEPCO added 1,000 MW to SPP's wind generation forecasts to reflect the fact that they did not include the Traverse project.⁴¹

The PFD's recommendation to add more wind generation based on the interconnection queue is inconsistent with SPP's ITP forecast, which contains less wind but significantly more solar generation than reflected in the interconnection queue.⁴² Since SWEPCO used the ITP forecast, its models likewise contain less wind and more solar. As shown in TIEC Exhibit 45, those forecasts contain 3,200 MW of additional solar by 2024 and 5,100 MW by 2029, even though there is currently only 250 MW of installed solar and 260 MW of solar in the interconnection queue with executed interconnection agreements.⁴³ Since the PFD relies on the interconnection queue to assess future wind generation, for consistency it should have also recognized that future solar generation included in the Company's models exceeded the interconnection queue, resulting in an overstatement of solar generation that offsets the purported understatement of wind generation under the PFD's logic. However, the SPP and its stakeholders made a different choice in the ITP process, forecasting more solar and less wind growth, based on a conscious decision to reflect the fact that tax incentives phase out more quickly for wind generation than for solar.⁴⁴ The Commission should reject the PFD's recommendation to second-guess SPP and its stakeholders,

³⁹ Rebuttal Testimony of Johannes Pfeifenberger, SWEPCO Ex. 20 at 3:7-18.

⁴⁰ SWEPCO Ex. 20 at 3:19-4:8.

⁴¹ SWEPCO Ex. 20 at 4:11-14 and n.3.

⁴² SWEPCO Ex. 20 at 6:3-6.

⁴³ SWEPCO Ex. 20 at 6:6-10.

⁴⁴ SWEPCO Ex. 20 at 6:10-12.

who are better informed and better positioned to assess future generation additions.

The PFD also faults SWEPCO for using SPP's Future 1 reference case, rather than the higher renewables levels in SPP's Future 2 emerging technologies case,⁴⁵ even though Future 1 reflects continuation of current industry trends while Future 2 assumes additional technological advances affecting renewable generation, electric vehicles, distributed generation, demand response and energy efficiency.⁴⁶ However, SPP recently re-evaluated and re-affirmed the Future 1 reference case, using it to analyze and approve \$336.7 million of transmission additions.⁴⁷ Moreover, SWEPCO added 1,000 MW of wind to the reference case to reflect that it did not include the Traverse facility, as compared to the Future 2 case, which added 2,800 MW more than the reference case by 2024 and 5,400 MW more by 2029.⁴⁸ As discussed below, these Future 2 levels of additional wind generation would not significantly affect the cost savings produced by the Selected Wind Facilities.

(c) EIA Projections

As with the interconnection queue and Future 2, the PFD uses EIA wind generation projections to second-guess the SPP ITP reference case forecast used by SWEPCO, even while agreeing, "SPP and its stakeholders have more intimate knowledge of project development in the SPP."⁴⁹ The EIA publication has a nationwide scope, although it does include a regional breakdown.⁵⁰ The PFD characterizes the EIA projections as a "reliable indication" that more renewables will be added in SPP than modeled by SWEPCO, but this conclusion necessarily rejects the forecasts developed by SPP and its stakeholders, notwithstanding their more intimate knowledge of SPP project development and their reliance on those forecasts to implement SPP's 2019 transmission expansion plan. Contrary to the PFD's conclusion, it was reasonable for SWEPCO to use the SPP ITP forecast rather than EIA's.

⁴⁵ PFD at 44.

⁴⁶ SWEPCO Ex. 20 at 3:7-18.

⁴⁷ SWEPCO Ex. 20 at 3:19-4:8.

⁴⁸ SWEPCO's response to GSEC RFI 1-1, TIEC Ex. 52.

⁴⁹ PFD at 45.

⁵⁰ Annual Energy Outlook 2020, TIEC Ex. 46 at 79 on pdf p. 23 of 29.

(d) LMP Projections and Implied Heat Rates

This section of the PFD concludes that SWEPCO's modeling of LMPs to increase over the life of the Selected Wind Facilities is inconsistent with historical trends, but rejects TIEC's argument that implied heat rates show increased renewable penetration.⁵¹ The PFD correctly rejected TIEC's implied heat rate argument but is wrong about LMPs.

The PFD's conclusion about LMPs is based on the observation that LMPs have "generally declined over the past decade" so that SWEPCO's model projecting increases is "inconsistent with historical trends."⁵² However, the evidence cited by the PFD (the SPP 2018 Annual State of the Market Report) shows that *since 2015 LMPs have increased*.⁵³ The report attributes changes in power prices to natural gas price changes as well as other factors such as higher loads and shows that natural gas prices, after declining for most of the last decade, have stabilized in recent years.⁵⁴ In addition, natural gas prices increase in every forecast in the record in this case.⁵⁵ As a result, the evidence does not support the PFD's conclusion that, based on historical trends, LMPs should decrease rather than increase. LMPs have increased in recent years and those increases can reasonably be expected to continue as natural gas prices rise.

(e) Impact of Undercounting Renewable Generation

Although SWEPCO relied on SPP's ITP forecast and did not undercount renewable generation, the PFD's analysis of the impact of additional renewable generation is also flawed.⁵⁶ The PFD correctly rejects TIEC's argument on this issue, but provides neither a valid reason to dismiss SWEPCO's analysis of the impact of additional renewable generation nor any direction to the Commission on how to assess whether more renewable generation in the SPP ITP forecast would have significantly affected the benefits of the Selected Wind Facilities.

SWEPCO analyzed the impact of additional wind generation on project benefits based on

⁵¹ PFD at 46-47.

⁵² PFD at 46.

⁵³ Rebuttal Workpapers of Johannes Pfeifenberger, SWEPCO Ex. 20A, 2018 State of the Market Report at 106-108 and Figures 4-1 to 4-3.

⁵⁴ SWEPCO Ex. 20A, 2018 State of the Market Report at 106-108 and Figures 4-1 to 4-3.

⁵⁵ See Highly Sensitive Rebuttal Testimony of Karl Bletzacker, SWEPCO Ex. 17A at Bates No. 000002, Highly Sensitive Figure 10.

⁵⁶ PFD at 48-49.

two sources of data. First, SWEPCO witness Mr. Pfeifenberger compared the Company's project benefits analysis to the Company's bid evaluation analysis, which included 3,400 MW of additional wind generation because it added bidders that were not included in the SPP ITP model. This comparison showed that an additional 3,400 MW of wind generation would reduce LMPs in AEP's load zone by less than 2% and at the Company's generating facilities by between 0.01% and 0.5%.⁵⁷ This means that additional wind deployment in SPP will only modestly reduce the benefits of the Selected Wind Facilities, which are based on market prices paid by the Company's loads and on sales from the Company's existing generators.⁵⁸ The Company's second data source was a study by the Lawrence Berkeley National Laboratory (LBNL) that assessed the influence of renewable energy growth on energy prices between 2008 and 2017. The LBNL study showed that the impact of additional wind generation was even smaller than the Company's comparison of its model runs indicated.⁵⁹ In short, both the comparison of SWEPCO's models and the LBNL study showed that additional wind generation would have only a small impact on the benefits of the proposed facilities.

The PFD cites two reasons for not accepting SWEPCO's analysis that including more wind generation than forecasted by SPP and its stakeholders would have minimal impact on the benefits of the SWFs:

- "SWEPCO's quantification of the impacts used 3,400 MW of wind capacity, which does not approach the projected level of wind penetration;" and
- "Moreover, the evidence shows that given the timing of wind generation, assessing its impact requires more nuance than simply comparing a certain number of watts to the LMPs. The evidence shows that additional wind penetration will have the greatest impact in driving down LMPs during the windiest hours, which will tend to be those hours when the SWFs are running."⁶⁰

Neither of these rationales support the conclusion that adding more wind generation to the SPP ITP reference case forecast would significantly impact the benefits of the Selected Wind Facilities,

⁵⁷ SWEPCO Ex. 20 at 9:5-10:11 and Figure 2.

⁵⁸ SWEPCO Ex. 20 at 10:4-11; SWEPCO Ex. 8 at 17:23-18:3.

⁵⁹ SWEPCO Ex. 20 at 11:1-12:7.

⁶⁰ PFD at 48-49.

nor does the PFD ever actually reach that conclusion.

The PFD's first rationale – that SWEPCO's quantification of the impact of 3,400 MW of additional wind capacity is not enough – fails for two reasons. First, 3,400 MW is very close to the amount of additional wind in the SPP ITP Future 2 case that the PFD faults SWEPCO for not using. SWEPCO's model used the SPP ITP Future 1 reference case forecast of future wind generation, plus 1,000 MW for the Traverse facility, resulting in 25,200 MW of additional wind generation in 2024 and 25,600 MW in 2029.⁶¹ The SPP Future 2 wind forecast is an additional 27,000 MW in 2024 and 30,000 MW in 2029, resulting in a difference between the Future 1 forecast used by SWEPCO and the Future 2 forecast favored by the PFD of 1,800 MW in 2024 and 4,400 MW in 2029. In light of the PFD's apparent endorsement of the Future 2 forecast, it is difficult to understand why it dismisses SWEPCO's quantification of the impact of 3,400 MW of additional wind as inadequate, since it is quite close to the Future 2 level.

The PFD's rejection of SWEPCO's quantification of additional wind impact is also flawed because the LBNL study was neither limited to nor based on a 3,400 MW level of additional wind. Instead, the study assessed the impact of a 25.3% level of wind penetration in SPP, which it found amounts to approximately a 3.5% impact on SWEPCO's 2029 load zone prices.⁶² This translates to approximately \$0.05/MWh for each one percent of wind penetration,⁶³ a minor impact. This quantification of the impact of wind penetration on SWEPCO LMPs is not limited to the 3,400 MW level and confirms that the impact on relevant LMPs is low.

The PFD's second conclusion concerning the impact of wind penetration on the benefits of the Selected Wind Facilities – that a more nuanced analysis is needed of the impact of additional wind generation when the proposed facilities are running – overlooks that both the Company's analysis and the LBNL study considered the time when wind facilities produce energy. The Company's analysis used PROMOD models prepared for the SPP ITP process, which model the dispatch of the SPP system for each hour of the year and therefore capture the hours in which wind facilities operate, including SWEPCO's proposed facilities. PROMOD is widely used to model the impact of changes in the dispatch of electric systems and is certainly nuanced enough to

⁶¹ SWEPCO Ex. 20 at 3:13-14, 4:11-14 and n.3.

⁶² Computed as $\$1.30/\$38.75 = 3.4\%$. See SWEPCO Ex. 20 at 11, Figure 3 and 14, n.10.

⁶³ SWEPCO Ex. 20 at 11, Figure 3.

determine impacts based on the operating characteristics of specific facilities. The LBNL study likewise considered the timing of generation from all SPP wind facilities, including their impact on SPP wholesale power prices for each hour of the annual SPP market simulation. In addition, LBNL modeled negative hourly prices when hourly net load exceeded the minimum generation level in its annual SPP market simulation. As a result, the observed impact on wholesale power prices of a 25.3% level of wind penetration in SPP captures the nuances of negative prices in SPP.⁶⁴

(f) Summary Concerning Future Renewable Generation

SWEPCO used the most credible source for modeling dispatch of the SPP grid – the reference case model developed by SPP and its stakeholders for the ITP process. The PFD recognizes that SPP and its stakeholders have more intimate knowledge of project development in the SPP but nonetheless recommends the Commission substitute its judgment based on other factors, such as the interconnection queue, SPP's Future 2 forecast, or an EIA forecast. The Commission should use the best available information – as SWEPCO did – which is the SPP ITP reference case.

The PFD also drops the ball on assessing whether additional wind would have affected SWEPCO's benefits analysis. The PFD suggests that SWEPCO's analysis of 3,400 MW of additional wind is inadequate even though 3,400 MW is very close to the additional amount in the SPP Future 2 forecast the PFD appears to endorse. The PFD also concludes that more nuanced analysis would have considered the timing of when the Selected Wind Facilities would run, even though SWEPCO's use of the SPP ITP PROMOD model included an hourly dispatch of the SPP, including the proposed facilities, and the LBNL study likewise considered when wind facilities operate. Since the PFD rejects TIEC's arguments about the impact of additional wind generation and apparently misunderstands the Company's analysis, it provides the Commission little direction on how to assess that impact.

There is no basis to conclude either that SWEPCO understated future wind generation or that including additional wind would have significantly affected the customer benefits of the Company's Selected Wind Facilities. The Commission should reject the PFD's analysis of this

⁶⁴ SWEPCO Ex. 20A, LBNL Study at 13.

issue and replace its proposed Findings of Fact No. 65-68 with the following:

65. SWEPCO reasonably modeled locational marginal prices (LMPs) in the SPP by relying on the 2024 and 2029 PROMOD models developed by SPP and stakeholders in the Integrated Transmission Planning (ITP) process.

c. Capacity Factor (Exceptions to Findings of Fact No. 70 – 75)

SWEPCO excepts to the PFD's conclusion that the benefits of the Selected Wind Facilities should be evaluated at the P95 level of production rather than the probable P50 level of production.⁶⁵ The PFD recognizes "the likelihood is high that the wind facilities will produce at the P50 level" and that it is a "near certainty" they will produce at the P95 level.⁶⁶ Yet the PFD inexplicably proposes a *near certainty* standard in evaluating the wind facilities' capacity factor, rather than the *probable* lowering of costs standard that is mandated by the statute and is in customers' best interests. Equally inexplicably, the PFD proposes to equate the standard for evaluating the facilities' capacity factor with the production level that SWEPCO is willing to *guarantee* to customers. The statute requires that cost reduction benefits be *probable*, not that they be *guaranteed* or a *near certainty*. Neither SWEPCO nor any other utility could prudently guarantee that a generating facility will achieve its expected performance throughout its useful life. The PFD's conflation of the two issues distorts the statutory requirement and disserves customer interests.

By way of background, each bidder into the Company's RFP for wind facilities was required to submit an independent assessment of the wind resource and the Company hired its own expert, Simon Wind, to review those assessments. These reviews produced various probability of exceedance levels, including the P50 and P95 levels discussed in the PFD, where the probability of energy production exceeding the specified level was 50% and 95%, respectively. Putting aside the force majeure and curtailment arguments raised by TIEC and discussed further below, this means that it is equally likely (50%) that production will be above or below the P50 level,⁶⁷ while it is 95% likely that production will be above the P95 level and 5% likely that it will be below that level.⁶⁸ Hence, the PFD's conclusion that the likelihood is high that the wind facilities will produce

⁶⁵ PFD at 52-53.

⁶⁶ PFD at 52.

⁶⁷ Tr. at 191:9-16 (Godfrey Cross) (Feb. 24, 2020).

⁶⁸ PFD at 51 (citing SWEPCO witnesses Tom Brice and John Torpey).

at the P50 level and that it is a near certainty they will produce at the P95 level.⁶⁹

The Simon Wind reports concluded that the P50 production level for the Selected Wind Facilities was equivalent to a 44.01% net capacity factor (NCF), while the P95 production level was a significantly lower 38.13% NCF. NCF is the percentage of the facilities' potential nameplate energy production that they actually produce and depends primarily on wind conditions at the site. By utilizing the low P95 production level to assess the facilities' benefits, the PFD would credit the facilities with only 86.6%⁷⁰ of the energy production they are likely to achieve at the P50 production level. Instead of evaluating the facilities' benefits at their probable P50 energy production levels, the PFD would consider only the 86.6% of that production that the facilities are *nearly certain* to achieve. According to TIEC, this reduction in expected output from the facilities reduces their customer benefits by \$193 million (net present value).⁷¹

While the PFD discusses TIEC's arguments that the P50 level does not reflect force majeure and curtailment risk, the PFD bases its recommendation to use the P95 production level on the fact that SWEPCO has guaranteed that level, not on TIEC's arguments. The PFD states, "[w]hile the risks of curtailment and force majeure may be low, the evidence shows they are real and asymmetrical,"⁷² but the PFD repeatedly refers to SWEPCO's P95 production guarantee:

- "The ALJs find that it is not reasonable to evaluate the customer benefits of the SWFs at the P50 level, while guaranteeing benefits only at the P95 level."
- "Accordingly, the ALJs recommend that the benefits of the SWFs be evaluated at the guaranteed level – P95."
- "[T]he ALJs do not recommend basing the customer benefit projections at a probability level SWEPCO is not prepared to guarantee. . . ."⁷³

Analyzing facility benefits based on what the utility will guarantee rather than how the facility is likely to perform is not only contrary to the statutory mandate to evaluate the probable lowering of costs to customers, but the policy implications of such an approach should be

⁶⁹ PFD at 52.

⁷⁰ $38.13/44.01 = 0.866394$.

⁷¹ TIEC's Initial Brief at 50 (Mar. 9, 2020).

⁷² PFD at 52.

⁷³ PFD at 52-53.

disturbing to the Commission. Reduced to its most basic, the PFD's conclusion is that the Commission should only consider benefits of a proposed facility that the utility is willing to guarantee. Utilities cannot possibly guarantee that a generation facility will achieve its expected or probable performance over its useful life. Such a guarantee would be unprecedented, create an unreasonable and asymmetrical risk contrary to the low-risk profile reflected in utility returns on equity, and extend well beyond the statutory requirements for approving the Selected Wind Facilities. At the same time, customers would receive an enormous windfall, paying a low, regulated rate of return in exchange for guaranteed asset performance plus all the upside if the asset performs better than expected (which, in the case of SWEPCO's Selected Wind Facilities, is 50% likely at the P50 production level.)

The PFD's reliance on the Company's P95 production guarantee to justify endorsing an unreasonably low level of production from the Selected Wind Facilities does not make sense. There is no requirement to make guarantees in applying for a generation CCN and the statutory standard – probable lowering of costs to customers – remains the same with or without guarantees. A rational analysis would have started with the probable level of production, P50, and then considered whether and to what extent the Company's production guarantee enhances the benefits of the facilities. Instead, the PFD has turned the production guarantee into a detriment, and proposes to penalize the Company for offering it, by refusing to evaluate any production above the guaranteed level. If the Company had not offered a production guarantee, the primary basis for the PFD's capacity factor recommendation would simply disappear.

Since utilities cannot possibly guarantee a facility's expected performance, the result of the PFD's analysis would be that the potential customer savings benefits of a proposed facility would be drastically under-counted (at either the guaranteed or near certainty level), causing facilities that would probably lower customer costs to be rejected. Rejecting facilities based on a distorted view of customer savings benefits is not a risk-free path for customers as the PFD and other parties seem to assume. If a rejected facility would have probably lowered customer costs, then the converse is also true – obtaining the generation from an alternative source will probably *increase* customer costs. Customers are exposed to generation cost risk with or without the proposed facility, which is why it is important that the probability of lowering customer costs be evaluated as even-handedly as possible. The PFD's arbitrary and ill-advised requirement of near-certainty or a utility guarantee does not accomplish that goal or comply with the statute. Instead, a flawed

evaluation of proposed generation facilities increases customers' generation risk rather than reduces it.

Finally, there are good reasons the PFD did not rely on TIEC's force majeure and curtailment arguments. Instead of presenting a witness to support those arguments, TIEC asserted them after the hearing based on statements in the Simon Wind reports that do not support TIEC's claims. As a result, SWEPCO had no opportunity to rebut those arguments or explain the Simon Wind reports' analysis. TIEC's arguments are premised on the claim that the capacity factor determined in the Simon Wind reports do not include production losses due to force majeure events, mechanical defects, and curtailments.⁷⁴ However, the reports consider all three of these factors. For example, the reports discount forecast production for losses due to grid availability, turbine availability, icing, other meteorological events, and site access force majeure.⁷⁵ The reports also evaluate confidence limits based on environmental factors and curtailment.⁷⁶ The reports are technical documents and TIEC made no effort to explore how these issues were actually treated. TIEC did not establish that the capacity factor determined by Simon Wind excluded consideration of force majeure, curtailment, and other factors. Their arguments lend no support to the PFD's conclusion to reduce the wind facilities' capacity factor to the P95 level even though it captures only 86.6% of the wind facilities' probable P50 production, nor did the PFD base its proposed capacity factor reduction on those arguments. There is no reason to conclude that force majeure, mechanical defects, or curtailments will lead to any reduction in the facilities' capacity factor, much less the very large reduction recommended by the PFD.

d. Useful Life (Exceptions to Findings of Fact No. 76 – 79, 81, and 102)

The Selected Wind Facilities are engineered and designed to have a useful life of 30 years, with General Electric wind turbine generators.⁷⁷ Accordingly, SWEPCO assumed this same 30-year useful life in its economic analyses. In contrast, the PFD agreed with TIEC's and Commission

⁷⁴ See PFD at 50 (describing TIEC's arguments).

⁷⁵ Direct Testimony of Jay Godfrey, SWEPCO Ex. 3, Exhibit JFG-6 at 11, 54 of 205.

⁷⁶ SWEPCO Ex. 3, Exhibit JFG-6 at 58 of 205.

⁷⁷ SWEPCO Ex. 3 at 22; Direct Testimony of Joseph G. DeRuntz, SWEPCO Ex. 4 at 18:11-19:10.

Staff's (Staff) positions for a 25-year useful life,⁷⁸ applying an analysis based on ongoing capital and O&M costs that would be virtually impossible for any generation project to satisfy. SWEPCO respectfully submits that the PFD's analysis is flawed and imposes unreasonable criteria for a generation CCN; related proposed Findings of Fact No. 76-79 and 81 should be changed or deleted.⁷⁹

One of the main flaws in the PFD's logic is clearly shown in the following passage intended to explain the PFD's 25-year useful life conclusion:

Although it is reasonable to assume an industrial progression toward longer useful lives with advances in technology and experience with operations, the evidence overwhelmingly shows that achieving a 30-year useful life for the SWFs depends heavily on ongoing capital and O&M expenses.⁸⁰

This passage is accurate. However, it does not support the PFD's adoption of a 25-year useful life. In particular, it is true that achieving the 30-year design life "depends heavily on ongoing capital and O&M expenses."⁸¹ Yet achieving any useful life for any generating facility—be it wind-powered or gas-fired of any size or type—depends on the facility being operated and maintained properly and receiving new and replacement capital parts as good utility practice suggests. No party alleged, and there is not one shred of evidence, that SWEPCO would not or could not provide necessary O&M funds and investment capital to achieve a 30-year life.

Similarly, the PFD opines, "The evidence further shows that the amount and extent of those [ongoing capital and O&M] expenses is uncertain. . . ."⁸² Once again, the same would be true of any generation project—be it wind-powered or gas-fired—whose design life extends past 20 years into the future. Estimates of future costs are the best that can be offered. Characterizing estimates of future costs as uncertain (a truism) as a means to reject CCN authorization for a power project simply creates an insurmountable barrier to such projects.

⁷⁸ Proposed FoF No. 76 states, "SWEPCO has not shown that the SWFs will have an extended useful life of 30 years." Additionally, FoF No. 81 states that the useful life should be 25 years.

⁷⁹ SWEPCO does not except to proposed FoF No. 80, which states, "A significant amount of SWEPCO's projected net benefits is expected to occur during years 26-30."

⁸⁰ PFD at 56 (footnotes omitted).

⁸¹ PFD FoF No. 78 states, "Extending the useful life beyond 25 years depends on operation and maintenance (O&M) and capital costs that may outweigh the benefit."

⁸² PFD at 56.

Nor does the PFD do justice to the two quotes it attributes to the LBNL study.⁸³ First, the PFD asserts, “[t]he LBNL study noted that ‘the actual incremental value of years 25 to 30 is generally quite low in present value terms, especially if there is a need for increased O&M or refurbishment.’”⁸⁴ In fact, the LBNL passage in question was from one survey respondent (out of 18 respondents).⁸⁵ That particular respondent also opined, “it tends to have a somewhat more conservative view—using 25 years as the technical and economic lifetime, albeit acknowledging that many others have gained comfort with 30 years.”⁸⁶

Second, the PFD states that the LBNL study “itself states that its ‘analysis overstates the benefits of extended project lifetimes.’”⁸⁷ The PFD thus implies that this LBNL quote applies to a 30-year project. Yet it does not; this quote applies to projects of longer duration—35 to 40 years. Page 7 of the LBNL study, which the PFD quotes, presents levelized cost of energy (LCOE) analyses of projects with lives of 20 years, 25 years, 30 years, 35 years, and 40 years.⁸⁸ The study refers to the “the now-common 30-year assumed life.” It then goes on to state that:

Even longer assumed lifetimes lead to further, but diminishing (due to discounting), LCOE reductions . . . for 35- and 40-year lives, respectively. These estimates assume that O&M costs simply scale with inflation regardless of useful life and that performance degradation as projects age is not present. Consequently, the analysis overstates the benefits of extended project lifetimes on LCOE. . . .⁸⁹

“Extended project lifetimes” in the LBNL study are thus 35 to 40 years, not the “now common” 30 years. Accordingly, the LBNL passages on which the PFD relies support SWEPCO’s assumed 30-year useful life.

The ALJs urge that they “find it unreasonable that a full third of the projected customer savings depends on such an uncertain final five years of the Project.”⁹⁰ Yet SWEPCO presented credible evidence fully to support the first 25 years and the final five years, beginning to end. This

⁸³ The LBNL study is Exhibit JGD-2R to the Rebuttal Testimony of Joseph DeRuntz (SWEPCO Ex. 16).

⁸⁴ PFD at 56; Rebuttal Testimony of Joseph DeRuntz, SWEPCO Ex. 16, Exhibit JGD-2R at 6.

⁸⁵ SWEPCO Ex. 16, Exhibit JGD-2R at 1.

⁸⁶ SWEPCO Ex. 16, Exhibit JGD-2R at 6.

⁸⁷ PFD at 56.

⁸⁸ SWEPCO Ex. 16, Exhibit JGD-2R at 7.

⁸⁹ SWEPCO Ex. 16, Exhibit JGD-2R at 7.

⁹⁰ PFD at 56.

evidence came from General Electric (who designed the turbines for a 30-year life) and SWEPCO witness Mr. DeRuntz (who presented the cost estimate).

The full 30-year useful life is supported by the General Electric site-specific analysis in its mechanical loads analyses. These analyses are contained in SWEPCO Exhibit 16A.⁹¹ General Electric, the turbine manufacturer, performed an analysis for each Selected Wind Facility: Traverse (pp. 1-16 of SWEPCO Ex. 16A), Maverick (pp. 17-32), and Sundance (pp. 33-48). The following quotations from those analyses clearly affirm the feasibility of a 30-year service life:

- “The project was assessed for a Life of 30 years. Additional maintenance activities are identified in Appendix 1.”⁹²
- “A fatigue loads analysis has been performed for the project assuming a 30 year life as follows. Table 1 and Table 2 show the Extended Life Maintenance Activities of the critical components.”⁹³
- In conclusion, “the fatigue and extreme loads of the . . . wind turbines . . . are within the design loads envelope. The installation and operation of the . . . wind turbines are approved based on current calculation methods.”⁹⁴
- “[T]he equivalent fatigue loads of the . . . wind turbines were analyzed at 30 years to confirm suitability and to identify any additional maintenance activities necessary to safely operate the turbines to the target life. Tables 1 and 2 show the Extended Life maintenance activities of the critical components.”⁹⁵

The three analyses also included a list of 30-year life maintenance activities.⁹⁶

It is difficult to imagine a clearer confirmation from the turbine manufacturer—who is by far in the best position to know—that a 30-year design, accompanied by life maintenance practices, is achievable. No credible evidence offsets or undermines this conclusion.

As for costs, SWEPCO witness Mr. DeRuntz took a ground up approach in preparing the projected 30-year ongoing capital and O&M costs. As he explained, the

⁹¹ Highly Sensitive Exhibit JGD-1R.

⁹² Highly Sensitive SWEPCO Ex. 16A at 4, 20, and 36 (use pagination in upper right-hand corner).

⁹³ Highly Sensitive SWEPCO Ex. 16A at 9, 25, and 41.

⁹⁴ Highly Sensitive SWEPCO Ex. 16A at 12, 28, and 44.

⁹⁵ Highly Sensitive SWEPCO Ex. 16A at 14, 30, and 46.

⁹⁶ Highly Sensitive SWEPCO Ex. 16A at 15-16, 31-32, 47-48.

ongoing O&M and capital forecast is based on maintaining the availability and performance of the turbines over 30 years of operation. This will be achieved through condition monitoring systems, routine preventative maintenance, planned corrective maintenance, and major maintenance and overhauls.⁹⁷

While the PFD states that SWEPCO's analysis assumes flat ongoing capital and O&M costs,⁹⁸ SWEPCO presented a detailed capital and O&M forecast for the facilities through 2031, based in part on a fixed-price O&M agreement with Invenergy for that period, and escalated those costs at the rate of inflation for the life of the facilities.⁹⁹ In addition, Mr. DeRuntz's ongoing capital cost projections for Major Maintenance/Other parts "includes all parts replaced under the Invenergy O&M Services Agreement and major maintenance parts and labor for activities such as blade replacements, gearbox repairs, and switchgear repairs."¹⁰⁰ Thus, Mr. DeRuntz included the major capital items that, over time, would need to be replaced.¹⁰¹ Mr. DeRuntz did what was possible and reasonable looking 30 years out. No other party offered an alternative cost estimate or any credible reports, studies, or evidence to dispute the appropriateness of O&M and capital budgets for a 30-year useful life.

In proposed Finding of Fact No. 77, the PFD accepts TIEC witness Mr. Pollock's argument that "[t]he warranty provided by the turbine manufacturer does not support a 30-year useful life." Mr. Pollock implied that there should be, or is, some close correlation between a wind facility's useful life and the duration of supplier warranties.¹⁰² However, he offers no support in the form of substantiating evidence or learned opinion. Warranties allocate risk for the item in question and are subject to negotiation, but this fact is unrelated to the minimum design life of a wind turbine.

In conclusion, SWEPCO reasonably covered all the bases in supporting the feasibility of a 30-year useful life, together with the associated costs. If the Commission finds, as the PFD

⁹⁷ SWEPCO Ex. 4 at 19:1-4.

⁹⁸ PFD at FoF No. 102.

⁹⁹ SWEPCO Ex. 4 at 16:7-18:2 and Exhibit JGD-5.

¹⁰⁰ See SWEPCO Ex. 4, Exhibit JGD-5 at n.3.

¹⁰¹ Proposed FoF No. 79 states, "SWEPCO's O&M and capital forecast is unreasonable because it does not recognize the higher level of capital and O&M expense that will be required to extend the useful lives of the SWFs to 30 years." However, Mr. DeRuntz did provide a comprehensive cost estimate. In addition, it is more accurate to say that the Selected Wind Facilities are being designed from the start to last 30 years than to say SWEPCO will extend the useful lives to 30 years.

¹⁰² Direct Testimony of Jeffrey Pollock, TIEC Ex. 1 at 15: 4-8.

proposes in Finding of Fact No. 76, that SWEPCO has not made an adequate showing, then such a finding will be because no utility could do so for a 30-year period (or at least the last five years), and not because SWEPCO's specific evidence is deficient. The Commission should not endorse such an impossible standard that prevents balanced evaluation of generation projects.

e. Congestion and Losses and Gen-tie (Exceptions to Findings of Fact No. 82 – 93)

SWEPCO excepts to the PFD's conclusion that the Company did not appropriately consider the cost of congestion and losses in assessing the customer benefits of the Selected Wind Facilities.¹⁰³ In fact, SWEPCO modeled both the expected congestion costs associated with the proposed facilities (assuming that the SPP ITP process promotes transmission solutions that moderate congestion on the SPP system) and the impact of higher congestion costs (if the SPP ITP process does not produce transmission solutions to reduce congestion and the Company builds a gen-tie to address congestion costs). As a result, SWEPCO addressed potential congestion costs associated with the proposed facilities both with and without SPP ITP grid improvements to contain those costs. In both cases, the proposed facilities will result in cost savings for customers.

The PFD's discussion of this issue appears to rely on three conclusions:

1. SWEPCO should have adjusted for the understatement of congestion inherent in PROMOD;¹⁰⁴
2. SWEPCO's assumption that the SPP ITP process will advance transmission solutions that reduce congestion is unreasonable;¹⁰⁵ and
3. SWEPCO's testimony that it does not expect to build a gen-tie is unpersuasive and inconsistent with its economic evaluation and RFP process.¹⁰⁶

SWEPCO will address each of these faulty conclusions in turn. None justify the ultimate conclusion that the Company did not appropriately assess congestion costs.

PROMOD Understatement of Congestion

The PFD states that because PROMOD understates congestion costs, "the ALJs find it

¹⁰³ PFD at 68-70.

¹⁰⁴ PFD at 68-69.

¹⁰⁵ PFD at 69.

¹⁰⁶ PFD at 70.

reasonable to make some adjustment for the understatement of congestion costs.”¹⁰⁷ The PFD concludes this is not addressed by SWEPCO’s high congestion (gen-tie) sensitivity because that accounts only for future congestion, not the understatement of congestion inherent in PROMOD.¹⁰⁸ This reasoning is flawed and the PFD’s conclusion is mistaken.

The PFD’s attempted distinction between “future” congestion in the Company’s high congestion (gen-tie) case and the congestion “inherent in PROMOD” does not exist. The Company used PROMOD models developed by SPP and stakeholders in the ITP process to forecast system operations, including congestion. The Company’s base case forecasts assumed that the ITP process would promote transmission improvements that contained congestion costs after 2029. The Company also used the SPP ITP PROMOD model for its high congestion (gen-tie) sensitivity case, but in that case assumed the ITP process did not result in transmission improvements but the Company instead built a gen-tie to avoid congestion. Both the base and high congestion models forecast system operation using models developed in the ITP process. The PFD’s attempted distinction between future congestion and congestion inherent in PROMOD does not exist because both the Company’s base case and high congestion sensitivity case used PROMOD to project system operations in the future. What the PFD misses is that the high congestion sensitivity case effectively bounds the impact of congestion at the level where it would become more economical for the Company to build a gen-tie. The high congestion (gen-tie) case shows that at that level of congestion, with the costs of the gen-tie to avoid congestion included in the analysis, the Selected Wind Facilities still reduce costs to customers.¹⁰⁹

The 5% PROMOD congestion adjustment made in the Wind Catcher case and proposed in the PFD does not apply here.¹¹⁰ In Wind Catcher, the Company compared the proposed project to a “generic wind” case that included wind facilities throughout the SPP footprint, including facilities in areas with constrained transmission.¹¹¹ In this case, by contrast, the Company performed a deliverability analysis during its bid selection process, resulting in selection of projects in locations closer to the AEP load zone with significant deliverability “headroom” on the

¹⁰⁷ PFD at 68.

¹⁰⁸ PFD at 68.

¹⁰⁹ SWEPCO Ex. 8 at Errata Exhibit JFT-3 pages 10-12.

¹¹⁰ PFD at 68.

¹¹¹ Tr. at 511:14-512:6 (Pfeifenberger Cross), 514:12-515:9 (Pfeifenberger Redirect) (Feb. 25, 2020).

transmission system.¹¹² Selection of the Selected Wind Facilities on a strong part of the transmission system addressed the risk that congestion would be undercounted by PROMOD, so the PFD's proposed adjustment should be rejected.

SPP ITP Transmission Solutions

It is also misguided for the PFD to conclude that the STP ITP process will not advance transmission solutions to address congestion.¹¹³ One of the key functions of the SPP transmission planning process is to advance transmission solutions when they are cost-effective to reduce congestion (*i.e.*, when the congestion cost savings exceed the cost of the transmission improvement). The SPP ITP process looks holistically at all the benefit drivers associated with new transmission and advances transmission solutions that meet an established benefit-to-cost ratio.¹¹⁴ SWEPCO's congestion forecasts are conservative because SPP is required to find transmission solutions based on economics, reliability, and public policy drivers, not just congestion.¹¹⁵ As a result, the cost of congestion is not expected to go up but rather to go down.¹¹⁶

This pattern has occurred in the recent past when congestion costs rose in the SPP and were then reduced by transmission improvements. Average congestion costs between wind facilities in Oklahoma and the AEP load zone grew to near \$8/MWh in 2017 and then dropped significantly after new SPP transmission facilities came on line.¹¹⁷ SPP's Annual 2018 State of the Market Report notes that transmission expansion in 2018 allowed higher transfer of wind generation to eastern Oklahoma¹¹⁸ and that the ITP process seeks to target a reasonable balance between long-term transmission investments and congestion costs to customers.¹¹⁹ ITP transmission planning is an ongoing process¹²⁰ and the SPP Board recently approved \$336.7 million in new transmission

¹¹² Direct Testimony of Kamran Ali, SWEPCO Ex. 7 at 3:1-6:4, 14:17-19; Rebuttal Testimony of Kamran Ali, SWEPCO Ex. 18 at 5:14-6:2, 7:12-8:2; SWEPCO Ex. 9, Direct Testimony of Johannes Pfeifenberger, SWEPCO Ex. 9 at 16:6-12.

¹¹³ PFD at 70.

¹¹⁴ Tr. at 324:3-325:2 and 350:11-21 (Sheilendranath Cross) (Feb. 25, 2020).

¹¹⁵ Tr. at 314:6-316:6 and 326:9-22 (Sheilendranath Cross) (Feb. 25, 2020).

¹¹⁶ Tr. at 341:5-14 (Sheilendranath Cross) (Feb. 25, 2020).

¹¹⁷ SWEPCO Ex. 9 at 10:12-11:4 and Table 1, 31:16-33 (Figure 1).

¹¹⁸ SWEPCO Ex. 20A, 2018 State of the Market Report at 155-156, 158-159 (Figure 5-4).

¹¹⁹ SWEPCO Ex. 20A, 2018 State of the Market Report at 160.

¹²⁰ SWEPCO Ex. 20A, 2018 State of the Market Report at 163 (Figure 5-8).

investment to address congestion and other system needs.¹²¹ SWEPCO's base case reasonably assumed that the SPP ITP process would advance transmission solutions when they are cost-effective to reduce congestion.

The Company's benefits modeling also reasonably held congestion costs constant after 2029 because they had reached the \$9-10/MWh threshold where additional transmission would be cost-effective to constrain those costs. The PFD is wrong that the evidence shows the economic threshold for new transmission investment could be as high as \$20/MWh.¹²² The evidence cited by the PFD was an estimate from the Wind Catcher case, which involved wind generation in the constrained western panhandle of Oklahoma, requiring a far longer and more expensive transmission line to relieve congestion to the AEP load zone.¹²³ In this case, the Selected Wind Facilities are in north central Oklahoma, much nearer to the AEP load zone, so if transmission solutions were needed to constrain congestion they would be much less costly than in Wind Catcher.¹²⁴ The Company reasonably assumed that congestion costs would not increase after 2029 because they had reached a level where transmission additions would become cost-effective to constrain them. As noted above, the Company also presented a high congestion sensitivity case, showing that if the SPP ITP process did not advance transmission solutions to constrain congestion, the Company could build a gen-tie to avoid congestion and the Selected Wind Facilities would still be economic even with the costs of the gen-tie included.

Consideration of Gen-Tie Costs

The PFD mistakenly concludes that SWEPCO should expect to build a gen-tie and therefore should consider the associated costs in its benefits analysis.¹²⁵ The evidence shows that a gen-tie should not be expected if the SPP ITP planning process cost-effectively advances transmission solutions to constrain congestion, but that SWEPCO *did* in fact consider the cost of a gen-tie in its sensitivity analysis for higher-than-anticipated congestion costs.

¹²¹ SWEPCO Ex. 20 at 3:19-4:8.

¹²² PFD at 69.

¹²³ PFD at 69, citing Tr. at 485 (Company witness Pfeifenberger discussing the transmission cost threshold for Wind Catcher); see also Tr. at 464:2-7 (380-mile transmission line in Wind Catcher) (Torpey Cross) (Feb. 25, 2020).

¹²⁴ Tr. at 514:12-515:20 (Pfeifenberger Redirect) (Feb. 25, 2020).

¹²⁵ PFD at 70.

Although the PFD concludes that congestion costs should have been increased with inflation,¹²⁶ the evidence shows that this would increase those costs to the point that it would be economical for the Company to mitigate the cost increases with a gen-tie (if the SPP ITP process did not advance transmission solutions to do so) because the present value of inflated congestion costs after 2029 would exceed the present value of a gen-tie's revenue requirements. Under these circumstances, allowing congestion costs to continue to increase would be unreasonable when either SPP or SWEPCO could cost-effectively mitigate those costs with transmission.¹²⁷ It makes no sense to assume that congestion costs would rise to the levels suggested in the PFD.

The PFD also asserts that SWEPCO considered gen-tie costs in its bid evaluation process and the proposed projects would not have ranked highest without that consideration.¹²⁸ This conclusion overstates and largely misses the point. In the Company's bid evaluation the Selected Wind Facilities would still have ranked very highly (3rd, 4th and 5th) even without consideration of a gen-tie to cap congestion risk, while they became the clear choices when the possibility of a gen-tie was considered.¹²⁹ In fact, the PFD does not reflect any challenge to the Company's selection of the proposed facilities through the bid evaluation process.¹³⁰ Nor does the PFD suggest that the Company should have selected bids without any consideration of controlling future congestion costs through construction of a gen-tie. Such an approach would have exposed customers to substantial future congestion cost risk, when that risk could effectively be mitigated by choosing highly ranked bids in locations that presented a gen-tie option as valuable protection against the risk of higher-than-projected congestion costs.¹³¹

The PFD also suggests that the cost of the gen-tie should be considered in the economic analysis of the proposed facilities and that Company's cost estimate for the gen-tie should be considered a "low end."¹³² The PFD apparently overlooks that gen-tie cost *was* considered in the economic analysis through a high congestion sensitivity that included the cost of the gen-tie, and

¹²⁶ PFD at 70.

¹²⁷ See SWEPCO Ex. 20 at 17:12-18:2.

¹²⁸ PFD at 70.

¹²⁹ SWEPCO Ex. 9 at 24:21-28:21.

¹³⁰ PFD at 11-12.

¹³¹ SWEPCO Ex. 9 at 24:21-28:21.

¹³² PFD at 70.

no credible evidence supports the suggestion that the Company's estimate was a low end. The PFD discusses an argument by East Texas Electric Cooperative and Northeast Texas Electric Cooperative (ETEC-NTEC)¹³³ that the gen-tie might need a second or parallel circuit to meet NERC standards, which could double its cost.¹³⁴ However, NERC standards apply to integrated transmission systems that must meet contingency requirements, not to gen-ties. The gen-tie's sole function would be to connect the Selected Wind Facilities to the SPP grid at the AEP load zone near Tulsa and an outage on the gen-tie would affect only the proposed facilities, not the remainder of the grid. ETEC-NTEC's claim that a second or parallel circuit should be added to the gen-tie at enormous additional cost is not required by NERC standards and makes no sense. Outages on AEP's existing system historically average less than 1%, which would not justify adding tremendous cost to the gen-tie that is not required by any standard.¹³⁵ There is no credible evidence that SWEPCO's gen-tie cost estimate is understated.

Finally, the PFD finds that the gen-tie should be evaluated over the useful life of the Selected Wind Facilities rather than the longer life of a transmission line.¹³⁶ However, it is highly unlikely that the gen-tie would be taken out of service after 30 years since all of the infrastructure necessary to repower the Selected Wind Facilities (including the gen-tie itself) would already be in place and they would remain a good source of low-cost renewable energy without fuel costs.

The PFD also recommends that SWEPCO be required to seek Commission approval prior to constructing a gen-tie.¹³⁷ As the PFD notes, SWEPCO has agreed to that proposal.¹³⁸

3. Capacity Value (Exceptions to Findings of Fact No. 95 and 96)

SWEPCO excepts to the PFD's conclusion that the projected capacity value of the Selected Wind Facilities is "entirely speculative."¹³⁹ The PFD also proposes the following related Findings of Fact:

95. When a generation resource is acquired solely on the basis of probable lowering of costs to customers, it is not reasonable to include the capacity value in the benefit

¹³³ PFD at 67.

¹³⁴ Direct Testimony of John Chiles, ETEC-NTEC Ex. 2 at 15:14-16:23.

¹³⁵ See SWEPCO Ex. 18 at 10:22-12:3.

¹³⁶ PFD at 70.

¹³⁷ PFD at 70.

¹³⁸ PFD at 68 citing Mr. Brice's testimony; Tr. at 97:3-10 (Brice Cross) (Feb. 24, 2020).

¹³⁹ PFD at 72.

analysis.

96. SWEPCO did not demonstrate that the SWFs will also provide value by deferring the Company's future capacity needs.

Both the PFD's conclusion and these two proposed findings are mistaken and flawed.

As an initial matter, the Company's projected capacity value for the Selected Wind Facilities is not speculative as the PFD suggests. Instead, it is based on the SPP's expected methodology for determining wind generation capacity value and the expected savings from deferral of other capacity additions as a result of acquisition of the Selected Wind Facilities.¹⁴⁰ The Company's models show capacity benefits beginning in the 2037-2038 time frame.¹⁴¹ This is not speculation; it is standard modelling employed for resource planning in the electric industry. The PFD suggests no reason to conclude otherwise. Although TIEC witness Mr. Pollock asserted that load growth projections can change and the SPP has not yet accredited the Selected Wind Facilities for capacity,¹⁴² any resource planning must necessarily be based on projections that could change and facilities cannot be accredited before they are built. These claims provide no valid basis for dismissing the Company's evidence that the facilities will provide capacity value savings by deferring the need for other facilities. By rejecting the well-established value of capacity cost savings as speculative, the PFD's analysis would erect an unjustified barrier to full evaluation of the cost impacts of a proposed project.

The PFD's proposed Finding of Fact No. 95 would take its dismissal of capacity savings a step further by concluding that when a generation resource is acquired on the basis of probable lowering of costs to customers, it is not reasonable to include the capacity value in the benefit analysis. It is flatly inconsistent with the statute to arbitrarily exclude certain cost impacts (*i.e.*, capacity cost impacts) when evaluating the probable lowering of costs to customers. The statute does not direct an evaluation of the probable lowering of *some* costs to customers. If accepted, the PFD's refusal to consider the capacity value of a project proposed for economic reasons would handicap the Commission's evaluation of a project's cost impacts by excluding one well-established type of cost savings for no apparent or articulated reason. As a result, the Commission

¹⁴⁰ SWEPCO Ex. 8 at 17:1-2; Rebuttal Testimony of John Torpey, SWEPCO Ex. 19 at 8:4-5.

¹⁴¹ SWEPCO Ex. 8, Errata Exhibit JFT-3 at 1-12, line 3.

¹⁴² PFD at 71, n.375.

would evaluate only one component of the project's cost impacts while systematically ignoring another component, which would result in an incomplete and inaccurate assessment of the proposed project. It would not be consistent with the statute or in customers' interests to evaluate projects based on an incomplete assessment of only some of their cost impacts.

The PFD's rejection of the Selected Wind Facilities' capacity benefits without any articulated justification besides labelling them speculative, apparently based on a flawed belief that capacity benefits should not be considered for economic projects, should be rejected.

4. Production Tax Credits (Exception to Finding of Fact No. 100)

SWEPCO excepts to the PFD's conclusion that the PTC benefits of the Selected Wind Facilities should be determined based on the low P95 level of energy production rather than the expected P50 level of production.¹⁴³ Because PTCs are earned for each unit of energy produced, the facilities' energy production levels are the primary driver of the PTC benefits customers will receive.

The PFD's PTC analysis is based on its conclusions concerning the facilities' expected capacity factor, discussed above in Section VI.C.2.c of these Exceptions. As noted in that Section, the PFD recognizes it is "highly likely" that the wind facilities will produce at the P50 capacity factor of 44.01% of nameplate capacity but nonetheless proposes that they be evaluated at the much lower P95 capacity factor of 38.13%, which the PFD views as a "near certainty." The PFD's characterization of the P50 and P95 production levels is apt since it is equally likely (50%) that production will be above or below the P50 level,¹⁴⁴ while it is 95% likely that production will be above the P95 level and 5% likely that it will be below that level.¹⁴⁵

The PFD bases its PTC and capacity factor recommendations on the production level that SWEPCO is willing to guarantee for the facilities, not the production level that is probable. However, PURA requires that evaluation of the proposed facilities be based on the *probable* lowering of costs to customers, not benefits that are guaranteed or a near certainty. Using these flawed standards as recommended by the PFD would increase customers' generation risk by undervaluing the cost savings of proposed facilities compared to the alternative generation sources that

¹⁴³ PFD at FoF No. 100.

¹⁴⁴ Tr. at 191:9-16 (Godfrey Cross) (Feb. 24, 2020); Direct Testimony of John Torpey, SWEPCO Ex. 8 at 15:21-16:2.

¹⁴⁵ PFD at 51 (citing SWEPCO witnesses Tom Brice and John Torpey).

would otherwise be used. Either way, customers will continue to bear generation risk, but the PFD's flawed standards would ensure that the alternatives are not evaluated evenly. The statutory standard of probable lowering of costs to customers is not only legally required but also best serves customers' interests by prescribing a balanced evaluation of alternatives.

As discussed in Section VI.C.2.c., above (Capacity Factor), the PFD's recommendation to reduce the facilities' energy output from the highly likely 44.01% P50 capacity factor to the nearly-certain, guaranteed 38.13% P95 capacity factor has already understated the facilities' customer benefits by \$193 million (net present value), before the distortion of PTC benefits is considered. According to the PFD, applying the same capacity factor analysis to PTC benefits results in an additional benefits understatement of \$84 million (net present value).¹⁴⁶ As a result, evaluating the facilities' capacity factor based on what is nearly certain or guaranteed, as proposed by the PFD, rather than what is probable, as required by PURA, understates the facilities' benefits by a total of \$277 million (net present value).

VII. PROPOSED CONDITIONS (Exceptions to Findings of Fact No. 110 – 112)

As noted above, the statutory standard for evaluating this application is whether SWEPCO's acquisition of the Selected Wind Facilities will result in the probable lowering of costs for Texas customers. With the use of the word "probable," the Legislature recognizes that the future cannot be predicted with certainty. The question is not whether the utility has guaranteed or will guarantee lower costs to customers. The question is whether SWEPCO's acquisition of the Selected Wind Facilities will more likely than not result in lower costs for Texas customers over the next 30 years. When all the evidence and a probable range of circumstances that may prevail in the future are considered, it is clear that acquisition of the Selected Wind Facilities will result in the probable lowering of costs to Texas customers with or without the guarantees offered by SWEPCO.

The PFD finds that SWEPCO failed to show its proposed guarantees were sufficient to "result in a probable lowering of customer costs."¹⁴⁷ The ALJs misunderstand the purpose of the guarantees. The guarantees offered by SWEPCO were never intended to guarantee a set amount of customer savings. The Company offers guarantees in this proceeding to help ensure that, *even*

¹⁴⁶ PFD at 73.

¹⁴⁷ PFD at 81.

under unexpected circumstances, the Selected Wind Facilities will benefit customers. The PFD's analysis of the guarantees repeatedly fails to understand the purpose of the guarantees. The PFD finds that SWEPCO's P95 Minimum Production Guarantee is "*de minimis*" given that the Selected Wind Facilities are expected to produce energy at the P50 level.¹⁴⁸ It is true that SWEPCO does not expect that the facilities will produce energy below the P95 level because there is a 95% chance that the facilities will produce energy at or above that level. The P95 Minimum Production Guarantee and the other guarantees offered by SWEPCO represent a backstop for customers in the event of unexpected circumstances. Again, the question is, after consideration of the probable range of circumstances that may prevail in the future (e.g., P50 production), will SWEPCO's acquisition of the Selected Wind Facilities result in the probable lowering of cost for customers.

A. SWEPCO's Proposed Conditions

SWEPCO is offering guarantees related to the Selected Wind Facilities' energy production levels, qualification for PTCs, and capital cost. These guarantees provide additional value to customers and should be adopted in the Commission's certification of the acquisition of the Selected Wind Facilities. These guarantees are identified in the direct testimony of SWEPCO witness Brice¹⁴⁹ at pages 16-17 and include:

1. Capital Cost Cap Guarantee

SWEPCO proposes a cost cap equal to 100% of the aggregated filed capital costs of approximately \$1.996 billion (SWEPCO share approximately \$1.09 billion), as outlined in EXHIBIT JGD-3 of Company witness DeRuntz's [direct] testimony.¹⁵⁰ The Capital Cost Cap Guarantee has no exceptions, including for *Force Majeure* (FM).

2. Production Tax Credit Eligibility Guarantee

If PTCs are not received at the 100% level for Sundance and the 80% level for the other two Facilities because a Selected Wind Facility is determined to be ineligible, customers will be made whole for the value of the lost PTCs based upon actual production. The Production Tax Credit Eligibility Guarantee is subject to Changes in Law that affect the federal Production Tax Credit.

3. Minimum Production Guarantee

Beginning in 2022, the Company guarantees a minimum production level, in

¹⁴⁸ PFD at 88.

¹⁴⁹ SWEPCO Ex. 2.

¹⁵⁰ SWEPCO Ex. 4.

aggregate from the Selected Wind Facilities, of an average of 87% (P95 Capacity Factor Case) of the expected output of the Selected Wind Facilities over each five-year period for 10 years average across all facilities. This scenario represents a 38.1% capacity factor and 4,959 GWh per year, in the aggregate for the Selected Wind Facilities. If the minimum production level is not achieved, customers will be made whole on an energy and PTC (if applicable) basis. There is an exception for FM and curtailment in SPP.

While the value of the Selected Wind Facilities lies in their production of largely fixed-price, low-cost energy and the PTCs that will be earned with that production, the guarantees offered by SWEPCO clearly add value for customers. Not even TIEC alleges that these guarantees have no value or will harm customers. If the Commission grants certification of the acquisition of the Selected Wind Facilities, it appears to be uncontested that the Commission should condition that certification on the guarantees being offered by the Company.

B. Conditions Contained in Settlements Filed in Other Jurisdictions

SWEPCO and its AEP affiliate utility operating company Public Service Company of Oklahoma (PSO) have entered into comprehensive settlements approved by regulatory commissions in Arkansas, Louisiana, and Oklahoma that provide for the acquisition of the Selected Wind Facilities with enhanced guarantees. Both in his pre-filed rebuttal testimony and at hearing, SWEPCO Vice President Thomas Brice indicated that SWEPCO would entertain an expansion of the guarantees being offered in this proceeding consistent with those contained in the settlements as part of a reasonable final order approving the acquisition of the Selected Wind Facilities.¹⁵¹ The Arkansas and Oklahoma settlements are contained in the workpapers to Mr. Brice's rebuttal testimony, SWEPCO Ex. 14A. The Louisiana settlement was filed by SWEPCO in this proceeding on April 14, 2020.¹⁵² The order approving the Arkansas settlement was filed by SWEPCO in this proceeding on May 11, 2020.

The settlements do not contain substantive changes to the Capital Cost or Production Tax Credit Eligibility Guarantees. The settlements do expand the Minimum Production Guarantee and provide further assurances to customers regarding a deferred tax asset, if any, and off-system sales. The Louisiana settlement contains a Net Benefits Guarantee. All settlements contain a Most

¹⁵¹ See Rebuttal Testimony of Thomas Brice, SWEPCO Ex. 14 at 14:16-15:8 and Tr. at 169:18-170:5 (Brice Redirect) (Feb. 24, 2020). The Louisiana settlement had not been filed at the time of the hearing on the merits in this proceeding.

¹⁵² Written order from the Louisiana Public Service Commission pending.

Favored Nations (MFN) clause. The PFD urges the Commission to find that SWEPCO declined to modify the cost-saving guarantees it proposed in this case to become consistent with the guarantees contained in the settlements approved in the other states.¹⁵³ To be clear, SWEPCO will accept an order from this Commission approving the acquisition of the Selected Wind Facilities on behalf of Texas customers that is conditioned on SWEPCO providing to Texas customers these guarantees being provided to customers in Arkansas, Louisiana, and Oklahoma under the orders issued in those states. These expanded guarantees are summarized below:

1. Minimum Production Guarantee

In the settlements, the two companies committed to extend the P95 Minimum Production Guarantee to the 30-year life of the Selected Wind Facilities (measured in six 5-year blocks). The two companies have provided this settlement guarantee with no exception for *force majeure*. Further, in the Arkansas and Louisiana settlements, SWEPCO has provided this guarantee with no exception for economic curtailments of the Selected Wind Facilities by the SPP. This settlement guarantee may be found in Section 2(C) of the Arkansas settlement.¹⁵⁴

2. Deferred Tax Asset

In the Oklahoma and Louisiana settlements, PSO and SWEPCO agreed that the company will earn a return on any DTA balance resulting from unused PTCs over the first twenty years of operation of the Selected Wind Facilities using its then applicable cost of long-term debt. This provision may be found in Section 3(A) of the Oklahoma settlement.¹⁵⁵

3. Off-System Sales

PSO in its Oklahoma settlement and SWEPCO in its Louisiana settlement agreed customers shall be credited with 100% of off-system sales margins effective January 1, 2021. This provision may be found in Section 3(B) of the Oklahoma settlement.¹⁵⁶

4. Most Favored Nation Clause

SWEPCO and PSO agreed to an MFN clause applicable to the Cost Cap Guarantee,

¹⁵³ PFD at FoF No. 110.

¹⁵⁴ Workpapers to the Rebuttal Testimony of Thomas P. Brice, SWEPCO Ex. 14A at 19-035-U_80_2 Settlement Agreement.

¹⁵⁵ SWEPCO Ex. 14A at Oklahoma Settlement Documents, Attachment A. This provision was not included in the Arkansas settlement due to ratemaking differences between the states.

¹⁵⁶ SWEPCO Ex. 14A at Oklahoma Settlement Documents, Attachment A. SWEPCO previously made this commitment in Arkansas in the context of a base rate case settlement in 2019.

Minimum Production Guarantee, PTC Eligibility Guarantee, and any other term or condition adopted for the two companies in any of the state jurisdictions on behalf of which SWEPCO or PSO acquires a share of the Selected Wind Facilities, whether through settlement or order issued by any such jurisdiction, to the extent such terms or conditions are more favorable to the Company's customers. The MFN clause may be found in Section 2(D) of the Arkansas settlement.¹⁵⁷

5. Net Benefits Guarantee

While the detailed calculation of the net benefits guarantee is spelled out on the three-page Attachment 3 of the Louisiana settlement filed in this proceeding on May 11, 2020, the basic formula is:

$$\text{Net Benefit for Customers} = \text{Fuel Savings} + \text{PTCs} + \text{RECs Value} + \text{Minimum Net Capacity Factor Guarantee Payments} + \text{Carbon Savings} - \text{SWF Revenue Requirement}$$

VIII. CONCLUSION

Current circumstances provide SWEPCO and the Commission with the opportunity to provide Texas customers, under a probable range of future conditions, with lower costs for the next 30 years. SWEPCO respectfully requests that the Commission reject the PFD and allow Texas customers to participate in the benefits and cost of the Selected Wind Facilities.

Respectfully submitted,

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¹⁵⁷ SWEPCO Ex. 14A at 19-035-U_80_2 Settlement Agreement.

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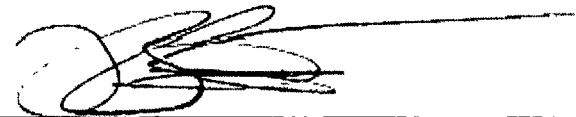
By: 

William Coe

**ATTORNEYS FOR SOUTHWESTERN
ELECTRIC POWER COMPANY**

CERTIFICATE OF SERVICE

I certify that a true and correct copy of this motion was served on all parties of record this
11th day of June, 2020.


William Coe