



Control Number: 47461



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Addendum StartPage: 0

# State Office of Administrative Hearings



Lesli G. Ginn  
Chief Administrative Law Judge

May 18, 2018

**TO: Stephen Journeay, Director**  
**Commission Advising and Docket Management**  
**William B. Travis State Office Building**  
**1701 N. Congress, 7th Floor**  
**Austin, Texas 78701**

**VIA EMAIL**

**RE: SOAH Docket No. 473-17-5481**  
**PUC Docket No. 47461**

*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*

Enclosed is the Proposal for Decision (PFD) in the above-referenced case. By copy of this letter, the parties to this proceeding are being served with the PFD.

Please place this case on an open meeting agenda for the Commissioners' consideration. The jurisdictional deadline is July 31, 2018. Please notify us and the parties of the open meeting date, as well as the deadlines for filing exceptions to the PFD, replies to the exceptions, and requests for oral argument.

Sincerely,

A handwritten signature in black ink, appearing to read "Wendy K. L. Harvel".

Wendy K. L. Harvel  
Administrative Law Judge

A handwritten signature in black ink, appearing to read "Henry D. Card".

Henry D. Card  
Administrative Law Judge

Enclosure

xc: All Parties of Record

**SOAH DOCKET NO. 473-17-5481  
PUC DOCKET NO. 47461**

<b>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</b>	<b>§ § § § § § §</b>	<b>BEFORE THE STATE OFFICE   OF   ADMINISTRATIVE HEARINGS</b>
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## GLOSSARY OF ACRONYMS

<b>AEO</b>	Annual Energy Outlook
<b>AEPSC</b>	American Electric Power Service Corporation
<b>AFUDC</b>	Allowance For Funds Used During Construction
<b>CARD</b>	Cities Advocating Reasonable Deregulation
<b>CCN</b>	Certificate of Convenience and Necessity
<b>DTA</b>	Deferred Tax Asset
<b>EHV</b>	Extra High Voltage
<b>EIA</b>	Energy Information Administration
<b>EPC</b>	Engineering, Procurement, and Construction
<b>ETEC</b>	East Texas Electric Cooperative, Inc.
<b>ETI</b>	Entergy Texas, Inc.
<b>FERC</b>	Federal Energy Regulatory Commission
<b>GE</b>	General Electric
<b>GIA</b>	Generation Interconnection Agreement
<b>GWh</b>	GigaWatt hours
<b>kWh</b>	KiloWatt hours
<b>IRP</b>	Integrated Resource Plan
<b>IRS</b>	Internal Revenue Service
<b>LMP</b>	Locational Marginal Prices
<b>MIPA</b>	Membership Interest Purchase Agreement
<b>MW</b>	Megawatt
<b>NCF</b>	Net Capacity Factor
<b>NGCC</b>	Natural Gas Combined Cycle
<b>NPV</b>	Net Present Value
<b>NTEC</b>	Northeast Texas Electric Cooperative, Inc.
<b>NYMEX</b>	New York Mercantile Exchange
<b>OATT</b>	Open Access Transmission Tariff
<b>OCC</b>	Oklahoma Corporation Commission
<b>OPUC</b>	Office of Public Utility Counsel

<b>PFD</b>	Proposal for Decision
<b>PO</b>	Preliminary Order
<b>PSO</b>	Public Service Company of Oklahoma
<b>PTC</b>	Production Tax Credit
<b>PURA</b>	Public Utility Regulatory Act
<b>SPP</b>	Southwest Power Pool
<b>SPS</b>	Southwestern Public Service Company
<b>SWEPSCO</b>	Southwestern Electric Power Company
<b>TCJA</b>	Tax Cut and Jobs Act
<b>TIEC</b>	Texas Industrial Energy Consumers



**SOAH DOCKET NO. 473-17-5481  
PUC DOCKET NO. 47461**

<b>APPLICATION OF SOUTHWESTERN</b>	<b>§</b>	<b>BEFORE THE STATE OFFICE</b>
<b>ELECTRIC POWER COMPANY FOR</b>	<b>§</b>	
<b>CERTIFICATE OF CONVENIENCE AND</b>	<b>§</b>	
<b>NECESSITY AUTHORIZATION AND</b>	<b>§</b>	<b>OF</b>
<b>RELATED RELIEF FOR THE WIND</b>	<b>§</b>	
<b>CATCHER ENERGY CONNECTION</b>	<b>§</b>	
<b>PROJECT IN OKLAHOMA</b>	<b>§</b>	<b>ADMINISTRATIVE HEARINGS</b>

**PROPOSAL FOR DECISION**

**I. INTRODUCTION**

On July 31, 2017, Southwestern Electric Power Company (SWEPCO) filed an application with the Public Utility Commission of Texas (Commission) seeking certificate of convenience and necessity (CCN) authorization to acquire an interest in the Wind Catcher Energy Connection Project (Project) to be located in Oklahoma (Application). The Wind Catcher Facility (Wind Facility) would be located on more than 300,000 acres in the counties of Texas and Cimarron in the Oklahoma Panhandle. The Wind Facility includes 800 General Electric model 2.5 megawatt (MW) wind turbine generators, which would provide 1,900 MW of delivered (2,000 MW nameplate) wind energy with an expected net capacity factor of approximately 51%. The Project also involves the Wind Catcher Generation Tie Line (Gen-Tie). The Gen-Tie would be an Extra High Voltage (EHV) 765-kV line running approximately 350 to 380 miles through northern Oklahoma from the Wind Facility site in the Panhandle east and slightly south to the American Electric Power (AEP) load zone in the Tulsa area. The total estimated cost of the Wind Facility is approximately \$2.9 billion, of which SWEPCO's share is approximately \$2 billion. The total estimated cost of the Gen-Tie is \$1.6 billion, of which SWEPCO's share is approximately \$1.1 billion. Accordingly, SWEPCO estimates that the total cost of SWEPCO's share of the Project will be approximately \$3.2 billion. The SWEPCO Texas retail jurisdiction total estimated cost of the Project is \$1.1 billion.

## II. EXECUTIVE SUMMARY

SWEPCO is not seeking the CCN because of the need for additional generation. Rather, SWEPCO is asking for the CCN because it estimated originally that the total cost savings from the Project would be \$1.940 billion. SWEPCO's estimate was based on a number of assumptions, including forecasted natural gas prices, an assumed net capacity factor, the value of production tax credits, and several other variables. SWEPCO changed its estimate following the passage of the Tax Cuts and Jobs Act (TCJA), which lowered SWEPCO's effective tax rate, thereby lowering the potential savings achieved from using tax credits, resulting in an estimated savings of \$1.495 billion.

The intervening parties disputed SWEPCO's estimates and presented evidence that SWEPCO significantly overstated the cost savings even after SWEPCO's adjustments for the TCJA. Some parties requested denial of the Application. Other parties requested that several conditions be imposed as guarantees for customer savings should the Project not realize SWEPCO's anticipated savings.

The Administrative Law Judges (ALJs) find that the estimated cost savings without any guarantees would be approximately \$354 million.<sup>1</sup> Although that is a net savings, the ALJs find that it is not a secure enough savings to recommend granting the CCN without including a number of guarantees to protect customers in the event the Project does not realize its anticipated savings. The ALJs base these recommendations on the unusual posture of this case. Instead of a regulated utility requesting a CCN to build additional generation to address the need to serve new or increased load, SWEPCO is seeking the CCN solely for financial reasons. SWEPCO is speculating financially that the Project will result in net customer savings, but it is doing so requesting that customers pay for the Project through rates even in the event customers do not see a net rate decrease. Because this financial speculation is being undertaken with a guarantee (if the CCN is granted) that customers will pay for the speculation, it is appropriate to require

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<sup>1</sup> To help the ALJs calculate estimated cost savings, Staff performed number running at the request of the ALJs. Staff's calculations are Attachment 1 to this Proposal for Decision (PFD). Staff will publish the number running memoranda between the agency liaisons following the issuance of this PFD.

SWEPCO to make its own guarantees to protect customers should the predicted economics of the Project not be achieved.

### III. SUMMARY OF PARTIES' POSITIONS

The Project will significantly increase SWEPCO's rate base, with some of the financial risk placed on the customers rather than the shareholders if SWEPCO's CCN is granted. The parties to the case take varying positions on the Application, with some requesting denial, while others take no position on the approval of the Application but request certain conditions should the Commission approve the Project.

Commission Staff (Staff), Texas Industrial Energy Consumers (TIEC), and Cities Advocating Reasonable Deregulation (CARD) oppose the Application and recommend denial.

Wal-Mart Stores Texas, LLC and Sam's East Inc. (collectively Walmart) take no position on approval of the Application except that Walmart argues the Application should only be approved if the Commission finds that the Project will provide a net positive benefit to customers. Walmart requests a most favored nation guarantee that any customer benefits set by Commission order in Oklahoma, Arkansas, or Louisiana would also be provided to Texas customers. Walmart also requests that the Commission require SWEPCO to file a base rate case at the earliest possible time at which the assets can be included in an historical test year, which would then move the plant assets into rate base. Walmart also requests that the Commission order SWEPCO to guarantee a reduction in rates in any year in which SWEPCO is recovering costs through fuel rates. During that same time period, Walmart requests that costs be allocated based on the most recently approved production demand allocator. Walmart requests that any return on the deferred tax asset for production tax credits (PTCs) be limited to SWEPCO's cost of debt for the entire asset.

The Office of Public Utility Counsel (OPUC) argues that the Project poses too much economic risk to customers. Thus, OPUC recommends denial, but if the Commission approves

the CCN, OPUC asks that additional conditions be added including a capital cost cap, crediting customers at 100% of the PTCs regardless of whether SWEPCO qualifies, and guaranteeing an energy savings.

South Central MCN LLC (South Central) takes no position on the approval of the Application but requests the Commission order SWEPCO and its affiliates to coordinate with South Central and other affected incumbent utilities to ensure that the Project is operated in the most integrated and efficient manner possible.

Golden Spread Electric Cooperative, Inc. (Golden Spread) requests that the Commission condition any approval on SWEPCO's commitment not to seek revenues through the Southwest Power Pool Open Access Transmission Tariff (SPP OATT) to recover any costs.

East Texas Electric Cooperative, Inc. and Northeast Texas Electric Cooperative, Inc. (ETEC-NTEC) did not file a brief but recommended denial in their witness testimony.

#### **IV. JURISDICTION, NOTICE, AND PROCEDURAL HISTORY**

The Commission has jurisdiction and authority over this matter pursuant to the Public Utility Regulatory Act (PURA), Texas Utilities Code §§ 14.001, 36.203, 36.204, 37.051, 37.053, 37.056, and 37.057, and has enacted rules regarding CCNs and recovery of fuel costs at 16 Texas Administrative Code §§ 25.101 and 25.236. The State Office of Administrative Hearings (SOAH) has jurisdiction, pursuant to Texas Government Code § 2003.049 and PURA § 14.053, over all matters relating to the conduct of a hearing in this matter.

In the Application, SWEPCO provided a proposed form of notice. No parties objected to the proposed notice. The form was approved, and SWEPCO provided notice. The details of the provision of notice were not disputed and are addressed in the findings of fact and conclusions of law without further discussion.

Notice of the time and place of the hearing issued on August 18, 2017. The hearing convened on February 13, 2018, and concluded on February 22, 2018. Parties filed initial briefs on March 12, reply briefs on March 21 and proposed findings of fact and conclusions of law on March 23, 2018. The record closed on May 14, 2018, with the admission into evidence of the Arkansas Public Service Commission Order regarding the Project.

## **V. PRELIMINARY ORDER (PO) ISSUES**

### **A. Certificate of Convenience and Necessity Standard of Review**

The grant or denial of a CCN is governed by PURA § 37.056. The Commission may approve an application and grant a certificate only if the Commission finds that the certificate is necessary for the “service, accommodation, convenience, or safety of the public.”<sup>2</sup> SWEPCO admits that the Project is not needed to meet increased load or capacity issues.<sup>3</sup> Instead, SWEPCO has filed the Application seeking a CCN because SWEPCO asserts the Project will provide savings to its customers. SWEPCO also notes that if the project is approved, it will likely delay the need to build additional capacity in the future.

In evaluating whether the grant a CCN, the Commission must consider:

- (1) the adequacy of exiting service;
- (2) the need for additional service;
- (3) the effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area;
- (4) other factors, such as:
  - (A) community values;
  - (B) recreational and park areas;

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<sup>2</sup> PURA § 37.056(a).

<sup>3</sup> SWEPCO Ex. 2 at 18.

- (C) historical and aesthetic values;
- (D) environmental integrity;
- (E) the probable improvement of service or lowering of cost to consumers in the area if the certificate is granted; and
- (F) to the extent applicable, the effect of granting the certificate on the ability of this state to meet the goal established by Section 39.904(a) of [PURA]<sup>4</sup>.

Because this Project is located entirely outside the State of Texas, the Commission should not evaluate the site-specific criteria such as community values, recreational and park areas, historical and aesthetic values, environmental integrity, and other site-specific factors.<sup>5</sup> SWEPCO admits that the controlling statutory factor is the probability of lowering costs to consumers.<sup>6</sup>

Staff agrees with SWEPCO that the controlling issue is whether the Project will lower costs for consumers. However, Staff notes that the statutory factors are not required to be weighted equally. Because the Project is not needed for reliability, whether costs would actually be lowered is of critical concern in evaluating whether to grant the Application.<sup>7</sup>

TIEC concurs with Staff that the Commission should fully consider the risks to ratepayers and also notes that customers bear the cost risk of the Project, whereas the shareholders will profit from the inclusion of the Project in rate base regardless of whether any savings are realized.<sup>8</sup>

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<sup>4</sup> PURA § 37.056(c).

<sup>5</sup> See, *Application of Southwestern Electric Power Company for Certificate of Convenience and Necessity Authorization for a Coal-Fired Power Plant in Arkansas*, Docket No. 33891, Order at Findings of Fact Nos. 43, 46, 48, 50, and 51 (Aug. 12, 2008).

<sup>6</sup> SWEPCO Initial Brief at 12.

<sup>7</sup> Staff Amended Initial Brief at 8.

<sup>8</sup> TIEC Initial Brief at 10.

CARD is also concerned about the risk to consumers, and suggests that SWEPCO could build the Project through a competitive affiliate, thereby retaining both the benefits and the risks of the Project.

OPUC agrees that if the Project will not result in savings to customers, it should not be approved. OPUC also asserts that the Commission may establish conditions so that the risk is more evenly shared between customers and shareholders.<sup>9</sup>

There is no disagreement among the parties that SWEPCO must show that the Project should be approved after considering all of the applicable statutory factors. In this case, most of those factors do not apply because the Project will be built in Oklahoma. Thus, the key statutory factor to evaluate is whether the Project will result in lower costs to consumers. Nothing in the ALJs' recommendation prohibits a competitive affiliate of SWEPCO's building the Project as a market plant.

**B. Analysis of Economics of Wind Catcher (PO Issues 10, 12, 14, 25, 26)**

SWEPCO witness Kelly D. Pearce provided a summary of the net ratepayer benefits SWEPCO asserts will result from the Project:

<b><u>Savings and Cost</u></b> <b><u>(\$ million)</u></b>	<b><u>Total SWEPCO</u></b> <b><u>(Base Case –</u></b> <b><u>NPV 2020</u></b>	<b><u>Total SWEPCO</u></b> <b><u>(Low Case –</u></b> <b><u>NPV 2020</u></b>	<b><u>Total SWEPCO<sup>10</sup></u></b> <b><u>(High Case –</u></b> <b><u>NPV 2020)</u></b>
Adjusted Production Cost (APC) Savings	\$4,079	\$3,727	\$4,544
Congestion and Loss Cost	(\$375)	(\$371)	(\$429)
Capacity Value	\$269	\$269	\$269
Wind Facility Revenue Requirement	(\$2,668)	(\$2,668)	(\$2,668)

<sup>9</sup> OPUC Initial Brief at 3.

<sup>10</sup> SWEPCO Ex. 25, Exh. KDP-2R; SWEPCO Initial Brief at 40. "Base Case," Low Case," and High Case" refer to the base, low, and high gas price estimates provided in AEP's Fundamentals Forecast, which SWEPCO used to determine projected gas prices.

Production Tax Credits	\$1,541	\$1,541	\$1,541
Gen-Tie Line Revenue Requirement	(\$1,151)	(\$1,151)	(\$1,151)
Benefits Excluding Deferred Tax Asset And 100% Off-System Sales (OSS)	\$1,695	\$1,347	\$2,106
Deferred Tax Asset Carrying Charges	(\$300)	(\$300)	(\$300)
Additional OSS Margin At 100% Sharing	\$100	\$ 67	\$126
<b>Total Benefits</b>	<b>\$1,495</b>	<b>\$1,114</b>	<b>\$1,932</b>

As shown, SWEPCO contends the ratepayers will experience \$1.495 billion in net benefits using its Base Case (which it believes is the correct case to use), \$1.114 billion in net benefits under its Low Case, and \$1.932 billion in benefits under the High Case. Several of the intervenors and Staff disagree with those assertions and the assumptions behind them. They challenge SWEPCO's estimates of the Wind Facility construction and construction-related costs and the estimated production cost benefits of the Wind Facility, including SWEPCO's gas prices, estimated future carbon burden, locational marginalized prices (LMP) levels, assumed Project net capacity factor, and capacity value savings.

The ALJs find that the estimated Project costs provided by SWEPCO are reasonable. The evidence shows risks of cost overruns or delays, particularly with regard to the Gen-Tie, however, that would not be covered by the conditions agreed to by SWEPCO. The Commission should consider those possibilities in weighing whether to approve the Project.

In addition, the ALJs find that, although the Project will probably result in lower net costs to SWEPCO's ratepayers, the evidence does not support the \$1.495 billion level of net cost savings predicted by SWEPCO. Specifically, the ALJs find that natural gas prices are likely to be lower than even the low-gas-price scenario estimated by SWEPCO (although higher than the scenarios suggested by intervenors). The ALJs find that the natural gas prices estimated by the federal Energy Information Administration (EIA) in its 2018 Annual Energy Outlook (AEO)



should be used instead. That change would reduce the estimated benefits of the Project by approximately \$388 million net present value (NPV).

The ALJs also find that SWEPCO failed to prove that a carbon tax is likely to be imposed by 2024 or even during the Project's lifetime. Removal of that assumption would reduce the estimated benefits of the Project by approximately \$550 million NPV.

The ALJs further find that SWEPCO failed to account for additional future wind generation in its LMP calculation, although the ALJs accept the amount of expected additional wind generation admitted to by SWEPCO witness Johannes Pfeifenberger rather than the higher level advocated by TIEC. Inclusion of that additional wind generation would reduce the estimated benefits of the Project by approximately \$203 million.

The ALJs find that SWEPCO proved the reasonableness of its estimated Project net capacity factor of 51.1% and its estimated value of avoided future capacity costs.

In summary, in its Base Case SWEPCO estimates the benefits from the Project at \$1.495 billion NPV. The ALJs find that the estimated savings should be reduced by \$388 million for lower natural gas prices, \$550 million for removal of the carbon-burden assumption, and \$203 million for additional wind generation, for a total reduction of \$1.141 billion NPV. That calculation results in the estimated net benefits from the Project of \$354 million NPV.

## **1. Project Description and Cost (PO Issues 10 and 12)**

The Project consists of the Wind Facility and the Gen-Tie. The total estimated Project costs, including allowance for funds used during construction (AFUDC) are set forth in the table below:

	<b>SWEPCO (billions)</b>	<b>TOTAL (billions)</b>
<b>WIND FACILITY</b>	\$2.031	\$2.902
<b>GEN-TIE</b>	\$1.137	\$1.624
<b>PROJECT (BOTH)</b>	\$3.168	\$4.526 <sup>11</sup>

The Wind Facility is being constructed by Invenergy Wind Development North American LLC (Invenergy), which commenced construction in 2016 and has continuously maintained construction. Invenergy has targeted completion of the Wind Facility for September 30, 2020. SWEPCO presented testimony that Invenergy is an experienced developer of wind projects. Invenergy has developed 77 wind energy projects across North America, Latin America, Japan, and Europe totaling more than 10,000 MW. It currently owns and operates almost 4,000 MW of wind generation in North America.<sup>12</sup>

On July 26, 2017, the developers and participants in the Wind Facility entered into an agreement entitled the Membership Interests Purchase Agreement (MIPA) to acquire, subject to regulatory approvals and other conditions, States Edge Wind I LLC, an Invenergy single-purpose subsidiary that will own the rights and assets of the Wind Facility. The MIPA, as described by SWEPCO witness Jay Godfrey, is a turn-key, fixed-price arrangement whereby Invenergy will manage all phases of construction and deliver the Wind Facility upon completion to the utility companies. Invenergy will pay all construction financing costs, which are included in the purchase price. The purchase price for the Wind Facility is \$2.694 billion. The total estimated cost, including the MIPA purchase price and other cost components discussed by SWEPCO witness Michael Bright, is \$2.902 billion. SWEPCO's share is approximately \$2.031 billion.<sup>13</sup>

The Gen-Tie is being constructed to deliver the Wind Facility's energy directly to the AEP load zone, bypassing congestion and curtailment on the Southwest Power Pool (SPP)

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<sup>11</sup> SWEPCO Ex. 2 at 5; OPUC Initial Brief at 5.

<sup>12</sup> SWEPCO Ex. 4 at 8; SWEPCO Initial Brief at 16.

<sup>13</sup> SWEPCO Ex. 3 at 5; SWEPCO Ex. 4 at 12.

system in the western Oklahoma area. The Gen-Tie will consist of a proposed 345 kilovolt (kV) to 765 kV generation substation (the Western Generation Substation) at the Wind Facility; the proposed 350-to-380-mile radial, single-circuit 765 kV transmission line; and a proposed 765 kV to 345 kV substation (the Tulsa North 765 kV Generation Substation), which is in the AEP load zone.

The participating utilities have entered into a fixed-price contract with Quanta Services (Quanta), a Houston company, for engineering, procurement and construction services (EPC) for the Gen-Tie. Under the EPC contract, all engineering, procurement and construction are covered under the scope of Quanta's work. Quanta is a transmission construction contractor specializing in designing, building, and maintaining transmission systems of various lengths and configurations across the voltage spectrum. It has completed more than 10,000 miles of extra-high-voltage transmission over the past 50 years and has built more than 600 substations over the last two decades. Quanta has significant experience with 765 kV transmission projects.<sup>14</sup>

The total estimated capital cost for the Gen-Tie is \$1.624 billion including \$148 million for AFUDC. SWEPCO's share of the estimated total will be 70%, or \$1.1 billion. The Gen-Tie has a projected completion date of December 15, 2020. As is discussed more fully below, that date is slightly more than two weeks before the end of the Internal Revenue Service (IRS) safe-harbor date for wind PTCs. PTCs are assured for projects in service before that date. Projects that enter into service after that date may still receive the credits, but must show they meet certain criteria.

The purpose of the Gen-Tie is to transmit the Wind Facility's energy from western Oklahoma, where wind is plentiful but adequate transmission facilities are lacking, to the AEP load zone. According to SWEPCO witness Thomas P. Brice, the Gen-Tie will ensure dependable delivery of the Wind Facility's energy, reduce congestion costs and wind generation curtailment, and reduce the AEP load zone energy cost for SWEPCO's load.<sup>15</sup>

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<sup>14</sup> SWEPCO Ex. 6 at 5-6.

<sup>15</sup> SWEPCO Ex. 2 at 8. Mr. Brice adopted the prefiled testimony of SWEPCO witness Venita McCellon-Allen.

Intervenors and Staff argue that SWEPCO's construction cost estimates and timelines are overly optimistic—that the Project is likely to cost more and require more time to complete than estimated by SWEPCO. Those concerns are amplified by the scope of the Project. Even if the Project is on budget, it will increase SWEPCO's rate base established in its most recent rate proceeding by over 72%, leading to a base rate increase in Texas of at least \$150 million in 2021, depending on the timing of a rate case.<sup>16</sup>

Intervenors and Staff also point out several respects in which the Project generally could cost more than the amounts estimated by SWEPCO. First, although the argument is not directly related to capital costs, the time frames for the Wind Facility and especially the Gen-Tie are very tight, which could affect the Project's eligibility for PTCs if the Project does not enter into commercial operation before the safe harbor date of December 31, 2020. The PTCs constitute a significant portion of the Facility's projected cost savings to ratepayers.<sup>17</sup> TIEC suggests that if one aspect of the Project is finished but another is not, SWEPCO on December 31, 2020, could wind up with either a wind farm that cannot deliver energy or a long transmission line to nowhere. TIEC contends those possibilities could impel SWEPCO to finish both projects by December 31, 2020 at almost any cost.<sup>18</sup>

More directly, Intervenors and Staff argue that the capital costs for the Project could easily rise above SWEPCO's estimates. As TIEC points out, SWEPCO witness Kelly Pearce agreed, on cross-examination, that for every 1% capital cost over-run, the NPV of the Project's net benefits for SWEPCO would decrease by \$30 million.<sup>19</sup> Staff notes that no facility study has been conducted by SPP regarding the Project. Staff witness Davis Smithson testified that, without such a study, the full costs of the Project "are not sufficiently known to provide an adequate cost-benefit analysis." ETEC-NTEC witness J. Neil Copeland observed that the introduction of additional wind generation, including the Project, would necessitate transmission

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<sup>16</sup> TIEC Initial Brief at 11. SWEPCO contends that the base rate increase will be more than outweighed by the savings from the Project.

<sup>17</sup> The PTC issues are discussed more fully in the "Projected Benefits of Wind Catcher" section of this PFD.

<sup>18</sup> TIEC Initial Brief at 12.

<sup>19</sup> Tr. at 1049; TIEC Initial Brief at 13.

upgrades in the SWEPCO zone below the 345 kV levels. He stated that SWEPCO had not accounted for those additional costs.<sup>20</sup>

In response to intervenors' and Staff's contentions, SWEPCO witness Paul Chodak observed that despite the size of the Project, both wind farms and high-voltage transmission lines are well-known technologies and that any ongoing problems could be remedied as they arise. He and other SWEPCO witnesses expressed confidence in SWEPCO's construction partners and their agreements. SWEPCO witness Robert W. Bradish noted, in his direct and rebuttal testimonies, that SWEPCO has analyzed the lower-level transmission upgrades necessary to place the Project into service. He agreed that ultimately the results of SPP's facility study will determine the final scope of any necessary upgrades to Public Service Company of Oklahoma's (PSO) or other utilities' systems as a result of the Project. He also believed that PSO was well-positioned to estimate those costs, however, and noted that SPP typically works closely with the incumbent transmission owner (in this case, PSO) to determine any necessary system upgrades. SWEPCO argues that the Project's situation vis-à-vis a facility study is typical of a generation project at this point in the certification process.<sup>21</sup>

SWEPCO generally characterized intervenors' and Staff's concerns about cost overruns and timely completion as "speculative."<sup>22</sup> Arguments specifically about the costs of the Wind Facility or the Gen-Tie or ancillary issues are addressed below.

**a. Wind Facility**

There is no dispute that Invenergy is an experienced developer of wind projects. However, the Wind Facility is by far its largest project to date. The largest previous wind farm developed by Invenergy had 156 turbines, which is slightly less than one-fifth of the Wind

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<sup>20</sup> Staff Ex. 3A at 10-11; Staff Initial Brief at 11; ETEC-NTEC Ex. 2 at 13-14.

<sup>21</sup> SWEPCO Ex. 5 at 21-23; SWEPCO Ex. 19 at 8-9; Tr. at 72-74; SWEPCO Reply Brief at 22-23.

<sup>22</sup> SWEPCO Reply Brief at 13.

Facility's 800 turbines.<sup>23</sup> Although the MIPA includes a provision for contingencies, that amount is \$93.3 million, which is only 3.2% of the total Wind Facility cost.<sup>24</sup> TIEC witness Jeffrey Pollock testified that the estimated cost of the Wind Facility per-kW is approximately 12% lower than the average of recently installed wind farms. Although the MIPA is a fixed-price contract, Mr. Pollock observed that SWEPCO's Turk Plant, which was the subject of SWEPCO's previous CCN proceeding, also was under fixed-price contracts, but ultimately cost 16% above the estimate in that proceeding.<sup>25</sup>

TIEC also argues that the scope of work for the Wind Facility could change, that environmental costs could increase because wildlife studies have not been completed,<sup>26</sup> and that General Electric, the turbine manufacturer, might not be able to meet its supply deadline because of increased demand before the PTC safe-harbor deadline. Staff also points out that a change in law, such as an increase in tariffs on imported aluminum and steel, could increase the price of the Wind Facility.<sup>27</sup>

SWEPCO agrees that the Wind Facility's estimated cost per-kW is lower than that of recently installed wind farms. SWEPCO witness Jay F. Godfrey testified that the lower cost is due to several factors, including economies of scale from the scope of the Wind Facility, volume pricing on the newest version of General Electric's wind turbine, and construction efficiencies resulting from the relatively contiguous site and standardized equipment. SWEPCO also contends that the provisions of the MIPA and the contingencies contained in that agreement minimize the risk of a cost overrun.<sup>28</sup>

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<sup>23</sup> TIEC Ex. 1 at 40; SWEPCO Ex. 17 at 4-5; TIEC Initial Brief at 13.

<sup>24</sup> SWEPCO witness Michael Bright identified items in the MIPA that could adjust the price of the Wind Facility. SWEPCO Ex. 3 at 14-15; *See also* TIEC Initial Brief at 13, OPUC Initial Brief at 6.

<sup>25</sup> *Application of Southwestern Electric Power Company for Certificate of Convenience and Necessity Authorization for a Coal-Fired Power Plant in Arkansas*, Docket No. 33891; Tr. at 1234; TIEC Initial Brief at 14; Staff Initial Brief at 10.

<sup>26</sup> *See* Tr. at 179-80; TIEC Initial Brief at 14.

<sup>27</sup> Staff Initial Brief at 9-10. No evidence regarding the possible impact of such tariffs was presented at the hearing.

<sup>28</sup> SWEPCO Ex. 16 at 3; SWEPCO Reply Brief at 13-14.

SWEPCO rejects any comparison between the Wind Facility and the Turk Plant. SWEPCO notes that wind farm construction is straightforward and well-established, while SWEPCO witness Brice observed that the Turk Plant—the first super-critical coal plant to be constructed in the United States—was unique and very complex.<sup>29</sup>

In its brief, which points out the lack of evidence on the issue, SWEPCO asserts that newly imposed tariffs on steel and aluminum will not affect the Wind Facility or the Gen-Tie. SWEPCO further states that its environmental permitting status is comparable to other projects and that possible changes in contract scope, or exercise of SWEPCO's step-in rights to complete the project, would result in financial liabilities for Invenenergy.<sup>30</sup>

**b. Gen-Tie**

TIEC contends that the cost estimates for the Gen-Tie are overly optimistic. Mr. Pollock observed that the Gen-Tie cost is not guaranteed, but is subject to increases based on a number of factors identified by SWEPCO witness Brian D. Weber, including the cost to acquire land (including the cost of possible eminent domain proceedings), internal labor and overheads, allowance for unknown risks, and AFUDC. Including those costs, Mr. Weber anticipated total Gen-Tie costs of \$1.624 billion. TIEC witness Pollock pointed out that the estimated cost of the Gen-Tie is \$4.45 million per mile, which is more than 20% lower than the Reynolds-to-Greentown line, the only other 765 kV line that is currently under construction. Mr. Pollock believed the Gen-Tie costs could rise above the estimated level.<sup>31</sup>

TIEC notes that, as with the Wind Facility, the necessary environmental permits for the Gen-Tie have not yet been obtained. Both Staff and TIEC observe that the right-of-way for the Gen-Tie has not yet been acquired. Staff witness Smithson expressed concern that the “extraordinary length” of the line could cause actual costs to vary significantly from the

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<sup>29</sup> Tr. at 1011-12; SWEPCO Reply Brief at 14.

<sup>30</sup> Tr. at 207-08; SWEPCO Reply Brief at 14-15.

<sup>31</sup> SWEPCO Ex. 6 at 10; TIEC Ex. 1 at 41-41; TIEC Initial Brief at 15.

estimated cost. TIEC suggests that the acquisition of the right-of-way could be subject to delay and expense because of opposition to the transmission line from parties in Oklahoma, most notably the Osage Nation, whose traditional boundaries cover about a fifth of the route.<sup>32</sup>

TIEC also points out that adverse weather conditions and other force majeure events can lead to cost overruns and delays. TIEC cites another transmission line built fairly recently by SWEPCO and PSO from Valiant, Oklahoma to Texarkana, Texas. The estimated cost for that 76.6-mile line, which was to have been placed in service in October 2014, was \$131 million. Due to flooding on the Red River and other factors, that line was not placed into service until December 2016, at a cost of \$157 million.<sup>33</sup>

As with the Wind Facility itself, TIEC and other parties observe that possible delays to the Gen-Tie are more important to the overall benefits of the Project because of the short time between the December 16, 2020 estimated completion date of the Gen-Tie and the December 31, 2020 expiration date for the safe-harbor provision for PTCs. That issue is discussed in the Production Tax Credits subsection of this PFD.

SWEPCO agrees that the Project is a “significant undertaking.” In response to intervenor and Staff concerns, however, SWEPCO argues that the Gen-Tie contract price is set with “limited reopeners, a stringent process for obtaining change orders, and numerous contractual protections.”<sup>34</sup> SWEPCO points out that the lower price of the contract compared with another transmission line is a good thing for both SWEPCO and its ratepayers.

SWEPCO contends that the permitting and right-of-way acquisition processes are on schedule. In particular, SWEPCO is on track to acquire 65% of the Gen-Tie right of way by December 18, 2018.<sup>35</sup>

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<sup>32</sup> Tr. at 231-33; Staff Ex. 3A at 6; TIEC Ex. 1 at 42; TIEC Initial Brief at 15-16.

<sup>33</sup> Tr. at 222-24; TIEC Exs. 23 and 24; TIEC Initial Brief at 16-17.

<sup>34</sup> SWEPCO Reply Brief at 16, citing Tr. at 235; SWEPCO Ex. 6 at 7-8; SWEPCO Ex. 18 at 12.

<sup>35</sup> Tr. at 239.



With regard to possible force majeure events such as those that delayed the Valiant-to-Texarkana line, SWEPCO witness Weber explained that the EPC contract provides exceptions to the “Force Majeure Event” definition by excluding weather events that are “normal weather conditions for the period, season and geographic area of the Project, except to the extent that such weather conditions cause physical damage to the towers or Work in progress.”<sup>36</sup> The contract also requires property or builder’s risk insurance. If weather that does not cause physical damage occurs, the contractor must provide:

“climatological data over the preceding five (5) years substantiating that the weather conditions were unusually adverse for the period of time and location based on historical data and could not have been reasonably anticipated.”<sup>37</sup>

In addition, the contract requires the contractor to spend up to \$5 million in aggregate to mitigate damage to the Gen-Tie work and any delay in the project schedule’s critical path before claiming additional compensation. It also includes a provision requiring an expedited schedule if a force majeure event creates any delay. According to Mr. Weber, the protections in the EPC contract for the Gen-Tie line go “far and beyond any other protections that [AEP has] ever had in an EPC contract against weather-related claims.”<sup>38</sup>

**c. Other Costs - Ancillary Services**

TIEC argues that the Project would increase ancillary services costs, in particular costs related to required operating reserves. SWEPCO witness Pearce agreed that SPP’s practice in calculating the operating reserve requirement is to base it on 100% of the largest SPP generating unit, plus 50% of the second largest. If approved and built, the Project would become the largest generating unit in the SPP system. Although SWEPCO believes that the effect on reserves costs would be only a little over \$200,000, it based its estimate on SPP setting the requirement on an

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<sup>36</sup> SWEPCO Ex. 18 at 3.

<sup>37</sup> Highly Sensitive Exhibit BDW-2, SWEPCO Ex. 6A, quoted in SWEPCO’s Redacted Reply Brief at 21.

<sup>38</sup> Tr. at 680; SWEPCO Ex. 6A, Highly Sensitive Exh. BDW-2; SWEPCO Reply Brief at 20-22. The contractual provisions cited are taken from SWEPCO’s redacted brief and so do not include highly sensitive confidential material.

hourly basis. SPP currently sets the requirement on a daily basis. SWEPCO did not provide an estimate of operating reserve costs set on a daily basis.<sup>39</sup>

In response, SWEPCO notes that Mr. Pearce stood by his calculation and that opposing parties had not asked questions on that issue to witness Richard Ross, SWEPCO's liaison to SPP. SWEPCO contends that TIEC's argument on that issue is not supported by any evidence.<sup>40</sup>

**d. ALJs' Analysis**

The ALJs find that SWEPCO, in general, presented a credible estimate of the costs of the Project, which themselves appear to be reasonable. Both the MIPA and the EPC agreements are fixed-cost agreements, and SWEPCO's witnesses' testimony as to the estimated costs of additional items was credible. Although Staff correctly pointed out that no facility study has been conducted by SPP, SWEPCO persuasively stated that PSO is in a position to estimate accurately the costs of the Project on other facilities. In general, the ALJs find that the Project costs are reliable enough for the Commission to evaluate them.

The ALJs agree with SWEPCO's observation that the Wind Facility, although huge, is not as complex as SWEPCO's Turk Plant, which encountered significant cost overruns. Although Invenergy has never constructed a wind farm of this magnitude, there is nothing in the record to suggest it is incapable of doing so in a timely fashion. SWEPCO showed that its environmental permitting, although not complete, is on schedule and that other considerations raised by Intervenor and Staff are unlikely to significantly increase the cost of the Wind Facility. The ALJs do find the contingency percentage in the contract to be somewhat low. Although that does not affect the reasonableness of the cost estimate *per se*, it is a factor that the Commission should consider. Generally, however, because the estimated Wind Facility costs are

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<sup>39</sup> Tr. at 279-96; TIEC Ex. 35; TIEC Initial Brief at 18-19. Although TIEC attempted to quantify those costs through cross-examination of Mr. Pearce, he did not agree with TIEC's assumptions.

<sup>40</sup> SWEPCO Reply Brief at 23-24.

credible, it would be reasonable for the Commission to use those costs in determining the costs versus the benefits of the Project.

The ALJs find that SWEPCO presented a credible and reasonable estimate of the Gen-Tie's costs as well. Again, the contract is a fixed-cost agreement, with certain additional costs to be determined. The ALJs find SWEPCO's estimates of the additional costs to be reasonable. Because it is a fixed-cost agreement, the ALJs are not concerned by the discrepancy between the estimated Gen-Tie costs and the costs per-mile of the Reynolds-to-Greentown line. As with the Wind Facility, SWEPCO showed that its environmental permitting is on schedule.

Because the estimated Gen-Tie costs are credible, it would be reasonable for the Commission to use those costs in determining the costs versus the benefits of the Project. Having said that, however, the ALJs find that the length and location of the Gen-Tie raise greater possibilities of some additional costs and delays. As TIEC observed, the acquisition of right-of-way may be more difficult and expensive than anticipated by Quanta. Although the EPC contract apparently has strong force majeure provisions, weather-related events such as tornados or flooding could still delay the line or add expense. That possibility is particularly relevant to the PTC safe-harbor deadline, considering the very short period of time between the estimated completion date and that deadline. Again, although possible delays and additional costs do not affect the reasonableness of the cost estimate *per se*, they are factors that the Commission should consider in determining whether the Project should be approved.

The ALJs were not convinced by SWEPCO's analysis of the operating-reserve expense issue. SWEPCO did not address the issue initially, and its subsequent analysis was based on an hourly calculation that SPP does not currently perform. Despite efforts on cross-examination, however, the record does not include a reliable calculation of the reserve costs based on a daily calculation. Therefore, the ALJs have not calculated any additional costs, but identify that issue as one for the Commission to consider as well.

## **2. Economic Evaluation Methodology and Assumptions (PO Issues 12 and 14)**

Although some criticism was leveled at SWEPCO's evaluation methodology, intervenors and Staff mainly criticized the assumptions and inputs that SWEPCO used in that modeling. Intervenors and Staff disputed SWEPCO's gas price estimates, its assumption that a carbon tax will be levied beginning in 2025, other assumptions that went into the LMP modeling, and the presumed NCF for the Project.

### **a. Evaluation Methodology**

SWEPCO witnesses Pearce and Pfeifengerger described in their testimonies the methodology and assumptions used by SWEPCO to evaluate the economics of the Project. To evaluate those costs, SWEPCO developed and compared three "cases"—three alternative resource procurement paths. Consistent with SWEPCO's 2015 Integrated Resource Plan (IRP), natural gas combined cycle units were assumed as additions to SWEPCO's resources in all three cases as needed to maintain the 12% capacity reserve margin required by SPP. The first case—the "Base Case"—assumed no new development or purchase of any wind resources between 2021 and 2045. The second case—the "Project Case"—reflected the development of the Project. To determine the estimated benefits of the Project, SWEPCO compared the difference between the Base Case and the Project Case for the period modeled, 2021 to 2045.<sup>41</sup> The third case—the "Generic Wind Case"—assumed the procurement of 1,900 MW of wind generation at 24 different wind sites across SPP. Mr. Pearce testified that the Project was expected to produce approximately \$685 million more in customer saving than the Generic Wind Case would relative to the Base Case.<sup>42</sup>

The three cases were modeled using PROMOD® and PLEXOS® simulation tools to estimate the production-related costs and benefits of each case. SWEPCO used both models

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<sup>41</sup> SWEPCO Ex. 7 at 7; SWEPCO Ex. 8 at 8; SWEPCO Initial Brief at 22-23.

<sup>42</sup> SWEPCO Ex. 7 at 15. Because of transmission congestion issues, the Generic Wind Case did not presume 1,900 MW of wind generation in western Oklahoma, but rather at numerous other smaller sites.

because neither was sufficient on its own to analyze the Project's lifetime impact. The PROMOD model is available only for two years (2020 and 2025), and is set up to analyze only cost impacts for individual SPP transmission zones such as the AEP zone, in the aggregate. The PLEXOS model, for its part, is not set up to simulate the entire SPP footprint and does not simulate transmission constraints or marginal losses. Therefore, SWEPCO input data for 2020 and 2025 into the PROMOD model, interpolated between those two points, and then extrapolated that trend going outward for the life of the Project. It used that data in PLEXOS to estimate the costs and the benefits of the Project for SWEPCO customers.<sup>43</sup>

Although CARD did not object to the mechanics of that methodology, it did object to its use to determine whether the Project should be constructed. CARD witness Scott Norwood testified that SWEPCO and PSO, in the fall of 2016, issued a request for proposal soliciting bids to construct a wind-energy project. In Mr. Norwood's view, the responses suggested that those bids would have provided wind energy at a lower cost than the Project, but SWEPCO ignored the bids in favor of the Project. In addition, Mr. Norwood argued, if the Project was to be built, SWEPCO and PSO should have instituted a competitive-bid process to build it. ETEC-NTEC witness J. Neil Copeland also testified that SWEPCO could have achieved lower prices through a request for proposal.<sup>44</sup>

In response, SWEPCO witnesses Pearce and Godfrey testified that the 2016 projects would have connected to the SPP system in congested areas and did not account for economic curtailment costs. Mr. Godfrey also testified that the competitive market would not have produced the Project and that the timing of a request for proposal would have precluded the construction of the Project in time to take full advantage of the PTCs.<sup>45</sup>

The ALJs find SWEPCO's arguments to be persuasive on the issues of the disadvantages, in terms of congestion, of the 2016 request-for-proposal wind facilities versus the Project. They

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<sup>43</sup> SWEPCO Ex. 8 at 9-15; SWEPCO Initial Brief at 22-26; OPUC Initial Brief at 8-9.

<sup>44</sup> CARD Ex. 1 at 11-13; ETEC-NTEC Ex. 2 at 14; CARD Initial Brief at 19-22.

<sup>45</sup> SWEPCO Ex. 16 at 4-9; Tr. at 321-22; SWEPCO Reply Brief at 24-27.

also find that the timing of the Project would have precluded a request-for-proposal approach, if one were feasible at all. In any event, what is before the Commission is the Project itself, not other possibilities that SWEPCO failed to pursue earlier.

The ALJs also find that SWEPCO's evaluation methodology was reasonable. That is not to say that the ALJs agree with the inputs, assumptions, and outputs of that methodology, which are discussed below.

**b. Assumptions Impacting Locational Marginal Prices**

**i. Natural Gas Prices**

**A. Evidence and Arguments**

One of the most energetically disputed assumptions affecting LMPs is SWEPCO's forecast of future natural gas prices. Future natural gas prices are an essential element of the Project benefits calculation. Basically, the higher the expected future natural gas prices, the greater the expected benefits from the Project, which of course is powered by wind rather than natural gas. SWEPCO witness Karl R. Bletzacker sponsored the Long-Term North American Energy Market Forecast (Fundamentals Forecast) used by SWEPCO witnesses Pearce and Pfeifenberger to help forecast the expected Project benefits. Mr. Bletzacker described the Fundamentals Forecast as "a long-term, weather-normalized commodity market forecast" that was not created for this or any other particular regulatory proceeding, but was made available to all AEP operating companies after its completion. This Fundamentals Forecast, which is AEP's most recent one, was made available to those companies on October 27, 2016. It considered numerous sources, which are set out in Mr. Bletzacker's testimony. New York Mercantile Exchange (NYMEX) futures prices, which were cited by several intervenors as an alternative measure, were not among those sources. In Mr. Bletzacker's view, NYMEX futures are not a reliable source because futures market participants are either speculating or escaping volatile

energy prices by hedging. Futures prices merely represent an agreed price point, but not the economic principles of demand and supply.<sup>46</sup>

Mr. Bletzacker observed that natural gas prices are important because fuel prices are a key component in determining the supply stack, or merit order, for the dispatch of generating units. As is discussed above, Mr. Bletzacker created Lower and Upper Band cases, based on lower and higher demand, in addition to the Base Case scenario. Those were used to help create the different benefits estimates presented by SWEPCO, with the Base Case leading to its calculated net Project benefits of \$1.495 billion.<sup>47</sup>

Mr. Bletzacker testified that weather normalization is imperative in comparing forecasts to actual results. He cited the winter of 2015-2016 as the warmest on record in the lower 48 states, which led to low natural gas demand, as contrasted with the Polar Vortex winter of 2013-2014 that had the opposite effect.<sup>48</sup> On a levelized basis, SWEPCO's high gas price was \$8.45 per MMBtu, the base gas price was \$7.35 per MMBtu, and the low gas price was \$6.46 per MMBtu.<sup>49</sup>

Mr. Bletzacker stated that the 2016 Fundamentals Forecast employed a carbon dioxide dispatch burden on all existing fossil-fuel-fired generating units that escalated from \$2.92 per ton in 2024 to \$26.31 per ton in 2032 to achieve national mass-based emission targets similar to those proposed in the national Clean Power Plan. He believed such emissions costs would adversely affect fossil-fuel-fired plants.<sup>50</sup>

Intervenors and Staff criticize SWEPCO's estimated natural gas price forecast as both out-of-date, because it was prepared in October of 2016, and unreasonably high.<sup>51</sup> TIEC points

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<sup>46</sup> SWEPCO Ex. 9 at 2-5, 7.

<sup>47</sup> *Id.* at 4, 7-8.

<sup>48</sup> *Id.* at 6.

<sup>49</sup> *See* TIEC Initial Brief at 26.

<sup>50</sup> *Id.* at 8, 10.

<sup>51</sup> Staff did not present any witnesses on natural gas prices, *but see* Staff Initial Brief at 12-14.

out that SWEPCO's projections are high even in the very near term. Although SWEPCO's 2016 forecast projected natural gas prices of \$4.89 per million British Thermal Units (MMBtu) in 2018, the recently released 2018 federal EIA AEO reference-case projection is \$3.13 per MMBtu. TIEC observes that SWEPCO's projections for 2019 and 2020 are well above EIA's as well. The relative projections for 2020, which was one of the years used by SWEPCO in its modeling, were \$5.26 per MMBtu for SWEPCO and \$3.96 per MMBtu for EIA.<sup>52</sup> In both his rebuttal testimony and on cross-examination, Mr. Bletzacker expressed his general approval for EIA's "impartial" and "fundamentals-based" forecasting approach, although he believed its forecasts should be higher. He noted that EIA does not use NYMEX futures in any way in its forecasts.<sup>53</sup>

TIEC witness Pollock contrasted SWEPCO's forecast with the forecasted prices presented by Southwestern Public Service Company (SPS) and Entergy Texas, Inc. (ETI) in recent Commission proceedings.<sup>54</sup> SPS's forecasts, which were presented in its pending wind-project CCN application, included a levelized estimated long-term base natural gas price of \$4.48 per MMBtu and a low price of \$3.55 per MMBtu. ETI's long-term projections, presented in its 2016 application to construct the Montgomery County Power Station, included a high price of \$7.19 per MMBtu, a base price of \$5.32 per MMBtu, and a low price of \$3.68 per MMBtu.<sup>55</sup> Mr. Pollock also trended NYMEX natural gas futures prices to 2045, for a levelized price of \$3.58 per MMBtu.<sup>56</sup> All those price projections, including the high prices, were below SWEPCO's base case forecast in this case, and all but ETI's high prices were above even SWEPCO's low forecast.

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<sup>52</sup> TIEC Ex. 39; TIEC Initial Brief at 23-24; *See also* OPUC Brief at 13-15.

<sup>53</sup> SWEPCO Ex. 21 at 9, 11-12; Tr. at 1025.

<sup>54</sup> TIEC Ex. 1 at 12; TIEC Initial Brief at 25-26.

<sup>55</sup> *Application of Southwestern Public Company for Approval of Transactions with ESI Energy, LLC and Invenergy Wind Development North America LLC, to Amend a Certificate of Convenience and Necessity for Wind Generation Projects and Associated Facilities in Hale County, Texas, and Roosevelt County, New Mexico and for Related Approvals*, Docket No. 46936 (pending application filed Mar. 21, 2017); *Application of Entergy Texas, Inc. to Amend Its Certificate of Convenience and Necessity to Construct Montgomery County Power Station in Montgomery County, Texas* Docket No. 46416 (Oct. 7, 2016). *See also* OPUC Initial Brief at 12.

<sup>56</sup> Actual NYMEX data ends in 2020. TIEC Ex. 1 at Exh. JP-1; TIEC Initial Brief at 25.



Mr. Pollock extrapolated the impact of lower gas prices on SWEPCO's estimated savings, using Base and Low Cases. Dividing the production cost savings differential by the corresponding natural gas price differential in those two cases resulted in a reduction of \$392 million NPV for every \$1 per MMBtu reduction in natural gas prices.<sup>57</sup>

Mr. Pollock also noted that each of AEP's past forecasts, dating back to 2007, has been on the high side of actual prices. Although Mr. Bletzacker pointed out that his forecasts were weather-normalized, his testimony did not quantify the impact of abnormal weather on those prior forecasts.<sup>58</sup>

CARD witness Norwood critiqued SWEPCO's comparison approach. In Mr. Norwood's view, SWEPCO Base Case compared the Project to an unrealistic alternative scenario that assumed no new wind energy purchases by SWEPCO for the next 25 years. A more realistic and helpful approach, in his opinion, would have been for SWEPCO to have compared the Project to what SWEPCO would actually do if the Project were not built. Mr. Norwood noted that SWEPCO's Generic Wind case showed a drastic reduction in the Project's benefits vis-à-vis the Base Case.<sup>59</sup> Mr. Norwood also compared SWEPCO's forecasts to the recent SPS forecasts and the NYMEX futures prices, and found SWEPCO's to be materially higher.

Mr. Norwood estimated that a decrease of \$1 per MMBtu in gas prices would reduce the estimated base-case savings for the Project by approximately \$349 million. He also derived that number by comparing SWEPCO's Base and Low Cases. He contrasted the approximately \$1 per MMBtu difference in natural gas prices in those cases to the savings set out in Mr. Pearce's direct testimony. Mr. Norwood testified that there is a significant risk that SWEPCO's estimates of the benefits of the Project are inflated.<sup>60</sup>

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<sup>57</sup> TIEC Ex. 1 at 51; TIEC Initial Brief at 51.

<sup>58</sup> TIEC Ex. 1 at 15; SWEPCO Ex. 21 at 12-14; Tr. at 370; TIEC Initial Brief at 28.

<sup>59</sup> CARD Ex. 1 at 16-17, Exh. 5; CARD Initial Brief at 24-25.

<sup>60</sup> CARD Ex. 1 at 16-19; SWEPCO Ex. 7 at Exh. KDP-2; CARD Initial Brief at 26-27.

OPUC witness Karl Nalepa also compared SWEPCO's forecasts with NYMEX futures prices from November 28, 2017. All three SWEPCO forecasts were considerably higher. Mr. Nalepa noted that an "ultra-low" forecast of 50% of the base price forecast, provided by SWEPCO in response to discovery, would yield a net cost to ratepayers.<sup>61</sup>

SWEPCO points out that, despite his criticisms, TIEC witness Pollock did not calculate the benefits of the Project under any of his natural gas scenarios. Although it maintains its own estimates were the most reliable, SWEPCO argues that the Project would provide benefits to ratepayers under any of the credible forecasts. Mr. Chodak testified that the break-even natural gas price is \$2.89 per MMBtu, which is below all the forecasts, including the NYMEX extrapolations, cited by intervenors.<sup>62</sup>

SWEPCO contends that the Commission has endorsed earlier versions of the AEP Fundamentals Forecasts. In SWEPCO's most recent rate case, the Commission found the forecasts used by SWEPCO to have been reasonable. TIEC observed, however, that the issue in that case was a retrospective determination of whether SWEPCO's forecasts were within a range of prudent options at the time SWEPCO's generation decisions were made.<sup>63</sup> In this case, the Commission must make a forward-looking determination of whether SWEPCO's forecasts provide the most reliable information regarding future natural gas prices, to determine whether the proposed Project is likely to benefit ratepayers.

SWEPCO rejects the notion that the SPS forecasts should be followed in this case. SWEPCO points out that no one who participated in the SPS wind facility case was made available at the hearing and that the SPS forecasts are not widely used in the industry. It observes that Mr. Pollock did not know how either the ETI or the SPS forecasts were developed. Mr. Bletzacker, in his rebuttal testimony, stated that SPS's limited reliance on NYMEX prices

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<sup>61</sup> OPUC Ex. 1 at 25-29; OPUC Initial Brief at 11-15.

<sup>62</sup> SWEPCO Ex. 28; Tr. at 692-94; SWEPCO Reply Brief at 27-28. Mr. Chodak did not know whether that break-even price included the carbon-tax assumption. Tr. at 695-96.

<sup>63</sup> *Application of Southwestern Electric Power Company for Authority to Change Rates*, Docket No. 46449 (Jan. 11, 2018); SWEPCO Reply Brief at 28-29; TIEC Reply Brief at 26 (Footnote 134).

undermined the credibility of its long-term forecasts. He noted that an ETI affiliate in Louisiana, in its certification proceeding, had filed testimony asserting that ETI relied on NYMEX only for first-year prices, because NYMEX prices do not reflect long-term market expectations.<sup>64</sup>

SWEPCO reiterates that NYMEX futures cited by Mr. Pollock, and by CARD and OPUC witnesses Norwood and Nalepa, are invalid predictors of future prices. SWEPCO notes that NYMEX natural gas futures trade for only 12 years. Mr. Norwood, in cross-examination, agreed that the use of NYMEX futures prices would be problematic in making predictions for the life of the Project. SWEPCO also points out that there were no settled NYMEX futures transactions for the years 2020 onward. Mr. Bletzacker emphasized those and other flaws with using NYMEX futures prices for forecasting purposes. In his opinion, the NYMEX prices did not provide useful information about actual long-term natural gas prices.<sup>65</sup>

With regard to the EIA forecasts, which Mr. Pollock did not use in his analysis, Mr. Pollock testified:

Q: Okay. Well, let me ask you: If you recognize that EIA is a recognized source of energy information in the industry, which didn't you use those? Why didn't you use their — look at their forecast in — evaluating the Wind Catcher project?

A: I think really because my job is to determine, you know, the economics of the project under a wider range of scenarios. And EIA's forecasts may provide a data point, but generally, that data point would fall somewhere in the middle. And — and my job is to look at, well, what happens if — if these forecasts don't — you know, don't happen, if the forecasts are wrong and — and other variables take effect that have the effect of lowering gas prices below what EIA or other vendors might say — .<sup>66</sup>

Mr. Bletzacker pointed out that the EIA recognized, in its 2017 AEO, that “many of the events that shape energy markets and future developments and technologies, demographics, and

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<sup>64</sup> SWEPCO Ex. 21 at 7-9; Tr. at 517-530; SWEPCO Reply Brief at 30-31.

<sup>65</sup> SWEPCO Ex. 21 at 2-6; Tr. at 567-73; SWEPCO Reply Brief at 31-33.

<sup>66</sup> Tr. at 525; SWEPCO Reply Brief at 31.

resources cannot be seen with certainty.” The EIA presented six side cases, in addition to its reference case, to account for that uncertainty. All three SWEPCO gas-price cases were within the range of those EIA cases.<sup>67</sup>

SWEPCO rebuttal witness Richard Smead agreed with Mr. Bletzacker’s assessment. He noted that SWEPCO’s process is similar to that that undertaken by EIA in its AEO. Mr. Smead recognized that the prices yielded by the AEP Fundamentals Forecast are higher in the near term than current experience or the short-term outlook. He found, however, that SWEPCO’s three cases, and most of the EIA cases except two outliers, were within a similar reasonable range. According to Mr. Smead, the average of EIA’s 2017 forecasts was between SWEPCO’s base and low forecasts, while EIA’s 2017 reference forecast was similar to SWEPCO’s low forecast.<sup>68</sup>

At the hearing, TIEC also presented evidence of EIA 2018 forecasts. As the TIEC exhibits show, EIA’s 2018 reference case is approximately 14% below its 2017 reference case.<sup>69</sup> EIA’s reference case and lowest case are lower than any of the SWEPCO three forecasts. On cross-examination, Mr. Smead agreed that EIA’s lowest case has been closest to correct for the last several years.<sup>70</sup>

In his testimony, Mr. Smead warned that EIA’s “best” case is predicated on continuing accelerated improvements in the extraction of natural gas from shale. Although that assumption may be reasonable for the short term, he believed it would be unwise to follow that assumption in planning resources for the long term. He described the lowest EIA case as being “as low as things can plausibly go.”<sup>71</sup>

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<sup>67</sup> SWEPCO Ex. 21 at 9-11.

<sup>68</sup> SWEPCO Ex. 22 at 11-12.

<sup>69</sup> TIEC Ex. 48; Tr. at 836; OPUC Initial Brief at 14.

<sup>70</sup> TIEC Exs. 48 and 78; Tr. at 833-39.

<sup>71</sup> SWEPCO Ex. 22 at 12-16; Tr. at 833, 841.

SWEPCO argues that, although the 2018 EIA forecasts are lower, they still essentially support SWEPCO's position. Mr. Smead testified that the 2018 EIA forecasts still bound the AEP estimates, although they do so "more tightly." SWEPCO also points out that the EIA forecasts are above the \$2.89 per MMBtu "break-even" point. TIEC witness Pollock agreed that it would be reasonable to use the 2018 EIA forecasts to evaluate the projected customer benefits of the Project.<sup>72</sup>

## **B. ALJs' Analysis**

### **Comparison of Projected Levelized Natural Gas Price Forecasts (\$/MMBtu)**

<b>Utility/Agency</b>	<b>Source</b>	<b>Sensitivity</b>	<b>Amount</b>
SWEPCO	Dkt. 47461 (473-17-5481)	High	\$8.45
		Base	\$7.35
		Low	\$6.46
ETI	Dkt. 46416 (473-17-647)	High	\$7.19
		Base	\$5.32
		Low	\$3.68
SPS Update	Dkt. 46936 (473-17-3539)	Base	\$4.45
		Low	\$3.55
NYMEX Trended	Pollock Direct		\$3.58
EIA	2018 AEO	Reference	\$6.36 <sup>73</sup>

The ALJs agree with intervenors that there are serious issues with SWEPCO's natural gas forecasts. As intervenors point out, SWEPCO's forecasts start out higher than current prices and have been higher than actual prices for several years. Moreover, SWEPCO's forecast is relatively old (2016 versus the 2018 EIA forecast). It is not enough, as asserted by SWEPCO witnesses, that SWEPCO's estimated prices are within a range of possible reasonable outcomes. In assessing the benefits, the Commission must determine what estimate of costs is most reliable

<sup>72</sup> Tr. at 550; SWEPCO Reply Brief at 38.

<sup>73</sup> The levelized 2018 EIA reference figure is derived from the information on TIEC Ex. 78, with the levelized price calculated by Staff through number running. See Attachment 1.

and most likely reflects the future price of natural gas—realizing, of course, that forecasting is subject to numerous factors beyond one’s control or estimation.

On the other hand, Mr. Bletzacker and Mr. Smead were convincing about the problems with using the SPS or ETI forecasts. The methodologies of the SPS and ETI forecasts were not explained by any witnesses or otherwise explored at the hearing. The SWEPCO witnesses also pointed out several issues with using NYMEX futures prices, including the purpose of the futures market and the lack of long-term data for future years.

Based on the evidence presented, the ALJs find the 2018 EIA AEO reference forecast to be the most reliable. Although no parties actually used EIA’s forecast to calculate the Project’s anticipated benefits, witnesses on both sides of the case testified to the reasonableness and impartiality of EIA’s methodology. The ALJs find the reference case to be more reliable than an average of all the EIA cases because the higher EIA cases appear to be outliers to recent trends, and pull the average upwards. On the other hand, although the lowest EIA case has been the most accurate in recent years, the ALJs agree with SWEPCO that that trend may not continue, depending on future technological and legal developments, and that a more conservative approach is more reasonable.

The levelized 2018 EIA reference-case price was calculated from TIEC Exhibit 78, using the Commission’s number-running process.<sup>74</sup> That price is \$0.99 per MMBtu less than SWEPCO’s Base Case estimated natural gas price. Using Mr. Pollock’s savings-reduction projection of \$392 million for each reduction in natural gas prices of \$1 per MMBtu, which appeared to be more precise than Mr. Norwood’s reduction calculation, would reduce the anticipated Project benefits by approximately \$388 million NPV.

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<sup>74</sup> Attachment 1.

**ii. Cost of Carbon**

**A. Evidence and Arguments**

SWEPCO's three cases employ a carbon dioxide dispatch burden (allowance price) on all existing fossil-fuel-fired generating units. SWEPCO designed that carbon burden to achieve emission targets similar to those proposed in the federal Clean Power Plan. In the Base Case, that carbon burden is zero in 2021 to 2023, then escalates from \$2.92 per ton in 2024 to \$26.31 in 2032. In SWEPCO's view, although there is at present no carbon burden, it would be unreasonable to assume that the status quo continues through the life of the Project. Mr. Bletzacker testified that the carbon-burden assumption increased the LMPs in SWEPCO's modeling, which in turn increased the projected net benefits. He did not perform a calculation of the increase in projected net benefits.<sup>75</sup>

Intervenors strongly criticize the use of the carbon burden in SWEPCO's forecast. TIEC points out that the Clean Power Plan did not include a carbon tax, but rather set national emissions standards. On cross-examination, Mr. Pearce agreed that a carbon tax has never been passed in the United States. TIEC further notes that the current administration has not supported the Clean Power Plan and points out that SWEPCO did not present any witness on environmental policy or electoral politics to support its assumption, or present a statistical analysis of that possibility. Mr. Pollock characterized SWEPCO's carbon burden assumption as "sheer speculation." He also observed that the perceived need for a carbon tax is decreasing, as carbon-based generating resources are declining. Mr. Pollock and Mr. Norwood both testified that the impact of removing the carbon-burden assumption would be to reduce SWEPCO's projected net benefits in its Base Case by approximately \$550 million in NPV.<sup>76</sup> SWEPCO did not dispute that calculation.

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<sup>75</sup> SWEPCO Ex. 9 at 10; Tr. at 382; SWEPCO Initial Brief at 35-36.

<sup>76</sup> TIEC Ex. 1 at 31-32; Tr. at 265, 510, 534, 587-88; TIEC Initial Brief at 35-39.

In response to intervenor criticisms, SWEPCO points out that its decisions to retrofit many plants and retire one unit, partly because of a potential carbon burden, were found to be prudent in Docket No. 46449. SWEPCO notes that some of TIEC's own members favor carbon emission regulations. More generally, SWEPCO defends the reasonableness of its approach, observing that long-term policy is not necessarily determined by a current administration or the most recent election.<sup>77</sup>

SWEPCO criticizes Mr. Pollock as admittedly inexperienced in the field of political analysis. On the other hand, Mr. Bletzacker characterized AEP's and SWEPCO's view as supported by experts:

Q: Okay. Who decided that it would be a likely thing that there would be a carbon tax coming up in 2024?

A: I am – I am absolutely blessed with the fact that we have a very enlightened and active Washington office that watches these things and other things very, very closely. So between our Washington office, our environmental legal folks, or environmental policy folks, and then just the standard environmental compliance folks, we come up with a consensus view of what our carbon mitigation policy reactions should be going forward.<sup>78</sup>

Mr. Bletzacker agreed that none of the experts he cited were witnesses in this proceeding.<sup>79</sup>

Mr. Pearce also characterized SWEPCO's inclusion of a carbon burden as prudent:

Q: Do you have an opinion on whether a carbon tax should be included in this analysis?

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<sup>77</sup> SWEPCO Reply Brief at 39-43.

<sup>78</sup> Tr. at 380-81.

<sup>79</sup> *Id.* at 381.



A: Oh, I – I think it’s very prudent to do so. I – as far as carbon – I mean, if you accept that there’s even a 1 percent chance that there could be carbon at some nonzero value, then you would put in an expected probability . . .<sup>80</sup>

### **B. ALJs’ Analysis**

The evidence does not support the inclusion of a future carbon burden in SWEPCO’s modeling of the benefits of the Project. Although it is possible that a carbon tax will be imposed in the future, such a tax has not been imposed in the past, there is not one in place now, and there was no credible evidence to show that the imposition of such a tax is likely in the future. The ALJs agree with Mr. Smead that it might be reasonable to model such a possibility. However, that possibility should not be used as a partial justification for the construction of a multi-billion-dollar generating facility. SWEPCO’s modeling should not have included the carbon-burden component, and the calculation of the estimated benefits of the Project should be reduced accordingly by \$550 million.

### **iii. Other Assumptions**

#### **A. Evidence and Arguments**

SWEPCO witness Pfeifenberger explained that SWEPCO’s PROMOD simulations began with SPP’s 2017 ITP10 base models with modifications for the purpose of analyzing the economics of the Project. The SPP base models add 2,750 MW of new wind generation throughout SPP’s footprint between 2016 and 2020, and another 420 MW of new wind by 2025, for a total of 17,500 MW of existing and new wind installed by 2025.<sup>81</sup>

TIEC witness Pollock raised several concerns with the assumptions used by SWEPCO in its modeling in addition to the natural gas price and carbon burden issues discussed above. First, Mr. Pollock argued that SWEPCO’s modeling does not adequately account for wind projects to

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<sup>80</sup> *Id.* at 266.

<sup>81</sup> SWEPCO Ex. 8 at 12; SWEPCO Initial Brief at 36.

be added onto the SWEPCO system. That issue is important, he stated, because an increase in wind power will put downward pressure on LMPs.<sup>82</sup>

Mr. Pollock considered the status of wind projects in the active SPP Generation Interconnection Queue as of November 21, 2017, and estimated that 30,785 MW of wind capacity is expected by 2020, which is an increase of 16,600 MW relative to 2016. He noted that 6,000 MW of planned wind capacity already has pending or completed Generation Interconnection Agreements (GIAs), which implies that those projects “are nearly certain to be completed.” In addition, more than 10,000 MW of additional wind projects are in the SPP Facility Study Stage, which is the step before executing a GIA, while approximately 24,000 MW of additional wind-project capacity is in the Definitive Interconnection System Impact Study stage. Mr. Pollock believed his estimate of upcoming wind capacity was reasonable and SWEPCO’s was seriously understated. In his opinion, the addition of that much wind generation will put “significant downward pressure on market energy prices.”<sup>83</sup>

Mr. Pollock contended that SWEPCO’s estimated LMPs were unreasonably high in general and inflated the Project’s estimated benefits. He noted that SWEPCO was projecting its LMPs to increase 62% in four years above actual AEP load zone LMPs for 2015-2017, and then more than double. Mr. Pollock observed that SPP LMPs have not always increased year after year and that SWEPCO’s projections are well above those projected by SPS in its pending wind project case. He stated that AEP has consistently forecasted high SPP LMPs.<sup>84</sup>

ETEC-NTEC witness Copeland also testified that SWEPCO’s modeling of additional wind generation was inadequate. He estimated total wind capacity of 20,900 MW, including the Project, by 2020. He based that figure on existing and under-construction capacity.<sup>85</sup>

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<sup>82</sup> TIEC Ex. 1 at 28.

<sup>83</sup> *Id.* at 26-28; TIEC Initial Brief at 39-40. This Project and SPS’s pending Hale and Sagamore Wind Projects (PUC Docket No. 46936) are at the latter stage. TIEC Ex. 1 at 27-28.

<sup>84</sup> TIEC Ex. 1 at 34-36, Exh. JP-5; TIEC Initial Brief at 43-47.

<sup>85</sup> ETEC-NTEC Ex. 2 at 10-11.

In his rebuttal testimony, Mr. Pfeifenberger acknowledged that the SPP model used by SWEPCO understated the amount of wind energy that is likely to be on the system in 2020 and 2025. Mr. Pfeifenberger did not agree with Mr. Pollock's estimate of the amount of additional wind generation, however. Mr. Pfeifenberger testified that Mr. Pollock's estimate included "many speculative projects." He believed it unreasonable to assume an additional 10,000 MW of wind projects to be completed by 2020 in addition to those already at the GIA stage. Mr. Pfeifenberger estimated that the modeling understated future wind capacity by approximately 6,000 MW, which was similar to that estimated by Mr. Copeland.<sup>86</sup> At the hearing, Mr. Pfeifenberger discussed his reasoning:

Q: So your additional 6,000 megawatts, and as a result, your calculations, do not include either Wind Catcher or the SPS wind plants?

A: As I explained, some of the projects with interconnection agreements or interconnection agreements in advanced stages will not be realized. The 6,000 megawatts that we talked about includes, I think, projects with interconnection agreements or advanced stages of interconnection agreements. Some of them will drop out. Some of them will go in. So the SPS projects might go in. The Wind Catcher project shouldn't be in because the base case doesn't have Wind Catcher in it.<sup>87</sup>

Mr. Pfeifenberger also testified that Mr. Pollock significantly overstated the impact of additional wind generation on LMPs in the eastern portion of SPP, where the Project is to terminate. Mr. Pfeifenberger emphasized that additional wind generation would also increase congestion between the western and eastern areas. He estimated that an increase of 6,000 MW of wind generation would cause a reduction in LMPs of only approximately 4% at the Project's Tulsa injection node, and thus reduce the estimated value of the Project by approximately 4%. Mr. Pfeifenberger did not rerun the model or derive an estimated reduction in Project NPV benefits. He reached his estimate by extrapolating from the impact of adding the Project's 1,900 MW.<sup>88</sup>

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<sup>86</sup> SWEPCO Ex. 24 at 3-5.

<sup>87</sup> Tr. at 803-04.

<sup>88</sup> SWEPCO Ex. 24 at 8-17.

TIEC determined that Mr. Pfeifenberger's changes to the expected wind generation would yield an annual reduction in Project benefits of \$18.44 million, for a nominal reduction over 25 years of \$460 million. Using Mr. Pollock's additional wind generation estimate, TIEC calculated an annual reduction of \$45.17 million and a nominal reduction over the life of the Project of \$1.129 billion.<sup>89</sup>

TIEC argues that Mr. Pollock's estimate of additional wind generation is more likely than Mr. Pfeifenberger's more conservative estimate. It also considers Mr. Pfeifenberger's calculation of future congestion to be exaggerated. Mr. Pollock stated that Mr. Pfeifenberger ignored any subsequent build-out of the SPP transmission system that would reduce congestion. That failure, according to Mr. Pollock, invalidates SWEPCO's extrapolation of LMPs from its 2025 PROMOD run. In addition, TIEC observes that SWEPCO's congestion costs are inflated because they are based on the AEP Fundamental Forecast's natural gas price assumptions—the incremental cost of running a plant, and therefore the dispatch of plants, is impacted by fuel costs.<sup>90</sup>

Mr. Pfeifenberger testified that he did not ignore potential transmission build-out in calculating transmission costs. Instead, his modeling assumed that, as more wind is added to the SPP footprint, additional transmission would also be added such that the ratio of congestion cost to market prices does not increase beyond those in the 2025 simulation.<sup>91</sup> SWEPCO further observed that AEP and SPS LMPs are not identical to SWEPCO's, because they are locational.

## **B. ALJs' Analysis**

The ALJs found Mr. Pfeifenberger persuasive on the issue of how much additional wind generation should be added to the modeling performed in this case. Although more wind generation is planned, it is unclear how much of that generation will come to fruition. The ALJs

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<sup>89</sup> TIEC Initial Brief at 52.

<sup>90</sup> TIEC Ex. 1 at 26; Tr. at 824-27; TIEC Initial Brief at 42-43.

<sup>91</sup> SWEPCO Ex. 24 at 21; Tr. at 1120; SWEPCO Reply Brief at 47-48.

find that SWEPCO's estimated Project benefits would be reduced annually by a \$18.44 million, for a reduction of approximately \$203 million NPV over the life of the Project.<sup>92</sup>

The ALJs recognize that the congestion costs calculated by Mr. Pfeifenberger are likely too high, due to his use of the AEP Fundamentals Forecast natural gas prices, as stated by Mr. Pollock. The effect of any changes, however, cannot be determined from the evidence in this proceeding; therefore, the ALJs simply advise the Commission that the effect on Project benefits from additional wind generation may be understated.

**c. Net Capacity Factor**

**i. Evidence and Arguments**

SWEPCO describes the forecasted annual output of the Wind Facility as the “most impactful” area reviewed by SWEPCO in its economic analysis of the Project. A crucial measure of generation output is the Wind Facility's net capacity factor (NCF), which is the ratio of the actual output of a generating unit over a period of time to its potential output at full nameplate capacity. As Mr. Pearce testified, each 1% drop in NCF would lead to a \$95.6 million drop in NPV project benefits. That figure considers both production cost savings and lower PTCs (which would be affected by SWEPCO's proposed conditions).<sup>93</sup>

SWEPCO presented two studies of the Wind Facility's NCF. The first, conducted by DNV-GL, a technical consultant retained by Invenergy, developed two estimates of the expected average production from the facility over 25 years.<sup>94</sup> Scenario A considered the production from an 800-wind turbine layout, and estimated an output of 8,963.9 GWh per year. Scenario B started with Scenario A, but also considered an additional wake impact deduction from a

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<sup>92</sup> See Attachment 1.

<sup>93</sup> TIEC Ex. 1 at 45-46; CARD Ex. 2 at 10; Tr. at 1050-51; SWEPCO Initial Brief at 38; OPUC Initial Brief at 16; TIEC Reply Brief at 33.

<sup>94</sup> SWEPCO describes DNV-GL as “the world's largest technical consultant for the renewable energy industry.” SWEPCO Initial Brief at 38; See SWEPCO Ex. 4 at Exh. JFG-3.

hypothetical 160-turbine build-out on adjacent land by a third party, and estimated an output of 8,951 GWh per year. SWEPCO chose the latter scenario, which yielded an NCF of 51.1% and represented a P50 estimate. A P50 estimate means there is a 50% likelihood that the actual output will be greater than the estimate and a 50% likelihood that the actual output will be less. SWEPCO used that 51.1% NCF to calculate the net benefits of the Project.<sup>95</sup>

SWEPCO hired another experienced consulting firm, Simon Wind, to independently review the expected annual net generation. Simon Wind's analysis resulted in an estimated P50 NCF of 50.74% over one year and 50.63% over ten years.<sup>96</sup> Although several Intervenors disputed the use of the 51.1% NCF for various reasons discussed below, they did not dispute that Simon Wind's NCF figures essentially confirmed the DNV-GL figures.

TIEC and its witness, Mr. Pollock, presented several criticisms of SWEPCO's estimated 51.1% NCF. TIEC points out that DNV-GL used only eight meteorological towers. Although DNV-GL itself recommended that there be a tower within two kilometers of every turbine, the actual spacing was 6.56 kilometers. Half of the eight towers had less than a year of data. Simon Wind also noted the need for more data. Although DNV-GL accounted for meteorological data issues by increasing the level of uncertainty, TIEC argued that it undermined the accuracy of the study.<sup>97</sup>

Mr. Pollock also testified that DNV-GL has conducted a "backcast" study comparing its predicted (pre-construction) capacity factors to the actual performance of wind power plants. Mr. Pollock stated that the study found that the predicted factors were approximately 2% higher than the actual factors. Mr. Pollock testified that the DNV-GL study did not consider all potential risks, such as potential curtailments due to wind sector management, grid curtailment, and noise, visual, or environmental curtailment. Other unassessed factors included wind farm consumption, high wind speed hysteresis, inordinately high site temperatures, and site access.

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<sup>95</sup> SWEPCO Ex. 4 at 13; SWEPCO Initial Brief at 38; OPUC Initial Brief at 17. In fact, because they were so close, both scenarios yielded the 51.1% NCF. OPUC Initial Brief at 17.

<sup>96</sup> SWEPCO Ex. 4; SWEPCO Initial Brief at 39; OPUC Initial Brief at 17.

<sup>97</sup> SWEPCO Ex. 4; Tr. at 862-70; TIEC Initial Brief at 47-48.

Those factors were considered in wind studies conducted by a different consultant for SPS in connection with its pending application. Mr. Pollock believed that the DNV-GL analysis was not completely independent, moreover, because it used lifetime average turbine availability and balance-of-plant availability percentages supplied by Invenenergy.<sup>98</sup>

Mr. Pollock compared the DNV-GL results with the NCFs for other recently commissioned wind farms within 125 miles of the proposed site. He found that those NCFs ranged from 42.4% to 52.1%, for an average of 47.8%.<sup>99</sup>

Although CARD witness Norwood did not address the adequacy of the DNV-GL report, he did point out that a 10% drop in actual energy production due to lower wind levels, equipment problems, or other issues, would dramatically affect the perceived benefits of the Project. He did not analyze the probability of such a difference. CARD provided exhibits to show that the capacity factor of SWEPCO's existing wind resources have been lower than 51.1%.<sup>100</sup>

OPUC witness Nalepa testified that SWEPCO erred by failing to prepare a sensitivity analysis on any level of plant output other than that shown by the DNV-GL report. He noted that there are no wind farms utilizing the proposed turbine configuration and that DNV-GL's P90 NCF estimate was equivalent to a 46.6% NCF. A P95 estimate would be a 44.7 % NCF.<sup>101</sup>

Staff witness Smithson expressed concern about the availability of the Gen-Tie. He noted that no other utility-scale power plant is connected to load on such a long and radial line. In Mr. Smithson's view, the Gen-Tie would be more subject to outages, which would take the Wind Facility off-line during the outage period. Significant outages would affect the actual

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<sup>98</sup> TIEC Ex. 1 at 10, 44-45.

<sup>99</sup> *Id.* at 45.

<sup>100</sup> CARD Ex. 1 at 19-20; CARD Exs. 17 (Confidential), 21, 30 (Confidential), 31 (Confidential), and 39; Tr. at 578-80; CARD Initial Brief at 31-32.

<sup>101</sup> OPUC Ex. 1 at 20-21; Tr. at 598-600.

NCF. TIEC and ETEC-NTEC also expressed concern about the effect of the Gen-Tie's vulnerability on the plant output.<sup>102</sup>

SWEPCO points out that both DNV-GL and Simon Wind are experienced and reputable wind energy consultants, and that neither intervenors nor Staff presented any alternative expert NCF analysis. In his rebuttal testimony, Mr. Godfrey testified that DNV-GL's backcast review showed an average 1%, rather than 2% difference between projected and actual capacity factors. He noted that DNV-GL has refined its analytical processes on an ongoing basis. He stated that the wind report accounts for grid downtime and considers grid curtailment and the environmental curtailment issues raised by Mr. Pollock. He testified that PSO's nearby comparable plant, which uses earlier and less efficient wind technologies, has an NCF comparable to the NCV-GL's estimate for the Wind Facility. He testified also that SWEPCO has a contractual availability guarantee to maintain a 96.0% plant availability, although it expects a higher availability.

Mr. Godfrey rejected the notion that problems were likely with the newest version of the GE turbines. He compared the new GE technology to the latest version of the Ford F150 versus last year's model. Although the new one may have more "whiz-bang gadgets, it's still the same truck . . . . Same V8. Same big tires . . . ," so one could still expect the same performance. SWEPCO also points out that the availability figures provided by Invenergy were based on Invenergy's historical performance.<sup>103</sup>

SWEPCO witness Bradish rejected the notion that the estimated NCF would be adversely affected by the availability of the Gen-Tie. He pointed out that the study's 99.8% energy loss factor for grid availability is "very consistent" with the historical availability for AEP's more than 2,100 miles of 765 kV lines. He explained that AEP has considerable experience in dealing with line repairs due to weather damage. He stated there is at least one comparable transmission line in Texas, the 214-mile 345 kV Horse Hollow-Kendall line. At the hearing, during cross-

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<sup>102</sup> Staff Ex. 3A at 5-9; Tr. at 889-96; TIEC Initial Brief at 49-50; Staff Initial Brief at 16-17.

<sup>103</sup> SWEPCO Ex. 16 at 9-17; Tr. at 872-73; SWEPCO Reply Brief at 5054.



examination, Mr. Bradish testified that the 99.8% figure would not be adversely affected by the length of the line.<sup>104</sup>

## **ii. ALJs' Analysis**

The ALJs find SWEPCO's testimony regarding the NCF of the Wind Facility to be convincing. SWEPCO presented two analyses of the NCF conducted by reputable consulting firms. Although there may have been some technical flaws in DNV-GL's methodology, nothing in the record suggests that the underlying study was unreliable. Even though DNV-GL's backcast study found a 1% variance between projected and actual performance, in this case the second consultant, Simon Wind, confirmed DNV-GL's results. The ALJs find the site-specific studies more persuasive than evidence about different wind farms at different locations. The ALJs also were persuaded by Mr. Bradish's testimony regarding the availability of the completed Gen-Tie. Although his view was challenged by other parties, there was no expert testimony that refuted his calculations.

Therefore, the ALJs find that the 51.1% NCF estimated by SWEPCO is reasonable to use to calculate the expected benefits of the Project. Because the estimate is a P50 estimate, of course, the actual results are equally likely, in a statistical sense, to be better or worse.

## **3. Projected Benefits of Wind Catcher**

### **a. Production Cost Savings**

The projected production cost savings from the Project are discussed in the section above. As stated there, the ALJs find the Project will supply production costs savings; however, the ALJs also find that those savings are likely to be less than estimated by SWEPCO. In particular, the ALJs find that SWEPCO's cost estimates for the Project and its projected NCF for the Wind Facility are reasonable. The ALJs find that SWEPCO's natural gas price estimates are too high,

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<sup>104</sup> SWEPCO Ex. 19 at 2-7; Tr. at 896.

that a carbon tax should not be assumed, and that SWEPCO underestimated additional wind energy by the amount set out by Mr. Pfeifenger in his rebuttal testimony. The Project may also affect SWEPCO's required operating reserve, although that possible effect was not quantified.

**b. Production Tax Credits (PO Issues 25 and 26)**

**i. Evidence and Arguments**

SWEPCO estimates PTCs of \$1,541 million from the Project.<sup>105</sup> The PTC is a tax credit against federal income taxes based on every kWh of energy that is produced by a wind generator over the first 10 years of operation. The amount is based on an annual inflation-adjusted value that was set for 2017 at 0.024 per kWh and is adjusted based on a gross domestic product adjustment. Because construction was commenced on the Project before December 31, 2016, and completion is projected within four years, by December 31, 2020, SWEPCO anticipates receiving 100% of available PTCs. SWEPCO's PTC projection depends upon timely regulatory approvals and, perhaps, upon timely completion of both the Wind Facility and the Gen-Tie. The IRS safe-harbor deadline for the PTCs is December 31, 2020, although there are provisions that would allow a company to qualify even if that deadline is not met.<sup>106</sup>

Intervenors and Staff do not question SWEPCO's PTC calculation amount. However, TIEC, CARD, and OPUC all question the ability of SWEPCO to qualify for PTCs and to meet the December 31, 2010 safe-harbor deadline.

As is discussed in the cost section of this Proposal, Mr. Pollock argued that the timelines for both the Wind Facility and the Gen-Tie were aggressive. Any slippage in the construction

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<sup>105</sup> As TIEC notes, that amount is greater than SWEPCO's projected net benefits from the Project. TIEC Initial Brief at 54.

<sup>106</sup> SWEPCO Ex. 4 at 4-6; SWEPCO Initial Brief at 41-43. As is discussed elsewhere in this PFD, SWEPCO guarantees that customers will receive the benefit of the PTC at the 100% level established by the IRS. SWEPCO's proposed guarantee does not apply, however, to PTCs lost due to changes in law or force majeure.

deadlines could endanger SWEPCO's ability to meet the safe-harbor deadline. CARD witness Garrett expressed similar concerns and noted that the PTC level depends on the energy output of the Wind Facility. OPUC witness Nalepa discussed those risks as well. He recognized that SWEPCO has mitigation strategies in place if the safe-harbor deadline is not met, but he believed significant risks still remain. Intervenors also pointed out that changes in federal tax law could reduce PTCs or eliminate them altogether.<sup>107</sup>

Several SWEPCO witnesses expressed confidence that the Project will be completed before the safe-harbor deadline. SWEPCO witness Thomas A. Finn testified that the Project is very likely to qualify for the PTCs at a 100% level even if timely completion does not take place, however. Mr. Finn noted that the IRS has provided a non-exclusive list of construction disruptions that will not be considered as indicating that a taxpayer has failed to maintain a continuous program of construction or continuous efforts to advance toward completion of a qualifying facility. That list includes:

- (a) severe weather conditions;
- (b) natural disasters;
- (c) delays in permitting;
- (d) delays at the written request of a federal, state, local, or Indian tribal government regarding matters of public safety, security, or similar concerns;
- (e) interconnection-related delays, such as those relating to the construction of a new transmission line or upgrades;
- (f) delays in the manufacture of custom components;
- (g) labor stoppages;
- (h) inability to obtain specialized equipment;
- (i) the presence of endangered species;
- (j) financing delays; and
- (k) supply shortages.<sup>108</sup>

In addition, although SWEPCO believes that delays related to the Gen-Tie would be considered an excusable disruption under the IRS guidelines, SWEPCO has contracted with

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<sup>107</sup> TIEC Ex. 1 at 36-42; CARD Ex. 2 at 9-10; OPUC Ex. 1 at 16-24.

<sup>108</sup> SWEPCO Ex. 23 at 5-6.

GridLiance Holdco, LP (GridLiance)<sup>109</sup> for an alternative point of interconnection in case the Gen-Tie is not completed in time.<sup>110</sup> As explained by Mr. Finn, that alternative is a 50 MW connection that would be rotated among the functioning Wind Facility turbines until they are all placed in service. Mr. Finn indicated that SWEPCO was not aware of any IRS ruling that requires an interconnection size to be equal to the production capacity of the wind farm. He cited an IRS private letter ruling for a different taxpayer that allowed that taxpayer to consider its wind facility to be in service despite a lower-capacity transmission line. He agreed, however, that the transmission line in that instance allowed the taxpayer to deliver 16% of its capacity to market in the first year. The 50 MW GridLiance connection would be 2.5% of the Wind Facility's 2,000 MW capacity.<sup>111</sup>

## **ii. ALJs' Analysis**

The ALJs find that there is some uncertainty over whether the two aspects of the Project, and particularly the Gen-Tie, will be completed on time. Nevertheless, the evidence shows that the projected PTCs are likely to be available to SWEPCO, either through the safe-harbor provision or because the reason for Project delay is one of the exceptions set out by the IRS. As SWEPCO points out, the construction disruptions listed by the IRS are precisely the risks the other parties allege may threaten the PTCs.<sup>112</sup> The GridLiance connection offers additional reassurance, although it is not entirely clear that connection would be acceptable to the IRS.

The main threat to the PTCs would appear to be from future changes in tax law. The ALJs find that the estimated cost and benefits of the Project, including the benefits of the PTCs, should not be determined by speculation over possible future changes in law, although the Commission may wish to consider those possibilities. SWEPCO's proposed guarantee is discussed below.

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<sup>109</sup> Intervenor South Central is subsidiary of GridLiance. South Central Initial Brief at 1.

<sup>110</sup> *Id.* at 7.

<sup>111</sup> SWEPCO Ex. 23 at 7; Tr. at 909-15.

<sup>112</sup> SWEPCO Reply Brief at 60.

**c. Capacity Value of the Wind Facility (PO Issue 14)**

**i. Evidence and Arguments**

SWEPCO acknowledges that the Project is not needed at this time to serve customer capacity. However, SWEPCO calculated the future capacity value of the Wind Facility and included that calculation, \$269 million on an NPV basis, as one of the financial benefits of the Project. Mr. Pearce stated that the forecasted incremental value was based on the deferral of a future natural gas combined-cycle (NGCC) unit from 2026 to 2033 and the avoidance of a second NGCC unit from 2038 through the end of the modeling period, 2045.<sup>113</sup>

In his live surrebuttal testimony, TIEC witness Pollock questioned the validity of that calculation. He testified that the actual amount of any capacity savings will not be known until the future, based on the performance of the Wind Facility, future SPP capacity credit rules, and SWEPCO's generation needs.<sup>114</sup> In reply, SWEPCO states that Mr. Pearce's projection was based on a conservative use of the SPP planning criteria.<sup>115</sup>

**ii. ALJs' Analysis**

TIEC is correct that SWEPCO's capacity value calculation is based on estimated capacity needs in the future. However, much of this proceeding is based on projections. Nothing in the record suggests that the planning projections used by Mr. Pearce were likely to be unreliable. While the capacity value estimate is just that—an estimate—the ALJs find that it is reasonable and should be used to help determine the expected net benefits of the Project in this proceeding.

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<sup>113</sup> SWEPCO Ex. 7 at 6, 10.

<sup>114</sup> Tr. at 1235-36.

<sup>115</sup> SWEPCO Reply Brief at 62-63.

#### **4. Summary of Costs and Benefits**

SWEPCO estimates net benefits of \$1.495 billion NPV under its Base Case. The ALJs find that downward adjustments should be made to SWEPCO's estimates for future natural gas prices (\$388 million), removal of the carbon burden (\$550 million), and additional wind generation (\$203 million). Those adjustments reduce the net benefits by \$1.141 billion, for total remaining estimate net benefits of \$354 million from the Project.

#### **C. Proposed Conditions to CCN (PO Issue 13)**

##### **1. SWEPCO'S Proposed Conditions and Intervenor Concerns**

Throughout this proceeding, the intervenors have expressed concerns that the Project will not result in a net savings to SWEPCO's consumers. In particular, the intervenors have expressed concerns about the cost, which is significantly increased over a traditional wind generation plant because of the need for a high-voltage transmission line running over 300 miles across Oklahoma to transmit the power from the Oklahoma panhandle to the Tulsa load center. This Gen-Tie line is estimated to cost over \$1.6 billion.<sup>116</sup> The intervenors also expressed concerns about the benefit level, arguing that the estimated benefit level is exaggerated.

In December 2017, after SWEPCO filed its Application, the TCJA was passed, reducing the corporate tax rate, which reduced the estimated value of SWEPCO's share of the Project.<sup>117</sup> The change in the tax rate affected how and when SWEPCO would be able to use the PTCs as they accrued, and resulted in the need for SWEPCO to file additional testimony to revise its calculations, reducing the estimated net benefits. The intervenors expressed greater concern about the economics of the Project as a result of the lower estimated benefits.

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<sup>116</sup> SWEPCO Ex. 2 at 5. The estimates presented at hearing and contained in the record do not account for any increase in steel costs that may occur as a result of tariffs being placed on foreign steel. The events surrounding the current administration's statements regarding implementing tariffs on steel occurred after the close of the evidentiary record. They are, therefore, not addressed in this PFD.

<sup>117</sup> SWEPCO Ex. 25 at 10.

In an effort to address some of the intervenors' concerns, SWEPCO offered several proposed conditions designed to act as hedges against some of the cost risks of the Project.<sup>118</sup> Each of these conditions is subject to exclusions for force majeure or a change in law.<sup>119</sup>

**a. Capital Cost Cap (PO Issue 21)**

SWEPCO proposes a cost cap for the Wind Facility, Gen-Tie, and all SPP-assigned generation interconnection costs of \$3.339 billion, which is 109% of the estimated cost of SWEPCO's 70% share of the Project. This cost cap does not include AFUDC.

TIEC argues that the cost cap proposed by SWEPCO is extraordinarily high compared to the cost of other wind facilities, noting that the average installed cost since 2015 has been approximately \$1,655/kW.<sup>120</sup> TIEC also notes that the SPS New Mexico settlement included a hard cost cap of \$1,675/kW.<sup>121</sup> Compared with those cost caps, TIEC notes that the level of SWEPCO's proposed cost cap is \$2,460/kW, which TIEC argues is so high that the project would be economically unfeasible long before the cost cap was reached.<sup>122</sup> TIEC observes that the SPS cost cap does not include exceptions for force majeure and change in law, so the cap acts as more of a hard guarantee. Whereas the proposed cap in this case is subject to exceptions for force majeure and change in law, which TIEC argues, serves to nullify much of the purported benefit from it.

OPUC notes that the proposed cost cap excludes AFUDC of approximately \$2 million in addition to it not applying to increases in cost due to force majeure and change in law.<sup>123</sup>

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<sup>118</sup> Many of these conditions mirror proposed guarantees in Docket No. 46936. Because that docket has not been decided as of the date of issuance of this PFD, the ALJs were not able to use that case as precedent for this case. The ALJs recognize the potential that this case could be affected by Docket No. 46936.

<sup>119</sup> SWEPCO Exs. 15 at 6, 14 at 3.

<sup>120</sup> TIEC Ex. 1 at 39.

<sup>121</sup> TIEC Ex. 65 at 8.

<sup>122</sup> TIEC Initial Brief at 61, citing Tr. at 700-01. The major difference, as the ALJs understand the cases, is that the increased costs in this case are primarily a result of the cost of the Gen-Tie line.

<sup>123</sup> OPUC Initial Brief at 23, citing SWEPCO Ex. 3 at 16; SWEPCO Ex. 6 at 5.

Additionally OPUC contends that SWEPCO's cost estimate for the Wind Facility already includes a contingency of \$93.3 million, which SWEPCO then seeks to build in an additional 9% over the cost of the entire Project before the cap would take effect.<sup>124</sup>

OPUC also recommends cost caps for both the Wind Facility and Gen-Tie that are consistent with current cost estimates. For the Wind Facility, OPUC requests a capital cost cap of \$1,451 per kW, which is inclusive of the purchase price and all associated costs. For the Gen-Tie, OPUC requests a capital cost cap at the contracted fixed price amount of \$1.62 billion. OPUC argues that SWEPCO is in a better position to control costs than its ratepayers, and holding SWEPCO to its estimates will incentivize cost control. In addition, OPUC notes that SWEPCO's cost estimate for the Wind Facility already includes \$93.3 million in contingency so it is unnecessary to set the cap at higher than 100% of the estimate. OPUC asserts the cap should include AFUDC and should not exclude changes in law or force majeure events.<sup>125</sup>

Staff requests a capital cost cap at \$1.087 billion, including AFUDC. And Staff also seeks a cost cap inclusive of the Gen-Tie line that does not exceed \$2,302.75 per kW of nameplate capacity, as measured on a total parent-company gross-plant basis.<sup>126</sup>

The construction cost risks of the Project are discussed in detail above in the PFD. Those construction risks combined with the high cost cap and the possibility of cost overruns attributable to force majeure or change in law diminish the value of SWEPCO's decision to provide a capital cost cap.

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<sup>124</sup> OPUC Initial Brief at 24, citing SWEPCO Ex. 3 at 16.

<sup>125</sup> OPUC Initial Brief at 30.

<sup>126</sup> Staff Ex. 3A at 13.



**b. Net Capacity Factor**

SWEPCO proposes a guaranteed net capacity factor of 44.7%, which is 87% of the capacity projected in its Application.<sup>127</sup>

CARD, OPUC, and TIEC all assert that the net capacity factor guarantee would be fairly ineffective. They again argue that the exclusions for force majeure and change in law reduce or eliminate the value. SPS agreed to a net capacity factor floor of 48% without exception for force majeure or change in law.<sup>128</sup> They also note that SWEPCO's guarantee is over a five-year period, thus the Project could fail to meet the factor each year for five years but still meet the guarantee if the average over five years was above the factor.

OPUC requests the Commission include a condition requiring customers receive the benefit in reduced fuel expense based on the estimated minimum NCF of 51.1% for the Wind Facility even if the actual NCF is lower. Holding SWEPCO to its NCF estimate will provide an incentive to maximize production, which will maximize production cost savings and PTCs. OPUC does not want exceptions to the NCF guarantee for force majeure or change in law.

**c. Production Tax Credit**

SWEPCO has stated it will guarantee eligibility for the 100% value of the PTCs under current law.<sup>129</sup>

OPUC asks the Commission to require SWEPCO to credit customers at 100% of PTCs regardless of whether SWEPCO qualifies for them. OPUC notes that without the PTCs, the Project would not be economical, and there would not be a basis for SWEPCO to obtain a CCN.

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<sup>127</sup> SWEPCO Ex. 25 at Exh. KDP-1R.

<sup>128</sup> TIEC Initial Brief at 63, citing Tr. at 1238.

<sup>129</sup> SWEPCO Ex. 15 at 6.

OPUC requests an order that includes a firm guarantee without exceptions for force majeure or change in law and that the guarantee be based on a minimum NCF of 51.1%.

TIEC, CARD, and OPUC note that the exceptions for force majeure and change in law still apply, and should Congress adjust the availability of PTCs, the guarantee would change. OPUC indicates that SWEPCO is not protecting against changes to the level of PTCs, so that if the production is lower than the 51.1% NCF that SWEPCO assumed in its calculation of benefits, the value of the PTC guarantee would be diminished.<sup>130</sup>

**d. Off-System Energy Sales Margins**

SWEPCO agrees to flow to customers 100% of the incremental off-system energy sales margins that would not have occurred but for the Project and the net proceeds from the sale of renewable energy credits associated with the Project.<sup>131</sup>

The Intervenors agree that customers should keep the revenues associated with off-system sales because the sales would have been generated by the Project paid for entirely by customers.

**e. Deferred Tax Asset Mechanism**

SWEPCO has developed a cost-sharing mechanism with a ceiling on the size of any deferred tax asset that would result from an inability on AEP's part to use PTCs generated by Wind Catcher in the year that they are earned. SWEPCO proposes to limit the return on any deferred tax asset balance to a combination of SWEPCO's then-approved weighted average cost of capital on 60% of the deferred tax asset balance and (2) the current cost of debt on 40% of the deferred tax asset balance. SWEPCO will also cap its deferred tax asset balance associated with the Project so that the balance will not exceed a cumulative, annual average of \$560 million.

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<sup>130</sup> Tr. at 926-929.

<sup>131</sup> SWEPCO Ex. 15 at 7.

Also, if the PTCs are not used after year 13 of the Project, SWEPCO agrees to no return on the asset through retail rates after year 13.<sup>132</sup>

Intervenors argue that this guarantee became critical after the enactment of the TCJA. As a result of that legislation, SWEPCO's taxes were reduced to the point that SWEPCO would not be able to use all of the accrued PTCs and would have a deferred tax asset. SWEPCO will be permitted to earn a return on that asset, thereby reducing the value of the PTCs that was anticipated prior to the enactment of the TCJA. TIEC notes that the actual cost to ratepayers would depend on the return on equity and the cost of debt over the period 2021 through 2033. If debt or equity costs are higher than they are currently, the adverse effect on ratepayers would be greater.<sup>133</sup>

**f. Ten-Year Tracking of Cost and Estimated Savings**

In addition to its other guarantees, SWEPCO offers a 10-year look-back proposal based on the following formula:

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

If the net benefit for customers at the end of the ten-year period is positive, SWEPCO will not owe customers any compensation under this guarantee. If the net benefit calculation for customers at the end of the ten-year period is negative, SWEPCO will compensate customers for that amount under the formula.<sup>134</sup>

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<sup>132</sup> SWEPCO Ex. 14 at 9.

<sup>133</sup> TIEC Ex. 3 at 12.

<sup>134</sup> TIEC Ex. 69.

SWEPCO asserts that this guarantee provides a backstop in addition to the other guarantees that could result in payments to customers triggered by circumstances such as sustained very low natural gas prices and the absence of a carbon emissions burden.<sup>135</sup>

TIEC, CARD, and OPUC argue that this provision is designed in such a way that it would not provide an accurate calculation to determine cost savings. Additionally, OPUC notes that it would cause intergenerational inequity.

TIEC explains that in the SPP market, utilities and other generation owners offer their generation based on the variable cost of each individual unit. Starting with the lowest cost unit, SPP goes up the bid stack until it has enough supply to meet demand. That point on the bid stack sets the price for all generation, even the lower priced units. Units operated above the price where supply meets demand are not dispatched. When additional generation is required, SPP simply moves up the bid stack, thereby likely increasing the cost of the set price.<sup>136</sup> SWEPCO's actual dispatch history shows that its units with low heat rates are dispatched frequently, whereas older less efficient units are rarely dispatched.<sup>137</sup>

According to TIEC, SWEPCO would calculate fuel savings based on generation that had not already been dispatched by the SPP to serve load, which could include less efficient generation. When there would not be enough generation remaining in SWEPCO's generation stack to meet the output of the Wind Facility, SWEPCO would go to the next unit in its generation stack, which could be less efficient than the generation bid into the SPP. In other words, even if SPP was setting the bid price at a lower price than SWEPCO's generation, SWEPCO would still use its higher priced generation to calculate fuel cost savings although that more expensive generation might never have been dispatched.<sup>138</sup>

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<sup>135</sup> See Tr. at 1309.

<sup>136</sup> Tr. at 1090-91.

<sup>137</sup> TIEC Ex. 99.

<sup>138</sup> Tr. at 1232.

TIEC also notes that the marginal unit in SPP is often a wind unit, which could bid negative prices because of the PTC value.<sup>139</sup> If the LMP is negative, SWEPCO would go up its generation stack and look at the cost to operate the next unit in its stack even though that cost would be significantly higher than the actual cost of the generation being bid into SPP. SWEPCO also proposes to freeze its generation stack with a few retirements during the period of the ten-year lookback.<sup>140</sup> Also locked into the calculation is \$269 million in avoided capacity costs. This stays in the calculation whether the capacity need is avoided or not.<sup>141</sup>

OPUC is concerned about intergeneration inequity. Under SWEPCO's proposal, it would calculate whether there was a net cost at the end of the first 10 years. If so, SWEPCO would credit customers in years 11 to 25 for the amount of any benefit they did not receive.<sup>142</sup> Thus, it is possible that a customer who experienced a net cost in the first year of operation would not be fully credited for the cost until 25 years later. OPUC contends that it is unlikely customers who incur costs will be around to receive any credits.<sup>143</sup>

**g. Most Favored Nation Agreement**

SWEPCO agrees to notify Commission Staff if terms more favorable to customers related to: (1) the GWh output of the Production Guarantee; (2) the PTC Eligibility; or (3) the Cost Cap percentage are agreed to by PSO or SWEPCO in any of the state utility commission proceedings under which they are seeking approval of the Project. SWEPCO will disclose the terms and incorporate them into the guarantees for the benefit of SWEPCO Texas customers.<sup>144</sup> As an example, SWEPCO cites its settlement in Arkansas where SWEPCO has agreed to a cost cap of 107.5%. If the settlement is adopted by the Arkansas Public Service Commission, SWEPCO

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<sup>139</sup> Tr. at 1338-41.

<sup>140</sup> Tr. at 1063, 1074-78.

<sup>141</sup> Tr. at 1235.

<sup>142</sup> Tr. at 777-79.

<sup>143</sup> Tr. at 777-79.

<sup>144</sup> SWEPCO Ex. 15 at 7.

will incorporate that term into the guarantees offered to Texas customers.<sup>145</sup> The same is true with SWEPCO's settlement proposals in Oklahoma and Louisiana.<sup>146</sup>

Even with SWEPCO's proposed conditions, TIEC and Staff still oppose the Application and recommend denial. TIEC argues that none of the proposed conditions provides any meaningful ratepayer protection particularly because the greatest concerns that could cause cost overruns are excluded from the guarantees—force majeure and change in law.

Many of the intervenors in this case attempted to compare SWEPCO's proposed conditions to the conditions adopted as part of the settlement of the SPS wind generation case in New Mexico. The ALJs place little weight on the differences between the New Mexico SPS settlement and SWEPCO's proposed conditions because there is no evidence in the record of this case regarding the costs and purported benefits of SPS's New Mexico case. However, because the parties spent a significant amount of time at the hearing and in briefing comparing the two cases, some elements of the SPS settlement are addressed below to present the parties' arguments to the Commission.

#### **h. ALJs' Analysis**

In response to the intervenors' primary concerns about the proposed guarantees, SWEPCO argues that it is unlikely the guarantees will be triggered because the Project is expected to perform at levels above those guarantees. SWEPCO argues that even if the Project were to hit the cost cap, and natural gas prices were to be at the Fundamentals Forecast Low Case, and the Project were to produce only at the guaranteed level, and the DTA were to hit the

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<sup>145</sup> On May 10, 2018, SWEPCO filed a copy of the Arkansas order.

<sup>146</sup> In its Initial Brief, Walmart argues that any most favored nation provision should apply from any of the states that have regulatory authority over SWEPCO. It was not clear from the testimony presented at the hearing that SWEPCO was agreeing to the most favored nation provision coming out of any state. However, in its briefing, SWEPCO confirmed that if any jurisdiction provides more favorable terms to customers than Texas does, those provisions would be included.

proposed cap, customers would still be expected to save approximately \$260 million (SWEPCO total company) on an NPV basis.<sup>147</sup>

In its proposed guarantees, SWEPCO has defined force majeure as:

*Force Majeure* means any event that is not within the Company's reasonable control which (i) causes the Project costs to exceed the cost cap set or (ii) prevents the Company from satisfying the minimum production guarantee obligation. Examples of events of *Force Majeure* include: (i) acts of God or the public enemy; (ii) the effects of severe weather (e.g., lightning, tornadoes, high winds or icing); (iii) equipment failure; and (iv) the inability of any Project vendor or supplier to fulfill its obligations to the Company so long as the cause thereof otherwise would qualify as an event of Force Majeure or is the result of labor strike, lockout or other labor issues. Events of Force Majeure shall not include (i) any event which could have been prevented, avoided or overcome as a result of the Company taking all reasonable precautions and measures pursuant to prudent industry practices to avoid the effect or occurrence of such event or (ii) any event caused by the Company's negligence.<sup>148</sup>

SWEPCO argues that it is required to manage its business and risks prudently. However, utilities do not insure customers against circumstances that are beyond the utility's control. In most generation CCN cases, the utility is applying for a CCN so that it can build generation that is needed to address a need for additional electricity. And, understandably, customers would not be insured against all risks for an electric generator when additional power is needed. However, this case is different in that the main driver for the Application is not the need for power but the potential cost benefits.<sup>149</sup> When the driving force behind the Application is a need for additional supply, the utility is committing to provide that needed generation as soon as it can construct and operate the Project. However, in this case, there is no current need for SWEPCO to increase its generation. Absent the potential cost savings, there would be no question that SWEPCO should not build the Project because it is simply not needed. Given that the only reason for building the Project is projected financial benefit, the ALJs find that SWEPCO should be willing to firmly

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<sup>147</sup> SWEPCO Ex. 15 at 4; SWEPCO Ex. 25 at Revised Exh. KDP-1R.

<sup>148</sup> SWEPCO Ex. 34 at 5.

<sup>149</sup> As noted by the intervenors, SWEPCO's investors stand to benefit if the Project is approved because they will earn a return on the large investment in the Project.

guarantee a certain level of savings to the customers, otherwise the customers are bearing the risk of financial speculation, something that is unusual in a regulated environment.

For these reasons, should the Commission decide to approve the Project, the ALJs recommend the Commission establish a firm cost cap as well as adopt certain of SWEPCO's other guarantees to ensure that the customers are protected in the event of contingencies including changes in the law and force majeure. There is Commission precedent for establishing firm cost caps.<sup>150</sup> Some parties have recommended different customer protections and those are addressed below.

## **2. Staff or Intervenor Proposed Conditions**

### **a. Staff**

Staff recommends that the Commission deny the Application because the Project is not necessary to maintain reliability, so there is no need to subject ratepayers to the risk of increased costs. However, Staff makes some specific recommendations should the Commission decide to approve the CCN.<sup>151</sup>

Staff wants a guarantee of projected savings net of the revenue requirement SWEPCO claims for the life of the Project, reporting the results on an annual basis, and compensating Texas retail ratepayers for any shortfall in net savings.<sup>152</sup> With respect to the PTCs, Staff asks for a guarantee of the greater of (1) 100% of the dollar value of the PTCs that SWEPCO has assumed in its analyses of the Project's estimated benefits, or (2) the dollar value of PTCs that SWEPCO actually claims.<sup>153</sup>

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<sup>150</sup> *Application of Southwestern Electric Power Company for Certificate of Convenience and Necessity Authorization for a Coal Fired Power Plant in Arkansas*, Docket No. 33891, Final Order at Ordering Paragraphs 2 and 3 (setting a firm overall cost cap and a cap on carbon dioxide mitigation costs) (Aug. 12, 2008).

<sup>151</sup> Staff's proposed cost cap is addressed above.

<sup>152</sup> Staff Ex. 3A at 13; Staff Ex. 2A at 20.

<sup>153</sup> Staff Ex. 2A at 20.



Staff further requests that the Commission require SWEPCO to seek base rate treatment of the Project, and not recover costs through interim fuel rates.<sup>154</sup> Staff also asks that SWEPCO not be allowed to defer a portion of PTCs for ratemaking purposes in a regulatory liability that will be used to offset SWEPCO's revenue requirement beginning the first year after the expiration of the PTCs. Staff asserts that allowing SWEPCO to do so would result in intergenerational inequities.<sup>155</sup>

Staff also recommends that the Commission set depreciation rates for the Project and require SWEPCO to use those rates until its next base rate case. In setting the depreciation rates, Staff contends they should be calculated under the assumption that the Wind Facility has a 30-year life span rather than SWEPCO's suggestion of 25 years.

Staff wants to prohibit SWEPCO from seeking recovery for case processing expenses from Texas ratepayers. Because SWEPCO is asking for an exception to Commission precedent regarding cost recovery, Staff asserts that Texas ratepayers should not be required to pay for those costs. Additionally, Staff asserts that Texas ratepayers should not be allocated any portion of litigation expenses incurred in litigation in other jurisdictions.<sup>156</sup>

**b. OPUC**

In addition to its specific requests for a cost cap, NCR and PTC treatments, OPUC also requests an energy savings guarantee based on SWEPCO's Base Gas Case, regardless of actual market prices. OPUC suggests shifting the risk of low gas prices to SWEPCO and away from the customers in case its gas price predictions are incorrect.

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<sup>154</sup> Staff Ex. 2A at 7.

<sup>155</sup> Staff Ex. 2A at 19.

<sup>156</sup> Staff Ex. 2A at 20-21.

**c. TIEC and CARD**

TIEC and CARD do not recommend any guarantees, noting that SWEPCO has been clear it is not interested in any guarantees that would provide protection against force majeure or change in law. TIEC does note that the Commission imposed a capital cost cap on SWEPCO's Turk Plant. TIEC notes that although the cap saved ratepayers from the 16% cost overrun, ratepayers still had the base rate increase for the plant. The Turk Plant is a coal-fired plant that, to run economically, required natural gas prices of at least \$8.25/MMBtu.<sup>157</sup> When natural gas prices dropped to \$5.00 and then to \$3.00, SWEPCO's ratepayers were locked into paying for more expensive generation from a high capital cost plant without the promised savings. TIEC is concerned that the circumstances will recur with this Project.

**d. Golden Spread**

Golden Spread requests that if the Commission grants the CCN, it condition the approval such that SWEPCO and its affiliates may not seek revenue from the Gen-Tie through the SPP Open Access Transmission Tariff (OATT).<sup>158</sup> Golden Spread asserts that because Gen-Tie is proposed as a private line not offering open access, there should be no cost allocation and recovery through the SPP OATT.<sup>159</sup> Golden Spread notes the Gen-Tie was not developed through the SPP regional transmission planning process under Federal Energy Regulatory Commission (FERC) Order No. 1000 or by SPP staff.<sup>160</sup> When a project is constructed outside of the SPP's transmission planning process, Attachment Z2 of the SPP OATT establishes a cost recovery methodology for a party that incurs costs not identified as fulfilling a need. Golden Spread argues that SWEPCO's recovery of costs related to the Gen-Tie line from SPP would not be reasonable because Gen-Tie is solely for the economic benefit of SWEPCO's and PSO's retail customers and not for a larger transmission need in the SPP. Therefore, Golden Spread argues

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<sup>157</sup> Docket No. 40443, Order on Rehearing at Finding of Fact 37.

<sup>158</sup> Golden Spread Initial Brief at 4.

<sup>159</sup> Golden Spread Initial Brief at 4.

<sup>160</sup> GSEC Ex. 1 at 10.

that the Commission should order SWEPCO not to seek an additional revenue source through the SPP OATT.

**e. South Central**

South Central has a 50 MW Interconnection Agreement with Invenergy. Invenergy plans to use this 50 MW interconnection for initial commissioning of the Wind Facility in time to qualify for PTCs prior to the completion of the Gen-Tie.<sup>161</sup> South Central is concerned that SWEPCO did not discuss alternatives to the Project with South Central, who is the incumbent utility in the area of the Wind Facility.<sup>162</sup> South Central also notes that once Gen-Tie becomes part of SPP's regional transmission planning, it will become subject to FERC jurisdiction. For these reasons, South Central asks the Commission to order SWEPCO and its affiliates to work with South Central and other incumbent utilities to ensure that the Project is constructed, owned, and operated in the most integrated and efficient manner possible.<sup>163</sup>

**f. ALJs' Analysis**

**i. Cost Cap**

Staff and OPUC have both requested cost caps similar to the cost cap the Commission imposed on SWEPCO for the Turk Plant in that the requested cost caps would not be subject to exceptions for force majeure or change in law. SWEPCO has agreed to a cost cap, but it would be subject to both exceptions.

The ALJs recommend that the Commission set a cost cap at Staff's recommended levels and without exception for force majeure and change in law for both the Wind Facility and the Gen-Tie. Setting the cost cap without those exceptions reduces the risk to the customers and is

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<sup>161</sup> South Central Initial Brief at 3, citing SWEPCO's Response to TIEC Request for Information No. 7-3.

<sup>162</sup> South Central Initial Brief at 6.

<sup>163</sup> South Central Initial Brief at 9.

entirely consistent with Commission precedent. Throughout the hearing and in briefing, SWEPCO has remained confident and consistent in its assertion that the Project will save consumers money. Setting a firm cost cap is consistent with SWEPCO's position, and it provides customer protection against the inherent risk of a project of this magnitude.

**ii. Depreciation**

Staff's proposed change to SWEPCO's proposed depreciation schedule would align the depreciation rate with the anticipated life span of the Wind Facility. The ALJs find that Staff's proposal is reasonable and recommend the Commission adopt Staff's depreciation rate. There is no evidence that supports a different depreciation rate for the Wind Facility that is accelerated beyond the actual anticipated life span.

**iii. Base Rate Treatment**

This issue is addressed in the sections of the PFD related to proposed ratemaking treatments.

**iv. Base Gas Case Savings Guarantee**

As discussed above, the ALJs do not find that SWEPCO's proposed Base Gas Case is an accurate prediction of where gas prices will be. Because of the anticipated higher natural gas prices, the ALJs have found that that Project is unlikely to provide the economic benefits that SWEPCO alleges it will. By providing a guarantee that savings will be based on the Base Gas Case, OPUC argues it will shift the gas price volatility risk away from customers. Although setting savings based on SWEPCO's Base Gas Case would protect customers, the ALJs do not recommend that the Commission adopt OPUC's recommendation if the Commission decides to approve the CCN. The ALJs have indicated that the 2018 EIA levelized reference case natural gas price forecast should be used to calculate potential cost savings. However, with that price, the potential savings to customers is decreased by approximately \$388 million. Setting a higher

guarantee would be contradictory to what the best prediction of gas pricing is and is not reasonable.

**v. Rate Case Expenses**

The ALJs disagree with Staff's proposal to limit the available rate case expenses for SWEPCO at this stage. An analysis of rate case expenses as part of a base rate case would necessarily inquire into the reasonableness of any expenses SWEPCO incurred. That case would be the appropriate vehicle to examine whether SWEPCO has included any inappropriate expenses. Doing so now would be premature. Therefore, the ALJs recommend that Staff's proposed restrictions on rate case expense recovery be denied with the understanding that during a rate case expense phase of a base rate case, any party could raise those issues.

**vi. Net Capacity Factor**

The ALJs do not recommend adopting OPUC's proposal for a firm guarantee of a 51.1% NCF not subject to force majeure or change in law. Although SWEPCO anticipates that it will reach that NCF based on the technology the Wind Facility is using and the predicted wind speed and duration for the Oklahoma Panhandle, SWEPCO cannot control the unpredictability of the wind. SWEPCO has proposed an NCF guarantee of 44.7% with exceptions for force majeure and change in law. The ALJs recommend that the Commission adopt SWEPCO's NCF guarantee of 44.7%; however, the ALJs recommend that there not be exceptions for force majeure and change in law to provide a firmer guarantee to customers in a situation where the regulated utility is building generation assets based on financial speculation.

**vii. Production Tax Credits**

The ALJs agree with Staff and OPUC that without the PTCs, the Project would not make economic sense, and because SWEPCO is seeking a CCN as financial speculation, requiring SWEPCO to guarantee the value of all PTCs, regardless of whether SWEPCO qualifies for them

seems reasonable. SWEPCO has agreed to guarantee eligibility for 100% of the PTCs at a 51.1% capacity factor, with exceptions for force majeure and change in law. If the NCF is lower, the value of the PTCs will also be lower.

The laws governing PTCs can be changed by the federal government at any time, something that is not within SWEPCO's control. The ALJs find that some guarantee for PTCs is reasonable and SWEPCO should be ordered to provide some assurance to customers. However, the ALJs also find that requiring SWEPCO to guarantee full performance of the PTCs even if there is a change in law is not reasonable because the availability of PTCs is governed entirely by federal law. Therefore, the ALJs recommend that the Commission order SWEPCO to guarantee the PTCs at 100% at the 51.1% capacity, with an exception for a change in law but no exception for force majeure.

**viii. 10-Year Look Back**

The ALJs recommend that SWEPCO's 10-year look back proposal be denied. The proposal suffers from too many uncertainties and inaccuracies. First, by using a frozen bid stack, it would not provide an accurate indication of the actual avoided costs. Second, it can result in customers incurring costs for which they never receive any credit, while customers who receive credit may never have incurred costs. Finally, there was not enough evidence presented to show what a reasonable alternative to SWEPCO's proposal would be. Therefore, the ALJs recommend the Commission evaluate the case without considering the benefit, if any, of SWEPCO's proposed 10-year look back condition.

**ix. Gen-Tie and SPP OATT**

The Gen-Tie line will be owned by SWEPCO and PSO. According to SWEPCO, under the SPP OATT, the Gen-Tie is not considered to be a sponsored upgrade and is not eligible for credits under Attachment Z2 of the SPP OATT.<sup>164</sup> Only if the Gen-Tie is identified as a network

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<sup>164</sup> SWEPCO Reply Brief at 70.

upgrade, will be it eligible for credits under Attachment Z2 of the SPP OATT.<sup>165</sup> SWEPCO argues that SPP will determine which network upgrades are used to provide service to SPP customers.

The ALJs agree with SWEPCO. Currently, SWEPCO anticipates that the Gen-Tie will be used as a dedicated line to supply energy from the Wind Facility for its life. However, after the Wind Facility is no longer generating, or when there is capacity on the Gen-Tie, the Gen-Tie could then serve as part of the integrated SPP transmission grid and provide transmission benefits for SPP customers.<sup>166</sup> SWEPCO argues that forcing it to agree to decline any future Attachment Z2 compensation provided for under the SPP OATT would shift the cost burden of using the line to SWEPCO customers from the entire SPP.<sup>167</sup> If the Gen-Tie were to be used to provide transmission within SPP and not used solely as transmission for SWEPCO, SWEPCO would be entitled to some payment for the use of the line under the SPP OATT. The mechanisms for that payment would be governed by the OATT and subject to FERC jurisdiction. Therefore, the ALJs recommend that the Commission not include Golden Spread's requested ordering paragraph that would prohibit SWEPCO from forever seeking inclusion of the Gen-Tie line in the SPP OATT.

**x. South Central**

The ALJs do not recommend that the Commission include any requirements in its order to require coordination between SWEPCO and South Central or other incumbent utilities. South Central did not present any evidence regarding the necessity of coordination or any details of what such coordination would entail.

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<sup>165</sup> SWEPCO Ex. 20 at 2-3.

<sup>166</sup> SWEPCO Ex. 15 at 12.

<sup>167</sup> SWEPCO Ex. 20 at 5.

**D. Other CCN Issues (PO Issues 9, 11, 14-17)**

**1. Reliability and Cost Effectiveness (PO Issue 9)**

SWEPCO admits that there is no current need for additional capacity or reliability.<sup>168</sup> There is adequate service. SWEPCO asserts that the Project may defer the in-service date of future capacity, including eliminating a combined cycle plant in 2032 and deferring another combined cycle plant from 2016 to 2032.<sup>169</sup> As SWEPCO states, the Project is an incremental resource proposed to reduce customers' cost of energy.<sup>170</sup>

**2. Continued Public Interest Evaluation (PO Issue 11)**

SWEPCO contends that it has continued to evaluate whether the Project is in the public interest. The ALJs agree. For example, SWEPCO reasonably requested a continuance to file additional testimony, revising its estimates based on the TDJA, which reduced SWEPCO's tax rate, thereby reducing the anticipated financial benefits to consumers and created a deferred tax asset because SWEPCO would be unable to use all of the PTCs as they are awarded.

SWEPCO continues to assert that the Project is in the public interest because it will probably lower costs to customers. As discussed throughout this PFD, the ALJs find that SWEPCO has not proven by a preponderance of the evidence that its anticipated cost savings are more likely to occur than not. The ALJs have found that primarily because SWEPCO's gas cost estimates are inflated, its predicted carbon tax is unlikely to occur, and there is likely to be additional wind generation on the grid, the Project is unlikely to generate the level of savings SWEPCO anticipates. The Project is likely, however, to produce some level of savings to customers. Although SWEPCO has made some guarantees, the ALJs have found that those guarantees are insufficient to provide enough customer protection to recommend the

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<sup>168</sup> SWEPCO Ex. 14 at 7.

<sup>169</sup> SWEPCO Ex. 7 at 10.

<sup>170</sup> SWEPCO Initial Brief at 53.



Commission grant the CCN with SWEPCO's conditions. Therefore, the ALJs find that the Application should be granted with stronger guarantees than those offered by SWEPCO to ensure that the Project is in the public interest.

**3. CCN (PO Issues 14a-c)**

The need for the Project and the effect on SWEPCO are addressed above.

**4. CCN balancing issues (PO Issues 14d through g)**

These issues do not apply because the Project is located entirely outside the State of Texas. Therefore, site-specific factors such as community values, recreational and park areas, historical and aesthetic values, and environmental activities are not applicable.<sup>171</sup>

**5. Improvement of service or lowering of cost to consumers (PO Issue 14h)**

The issue of whether costs to customers will be lowered is discussed above.

**6. Renewable energy goals (PO Issue 14i)**

SWEPCO asserts that this issue is not applicable because Texas has already met its renewable energy goals in PURA § 39.904(a).<sup>172</sup>

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<sup>171</sup> Docket No. 33891, Final Order at Finding of Fact Nos. 43, 46, 48, 50, and 51 (August 12, 2008).

<sup>172</sup> Tr. at 70.

**7. Effect on Implementation of Customer Choice (PO Issue 15)**

SWEPCO is not currently in the process of implementing customer choice in its Texas service territory.<sup>173</sup> The Project will have no effect on the implementation of customer choice in SWEPCO's service territory or the creation of stranded costs.<sup>174</sup>

**8. Effect on Lubbock Power & Light and Rayburn Country Electric Coop (PO Issue 16)**

Approval of the Application would have no effect on Lubbock Power & Light's or Rayburn Country Electric Cooperative's proposal to become part of the Electric Reliability Council of Texas. The Commission approved Lubbock's application in Docket No. 47576 at its March 8, 2018 open meeting. Commission approval of Lubbock's or Rayburn's proposals would not change the answer to any issue in this docket.

**9. Whether the Commission Should Grant CCNs for Generation Proposed for Economic Purposes or Require Utilities to Acquire Additional Generation through Competitive Affiliates (PO Issue 17)**

SWEPCO asserts that the Commission should grant a CCN if it is in the public interest, including the probability of lowering costs to customers in the area. SWEPCO contends that if the need test could only be satisfied by a capacity need and not the ability to lower cost, the evaluation of cost under PURA § 37.056 would be meaningless. SWEPCO also argues that it would not be good policy to deny certification of resources proposed for economic purposes. Utilities are required to provide reliable service at the lowest reasonable cost. To achieve that objective, according to SWEPCO, utilities routinely enter into purchase power agreements for economic purposes, especially wind-power agreements.

Staff disagrees with SWEPCO's contention that the Commission should grant a CCN when cost is the only reason for the CCN. Staff asserts that regulation is intended to be a

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<sup>173</sup> PURA §§ 39.501(b), 39.502(b); 16 Tex. Admin. Code § 25.422(e).

<sup>174</sup> See PURA §§ 39.501(b), .502(b).

substitute for competition, so when the profitability of an economic generation project is uncertain, and there is no reliability need, then a merchant generator should construct the generation. Staff notes that if the Project were constructed by a merchant generator, it would still benefit ratepayers by reducing LMPs without risking ratepayer funds or creating stranded costs if SWEPCO were to transition to competition.

Staff suggests that this case presents the Commission with a question as to whether the Commission should permit a regulated utility to compete with merchant generators within SPP for economic generation projects. Staff notes that a merchant generator constructing the Project would bear all risks associated with the cost of the project.<sup>175</sup> Even if the Project were built by a merchant generator, SWEPCO's customers would still receive some of the benefits. For these reasons, Staff suggests that the Commission allow the market to determine whether a project may be profitable, let merchant generators take the risk and not subject captive ratepayers to the risks in this Project.

In Docket No. 46936, the Commission asked the parties to brief the question of whether the Commission can grant a CCN solely for economic reasons when there is no demonstrated capacity need. Although there was no Final Order issued in that case prior to the issuance of this PFD, it appeared from the Commissioners' discussions at the open meetings and in the draft orders that the Commission has determined that it can grant a CCN for economic reasons alone, not just when there is a need to meet increased load.

Therefore, the ALJs find consistent with the Commission's discussions in Docket No. 46936, that the Commission can grant a CCN solely for economic reasons.

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<sup>175</sup> Tr. at 171-72.

**E. Proposed Ratemaking Treatments (PO Issues 18-20, 22-24, 27-36)<sup>176</sup>**

**1. Request To Recover Revenue Requirement Through Fuel (PO Issues 18-20)**

SWEPCO requests a good cause exception to 16 Texas Administrative Code § 25.236 to pass the Project revenue requirement and PTCs to customers through the fuel clause until the Project is included in SWEPCO's base rates.<sup>177</sup> SWEPCO contends that once in service, the Project would displace higher-cost energy to serve SWEPCO's customers, and those savings, together with the value of the PTCs, will more than offset the Project's revenue requirement.<sup>178</sup>

SWEPCO indicates that the Commission's fuel rule authorizes exceptions to include otherwise ineligible expenses if the expenses are reasonably expected to result in lower fuel costs than would otherwise be the case. SWEPCO also asserts that including the Project as an eligible fuel expense would make cost recovery consistent with the timing when customers receive the benefits of the Project.<sup>179</sup> Using its requested rate treatment would also incentive the use of renewable resources as authorized under PURA § 36.204, according to SWEPCO.

With respect to financial integrity, SWEPCO witness Renee Hawkins testified that the recovery of costs through fuel until the project is included in base rates is necessary to protect SWEPCO's financial condition. SWEPCO's anticipated investment in the Project will increase its net plant assets by 49%. If SWEPCO does not obtain timely recovery of Project costs, it contends that earnings and cash flow would be negatively impacted, and that investors and credit rating agencies would be affected.<sup>180</sup>

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<sup>176</sup> Preliminary Order Issues 32-34 (relating to rate risks and other rate adjustments) were not addressed in SWEPCO's Application, and the parties did not present evidence on these issues.

<sup>177</sup> SWEPCO Ex. 2 at 5, 26.

<sup>178</sup> SWEPCO Ex. 2 at 22.

<sup>179</sup> SWEPCO Ex. 2 at 23.

<sup>180</sup> SWEPCO Ex. 10 at 6-7.

TIEC argues that Commission foreclosed the request because the Preliminary Order identified the issue of whether the Commission can “permit recovery of costs before their inclusion in rate base through a mechanism other than construction work in progress under PURA § 36.054” as an issue not be addressed in this proceeding.<sup>181</sup>

OPUC asserts that interpreting the fuel rule to allow for SWEPCO’s requested cost recovery would be an unprecedented expansion of the fuel rule and its special circumstances exception. Primarily, OPUC contends that the entire revenue requirement for a generation project and a transmission line should not be considered fuel or fuel-related expense. OPUC’s witness Karl Nalepa testified that the request is a mechanism to eliminate the normal effects of regulatory lag.<sup>182</sup> OPUC notes that to reduce the effects of regulatory lag, SWEPCO can file a base rate case as soon as the Project is in service and request interim rates. The fuel factor was designed to allow a utility the opportunity to collect fuel costs on an interim basis because those costs are often volatile and outside the control of the utility.<sup>183</sup>

Staff agrees with OPUC that SWEPCO should not be granted a special circumstances exception to allow SWEPCO to recover revenue requirement through fuel. To determine whether special circumstances exist, the Commission is to consider, “in addition to other factors developed in the record of the reconciliation proceeding, whether the fuel expense or transaction giving rise to the fuel expense resulted in, or is reasonably expected to result in, increased reliability of supply or lower fuel expenses than would otherwise be the case.”<sup>184</sup> Based on the language of the rule, Staff argues that the rule contemplates that a special circumstances request should be addressed in a fuel reconciliation proceeding. Staff also notes that if the Commission approves SWEPCO’s request, and the costs SWEPCO was allowed to recover were determined

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<sup>181</sup> Preliminary Order at 9, citing Docket No. 46936.

<sup>182</sup> OPUC Ex. 1 at 34.

<sup>183</sup> OPUC Ex. 1 at 34.

<sup>184</sup> 16 Tex. Admin. Code § 25.236(a)(7).

to be imprudent in a base rate proceeding, then the Commission would have to consider expending resources to claw back those costs.<sup>185</sup>

CARD asserts that SWEPCO's proposed special circumstances exception would allow it to recover all revenue requirement, including return on equity and debt, depreciation expense, operation and maintenance expenses and taxes, including PTCs as if those costs were eligible fuel expense.<sup>186</sup> CARD argues that SWEPCO's modeling results are speculative because they depend on both PTCs that may not be qualified for or be used by SWEPCO to the extent predicted and SWEPCO's wind and gas price projections are high. SWEPCO's proposed exception would amount to piecemeal ratemaking, according to CARD. It would thus allow SWEPCO to recognize cost increases from a single project without looking at offsets beyond PTCs. CARD contends that potential cost offsets could include higher levels of accumulated depreciation, deferred income taxes, higher revenue, lower expenses, and lower capital costs.<sup>187</sup> Finally, CARD asserts the Project will be a 71% increase in SWEPCO's rate base. SWEPCO's current rate base is approximately \$4.443 billion and SWEPCO's share of the Project is estimated to be \$3.168 billion.<sup>188</sup> CARD suggests that given the size of the Project, all components of the revenue requirement should be evaluated together across the company, including rate base, cost of capital, revenues, O&M expense, depreciation, and taxes before any recovery is allowed.

Walmart asks the Commission to require SWEPCO to file a base rate case at the earliest possible time at which the Project assets can be included in an historical test year.<sup>189</sup> Walmart agrees with OPUC that SWEPCO's proposal shifts the risk of regulatory lag from SWEPCO to SWEPCO's customers. Walmart argues that the best way to address the revenue requirement is through a base rate proceeding. However, Walmart requests that should the Commission decide

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<sup>185</sup> Staff Initial Brief at 24.

<sup>186</sup> CARD Initial Brief, citing SWEPCO Ex. 11 at 3-4, 7-8.

<sup>187</sup> CARD Initial Brief at 14.

<sup>188</sup> CARD Ex. 2 at 11-12.

<sup>189</sup> Walmart Initial Brief at 7.

to grant the special circumstances exception, the Commission should require SWEPCO to guarantee the reductions in revenue requirement that it estimated in its application.<sup>190</sup>

The ALJs agree with OPUC that the rule anticipates exceptions for recovery when fuel costs are volatile. In this case, there is no specific fuel cost for which SWEPCO is seeking an exception. Rather, it is the revenue requirement of the Project. The ALJs find that the rule does not contemplate such a broad exception. Furthermore, the ALJs agree that the proposal shifts the risk of regulatory lag from SWEPCO to the customers, when other mechanisms permit SWEPCO to reduce the effects of regulatory lag that do not so significantly shift the risk.

The ALJs are unconvinced by SWEPCO's argument that denying the special circumstances exception would result in a risk to SWEPCO's financial integrity. SWEPCO's case relies on the argument that this Project is estimated to be extremely beneficial to customers due to SWEPCO's projected savings in excess of \$1 billion. Plus, by adding to its rate base, SWEPCO is increasing the investments on which it is eligible to earn a return. To argue for a special circumstances exception because it is risking financial integrity on the one hand and on the other hand argue about the low risks and guaranteed cost savings of the Project is problematic. If SWEPCO faces a real risk to its financial integrity as a result of the investment, absent an exception to Commission rules, it would be imprudent for SWEPCO to proceed with the Project when it is not needed to serve additional load. Therefore, the ALJs recommend the Commission deny SWEPCO's request for a special exception.

In the event that the Commission decides to permit the exception and allow SWEPCO to recover its revenue requirement through fuel, the ALJs do not recommend adopting Walmart's request for a guaranteed savings. Rather, the ALJs recommend that the Commission require SWEPCO to file a base rate case by a date certain should the Commission grant this special circumstances exception.

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<sup>190</sup> Those benefits are \$27,000,000 in 2021, \$47,000,000 in 2022, and \$42,000,000 in 2023. SWEPCO Ex. 25 at Exh. KDP-2R.

**2. Anticipated Revenue Stream (PO Issue 22)**

The Project's anticipated revenue stream is addressed above. SWEPCO asserts that the total benefits of the Project are expected to exceed the revenue requirement.<sup>191</sup>

**3. Proposal to Flow PTCs through Fuel (PO Issue 23)**

To match its proposal to flow Project costs through fuel until it is included in base rates, SWEPCO also proposes to flow PTC benefits to customers through the fuel clause until they are included in base rates.

The ALJs find that PTCs should flow through fuel. PTCs are used to bid into the LMPs in SPP. The cost of the power includes the value of the PTC, which can result in a utility bidding negative prices for wind energy due to the credit on the cost. If PTCs do not flow through fuel, fuel costs will not reflect the actual bid price, and customers would pay a different price than the bid price.

Therefore, PTCs should flow through fuel even when the revenue requirement does not.<sup>192</sup> The revenue requirement can be addressed in a base rate case where decisions about allocation can be made in the context of a complete test year.

**4. Deferred Tax Asset for PTCs (PO Issues 25-26)**

As a result of the TCJA, SWEPCO's tax liability is likely to be smaller than what was anticipated at the time SWEPCO filed its Application. Because SWEPCO will not be able to use all of the PTCs to offset its tax liabilities, a deferred tax asset will result. The deferred tax asset

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<sup>191</sup> SWEPCO Ex. 14 at 8-10. *See also* SWEPCO Initial Brief at 57.

<sup>192</sup> At the open meeting on May 10, 2018, when discussing Docket No. 49636, the Commission and parties addressed this issue but did not reach a resolution. To the extent the Commission final order in that docket is outcome determinative on this issue and different from the ALJs' recommendation, the ALJs encourage the parties to address the issue directly in exceptions.



will be another asset on which SWEPCO could earn a return, thereby further reducing the estimated economic benefits of the Project.

To reduce the impact of a deferred tax asset, SWEPCO proposes to cap the balance at a cumulative, annual average of \$560 million, to limit the return on any deferred tax asset balance to the weighted average cost of capital for 60% of the balance and the cost of debt for 40% of the balance, and to seek no return after year 13 of the Project.<sup>193</sup> SWEPCO asserts that along with its commitments to establish a cost cap of 109% and to provide a production guarantee equivalent to a 44.7% capacity factor the deferred tax asset cap will preserve a benefits level of approximately \$260 million (SWEPCO Total Company NPV) under Mr. Pearce's revised Exhibit KDP-1R.<sup>194</sup>

TIEC requests that the Commission not address the issue of how to handle the deferred tax asset, if any. According to Mr. Pollock, it is uncertain whether and how large any deferred tax asset may be.<sup>195</sup> TIEC would put off making a determination regarding any deferred tax asset until such time as the amount of the deferred tax asset was known.

Walmart requests that the Commission limit any return to SWEPCO's cost of debt for the entire asset. In support of its argument, Walmart asserts that SWEPCO has not shown that the deferred tax asset presents any incremental risk to shareholders that would warrant an equity return. Walmart notes that customers bear the risk of bill increases due to cost recovery of deferred tax assets, and thus, the benefit of the PTCs could be lowered by the cost of the deferred tax asset in rates.

Staff notes that the deferred tax asset further diminishes the estimated benefits. Staff states that SWEPCO's estimate is that the deferred tax asset would reduce the projected benefits assignable to SWEPCO by \$241 million NPV.<sup>196</sup>

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<sup>193</sup> SWEPCO Ex. 14 at 9-10.

<sup>194</sup> SWEPCO Ex. 14 at 9-10.

<sup>195</sup> TIEC Ex. 1 at 65.

<sup>196</sup> Staff's Amended Initial Brief at 24, citing SWEPCO Ex. 25 at Exh. KDP-1R.

The ALJs find that SWEPCO's proposed solution will mitigate the effect of the deferred tax asset and recommend the Commission adopt SWEPCO's proposal. The deferred tax asset will be carried on SWEPCO's books and not earning some return on it would reduce SWEPCO's rate of return, thereby potentially affecting its credit rating and investor desirability. By recovering only its cost of debt on 40% of the asset, SWEPCO has shifted some of the risk to shareholders and away from ratepayers. The ALJs find that Walmart's proposal goes too far in assigning risk to shareholders, thereby risking the rate of return SWEPCO is eligible to earn.

#### **5. Proposal to Defer PTCs to "Shape" the Revenue Requirement (PO Issue 24)**

In the Application, SWEPCO proposes to shape the revenue requirement to moderate customer impact of the expiration of the PTCs after 10 years by deferring a portion of the PTCs in a regulatory liability that will be used to offset the revenue requirement in years 11 through 17 of the Project.<sup>197</sup> SWEPCO's goal is to prevent rate shock following the expiration of the PTCs. SWEPCO notes that the NPV of the Project to customers is the same with or without shaping.<sup>198</sup> The deferred PTCs would be returned to customers with interest at SWEPCO's weighted average cost of capital.<sup>199</sup>

Staff recommends denying SWEPCO's request to defer a portion of the PTCs. Staff asserts that deferring a portion of the PTCs is contrary to Commission precedent and that benefits of the credits should not be shifted to customers who likely did not incur the costs.<sup>200</sup>

TIEC suggests that addressing this issue is premature prior to having all the data and should be saved for a future rate case.<sup>201</sup>

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<sup>197</sup> SWEPCO Ex. 2 at 24; SWEPCO Ex. 7 at 18-20, Exhs. KDP 5 and KDP-6; SWEPCO Ex. 11 at 5-6.

<sup>198</sup> SWEPCO Ex. 7 at 20.

<sup>199</sup> SWEPCO Ex. 26 at 5.

<sup>200</sup> Staff Ex. 2A at 19.

<sup>201</sup> TIEC Ex. 1 at 66.

OPUC also opposes SWEPCO's proposal to shape the revenue requirement. OPUC notes that SWEPCO is seeking relief that may be unnecessary depending on how its overall revenue requirement varies over the next 25 years. OPUC notes that SWEPCO's calculation of the deferred PTCs are based on assumptions regarding ratemaking treatments, interest rates, inflation, and the value of the OTCs in the future, all of which could change.

The ALJs agree with the intervenors that the SWEPCO should not shape the revenue requirement by deferring PTCs. There are too many unknowns this many years out from the date that PTCs would expire. Therefore, the ALJs recommend that SWEPCO not shape the revenue requirement, but instead credit the PTCs as they are accrued.

## **6. Jurisdictional and Class Allocation (PO Issues 28-29)**

SWEPCO has allocated the revenue requirement of the Project and the PTC offset to the Texas jurisdiction and retail classes using 2021 estimated demand. SWEPCO proposes to use actual Texas jurisdictional and class demand allocation factors when the Project is recovered in Texas rates.<sup>202</sup>

TIEC and OPUC argue that these issues should be addressed in a rate case and not in this proceeding. Staff notes that not all ratepayers may expect benefits from the Project even if there were benefits demonstrated.<sup>203</sup>

OPUC notes that for cost recovery, SWEPCO proposes to use the actual kW production demand allocator in effect when recovery of Project costs begins while using an energy allocator for allocating the benefits of the Project.<sup>204</sup> Using these different allocation methods results in the residential class receiving approximately 31% of the benefits while bearing around 37% of

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<sup>202</sup> SWEPCO Ex. 11 at 6.

<sup>203</sup> Tr. at 1137.

<sup>204</sup> Compare SWEPCO Ex. 26 at 4 with Tr. at 444.

the costs.<sup>205</sup> Because of these disparities, OPUC asks that should the Commission address allocation, it use an energy allocator to avoid cross-class subsidizing.

Walmart argues that the costs should be allocated based on the most recently approved production demand allocator.<sup>206</sup>

The ALJs agree with TIEC and OPUC that the issues of jurisdictional and class allocation are better addressed in a rate case. The Commission has not previously approved an allocation factor for a SWEPCO wind facility, nor has it considered whether wind generation might be treated differently than other generation.<sup>207</sup> As such, the ALJs find that the issues of allocation should be reserved for a subsequent rate case.

## **7. Depreciation (PO Issues 30-31)**

The issue of the depreciation schedule for the Wind Facility is addressed above. The parties also contest the depreciation schedule for the Gen-Tie. SWEPCO has assumed a 50-year useful life. TIEC, Staff, and OPUC argue that the Gen-Tie depreciation should match the depreciation of the Wind Facility because there is no need for the Gen-Tie without the Wind Facility. SWEPCO asserts that the Gen-Tie could be used beyond the life of the Wind Facility. Even if the Wind Facility is not renewed or repowered, the Gen-Tie could be interconnected into the SPP transmission system or connected to different wind facilities.<sup>208</sup>

The ALJs agree with SWEPCO and recommend a depreciation schedule of 50 years for the Gen-Tie. The Gen-Tie could continue to be used after the Wind Facility is no longer in service.

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<sup>205</sup> OPUC Ex. 2 at 6-7

<sup>206</sup> Walmart Initial Brief at 11-12.

<sup>207</sup> Tr. at 447-48.

<sup>208</sup> SWEPCO Ex. 5. This issue is discussed above.

**8. Treatment of Renewable Energy Credits (PO Issues 35-36)**

The Wind Facility will create one renewable energy credit for each MWh of energy it generates. If the Commission grants its request for recovery of Project costs through the fuel clause, SWEPCO would create a new tariff schedule through which customers could purchase renewable energy credits.<sup>209</sup>

OPUC notes that in rebuttal testimony, SWEPCO agreed to flow 100% of the net proceeds to customers from the sale of renewable energy credits associated with the Project.<sup>210</sup> OPUC agrees that any credits associated with the Project should be credited to customers. TIEC recommends that this issue not be addressed.

The ALJs find that all net proceeds from renewable energy credits should be returned to customers as agreed by the parties.

**F. Sale, Transfer, Merger Issues (PO Issues 1, 2, 3)**

PURA § 14.101 requires a utility to report certain transactions to the Commission, including a transaction to “sell, acquire, or lease a plant as an operating unit or system in this state for a total consideration of more than \$10 million.” Because the Project is located entirely within Oklahoma, SWEPCO argues that PURA § 14.101 does not apply.<sup>211</sup> OPUC agrees with SWEPCO that a finding under PURA § 14.101 is not required and therefore, Preliminary Order Issues 2 and 3 related to the public interest standard and reporting requirements do not apply. The ALJs agree with SWEPCO and OPUC that PURA § 14.101 does not apply. Therefore, the public interest evaluation and reporting requirements under that statute are not addressed.<sup>212</sup>

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<sup>209</sup> SWEPCO Ex. 2 at 25.

<sup>210</sup> Tr. at 1129-30.

<sup>211</sup> SWEPCO Ex. 2 at 19.

<sup>212</sup> Although not addressed in terms of PURA § 14.101, whether the Project is in the public interest is addressed throughout this PFD.

**G. Other Regulatory Approvals (PO Issues 4-8)**

In addition to the Commission, SWEPCO is seeking regulatory approval of the Project from the Arkansas Public Service Commission (APSC) and the Louisiana Public Service Commission. SWEPCO affiliate PSO is seeking regulatory approval of the Project from the Oklahoma Corporation Commission. SWEPCO, PSO, and States Edge Wind I, LLC (States Edge) are seeking FERC approvals. Ancillary approvals will be sought from the Federal Aviation Commission, Oklahoma Aeronautical Commission, Oklahoma Tax Commission, Texas and Cimarron County, and Oklahoma Department of Transportation.

SWEPCO filed applications (other than this one) for regulatory approval with the Arkansas and Louisiana Commissions on July 31, 2017. On the same day, PSO filed an application for regulatory approval with the Oklahoma Commission. On December 21, 2017, SWEPCO, PSO, and States Edge filed an application at FERC for authorization to acquire States Edge and to distribute undivided interests in the Project and related facilities and rights between SWEPCO and the Oklahoma Commission.

As of the first date of the hearing on the merits, an administrative law judge in Oklahoma had recommended that the Oklahoma Commission deny pre-approval of costs related to the Project.

On December 17, 2017, SWEPCO, PSO, and States Edge filed an application at FERC for authorization for SWEPCO and PSO to acquire States Edge and to distribute undivided interests in the Project between SWEPCO and PSO.

In the Arkansas case, a settlement has been reached among SWEPCO, APSC Staff, the Arkansas Attorney General, and Walmart. South Central is the only party in that docket not joining the settlement. The settlement hearing took place on March 1, 2018. The order was filed in this docket on May 10, 2018. The ALJs have not evaluated that order to determine which, if

any, provisions would be applicable to Texas customers through a most favored nations guarantee.

Prior to the issuance of this PFD, SWEPCO filed proposed stipulations and settlement agreements in the Oklahoma and Louisiana cases. Those agreements were admitted as ALJ Exhibits 1 and 2 on April 30, 2018, in SOAH Order Nos. 12 and 13 for the limited purpose of showing the status of those cases. The ALJs did not evaluate those proposals and note that they have not been approved by either Commission.

SWEPCO has not committed to any particular plan should the Project not be approved by one or more regulatory agencies. To the extent another regulatory authority adopts a provision more favorable to customers than what SWEPCO has offered, SWEPCO agrees that there should be a Most Favored Nations provision that will require SWEPCO to notify the Commission Staff and include those terms for the benefit of SWEPCO Texas customers.

## **VI. CONCLUSION**

The ALJs find that SWEPCO's Application should be granted with conditions as outlined above to ensure a net benefit to customers.

## **VII. FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDERING PARAGRAPHS**

### **A. Findings of Fact**

#### **Background and Procedural History**

1. Southwestern Electric Power Company (SWEPCO) is a wholly owned subsidiary of American Electric Power Company (AEP) and is a fully integrated electric utility serving retail and wholesale customers in Texas, Arkansas, and Louisiana.
2. On July 21, 2017, SWEPCO filed an application with the Public Utility Commission of Texas (Commission) to amend its certificate of convenience and necessity (CCN) to authorize acquisition of an interest in the Wind Catcher Energy Connection Project

(Project) to be located in Oklahoma (Application). The application also requests preapproval of various ratemaking treatments to recover the Project costs from SWEPCO's customers.

3. The Commission referred the Application to the State Office of Administrative Hearings (SOAH) on August 2, 2017.
4. SWEPCO provided notice of the Application by publication once a week for two consecutive weeks in a newspaper having general circulation in each county in SWEPCO's service territory. SWEPCO's notice by newspaper publication was completed on September 9, 2017.
5. SWEPCO provided notice to SWEPCO's Texas retail customers by bill insert, which was completed on September 26, 2017.
6. SWEPCO provided individual notice to Commission Staff (Staff) and the Office of Public Utility Counsel (OPUC) by hand-delivering a copy of SWEPCO's filing to each party's counsel. Individual notice was also provided to the legal representative of all parties in Docket No. 46449, SWEPCO's last base rate case, and Docket No. 42527, SWEPCO's most recent fuel reconciliation proceeding. Individual notice was completed on July 31, 2017.
7. The following parties intervened and participated in this docket: Texas Industrial Energy Consumers (TIEC); OPUC, Golden Spread Electric Cooperative, Inc. (Golden Spread); East Texas Electric Cooperative, Inc. and Northeast Texas Electric Cooperative, Inc. (ETEC-NTEC); Wal-Mart Stores Texas, LLC and Sam's East, Inc. (collectively Walmart); Cities advocating Reasonable Deregulation (CARD); South Central MCN, LLC (South Central); and Tri-County Electric Cooperative, Inc. (Tri-County).
8. Notice of the time and place of the hearing issued on August 18, 2017.
9. The federal Tax Cuts and Jobs Act (TCJA) was signed into law on December 22, 2017, with an effective date of January 1, 2018.
10. On January 17, 2018, SWEPCO filed a motion to postpone taking evidence until January 22, 2018 because, after further study of the TCJA, the Company determined that certain testimonies and exhibits would need to be amended or supplemented to accurately reflect the impact of the TCJA.
11. The hearing on the merits was held on February 13-16 and February 20-22, 2018.
12. The record closed on April 30, 2018, following the admission of evidence to update the status of the regulatory proceedings in other jurisdictions.



**CCN Issues**

13. The investment in the Project will have a significant impact on SWEPCO's finances.
14. Because the Project will be located entirely within the state of Oklahoma, there will be no adverse effects on any other electric utility in Texas.
15. There will be no adverse effect on community values, recreational and park areas, historical and aesthetic values, or environmental integrity in Texas because the Project is located entirely within the state of Oklahoma.
16. Because there is no need for the Project to serve retail load, the addition of the Project will not improve service.
17. Texas has already met its renewable energy goals, so the Project will have no effect on those goals.
18. SWEPCO is not currently in the process of implementing customer choice in its service territory.
19. Approval of the Application would have no effect on Lubbock Power & Light's or Rayburn Country Electric Cooperative's proposal to become part of the Electric Reliability Council of Texas.

**Analysis of Economics of Wind Catcher (PO Issues 10, 12, 14, 25, 26)**

20. SWEPCO contends the ratepayers will experience \$1.495 billion in net benefits using its base-gas-price case (which it believes is the correct case to use), \$1.114 billion in net benefits under its low-gas-price case, and \$1.932 billion in benefits under the high-gas-price case.

**Project Description and Cost (PO Issues 10 and 12)**

21. The Project consists of 800 General Electric model 2.5 megawatt (MW) wind turbine generators that would provide 1,900 MW of delivered and 2,000 MW nameplate wind energy (Wind Facility) and the Wind Catcher Generation Tie Line (Gen-Tie). The total estimated Project costs, including allowance for funds used during construction (AFUDC) are set forth in the table below:

	<b>SWEPCO (billions)</b>	<b>TOTAL (billions)</b>
<b>WIND FACILITY</b>	\$2.031	\$2.902
<b>GEN-TIE</b>	\$1.137	\$1.624
<b>PROJECT (BOTH)</b>	\$3.168	\$4.526

22. The Wind Facility is being constructed by Invenergy Wind Development North American LLC (Invenergy), which commenced construction in 2016 and has continuously maintained construction.
23. Invenergy has targeted completion of the Wind Facility for September 30, 2020.
24. Invenergy is an experienced developer of wind projects. Invenergy has developed 77 wind energy projects across North America, Latin America, Japan, and Europe totaling more than 10,000 MW. It currently owns and operates almost 4,000 MW of wind generation in North America.
25. On July 26, 2017, the developers and participants in the Wind Facility entered into an agreement entitled the Membership Interests Purchase Agreement (MIPA) to acquire, subject to regulatory approvals and other conditions, States Edge Wind I LLC, an Invenergy single-purpose subsidiary that will own the rights and assets of the Wind Facility.
26. The MIPA is a turn-key, fixed-price arrangement whereby Invenergy will manage all phases of construction and deliver the Wind Facility upon completion to the utility companies. Invenergy will pay all construction financing costs, which are included in the purchase price.
27. The purchase price for the Wind Facility is \$2.694 billion. The total estimated cost, including the MIPA purchase price and other cost components, is \$2.902 billion. SWEPCO's share is approximately \$2.031 billion.
28. The Gen-Tie is being constructed to deliver the Wind Facility's energy directly to the AEP load zone, bypassing congestion and curtailment on the SPP system in western Oklahoma.
29. The Gen-Tie will consist of a proposed 345 kV to 765 kV generation substation (the Western Generation Substation) at the Wind Facility; the proposed 350-to-380-mile radial, single-circuit 765 kV transmission line; and a proposed 765 kV to 345 kV substation (the Tulsa North 765 kV Generation Substation), which is in the AEP load zone.
30. The purpose of the Gen-Tie is to transmit the Wind Facility's energy from western Oklahoma, where wind is plentiful but adequate transmission facilities are lacking, to the AEP load zone.
31. The participating utilities have entered into a fixed-price contract with Quanta Services (Quanta), a Houston company, for engineering, procurement and construction services (EPC) for the Gen-Tie.

32. Under the EPC contract, all engineering, procurement and construction are covered under the scope of Quanta's work.
33. Quanta is a transmission construction contractor specializing in designing, building, and maintaining transmission systems of various lengths and configuration across the voltage spectrum. It has completed more than 10,000 miles of extra-high-voltage transmission over the past 50 years and has built more than 600 substations over the two decades. Quanta has significant experience with 765 kV transmission projects.
34. The total estimated capital cost for the Gen-Tie is \$1.624 billion including \$148 million for AFUDC. SWEPCO's share of the estimated total will be 70%, or \$1.1 billion.
35. The Gen-Tie has a projected completion date of December 15, 2020.
36. The Gen-Tie's projected completion date is slightly more than two weeks before the end of the Internal Revenue Service (IRS) safe-harbor date for wind production tax credits (PTCs).
37. PTCs are assured for projects in service before the safe-harbor date. Projects that enter into service later may still receive the credits, but must show they meet certain criteria.
38. If the Project is on budget, it will increase SWEPCO's rate base established in its most recent rate proceeding by over 72%, leading to a base rate increase in Texas of at least \$150 million in 2021, depending on the timing of a rate case.
39. Although the MIPA includes a provision for contingencies, that amount is \$93.3 million, which is only 3.2% of the total Wind Facility cost.
40. The Gen-Tie cost is not guaranteed, but is subject to increases based on a number of factors, including the cost to acquire land (including the cost of possible eminent domain proceedings), internal labor and overheads, allowance for unknown risks, and AFUDC.
41. Including those additional costs, the Gen-Tie is anticipated to cost a total of \$1.624 billion.
42. The Gen-Tie contract price is set with limited reopeners, a stringent process for obtaining change orders, and numerous contractual protections.
43. SWEPCO's permitting and right-of-way acquisition processes are on schedule.
44. The EPC contract provides exceptions to the "Force Majeure Event" definition by excluding weather events that are normal weather for the period, season and geographic area of the Gen-Tie except to the extent that such normal weather causes physical damage to towers or the work in progress.

45. If weather that does not cause physical damage occurs, the contractor must provide climatological data over the preceding five years substantiating that the weather conditions were unusually adverse for the period of time and location based on historical data and could not have been reasonable anticipated.
46. The EPC contract requires the contractor to spend up to \$5 million in aggregate to mitigate damage to the Gen-Tie work and any delay in the project schedule's critical path before claiming additional compensation. It also includes a provision requiring an expedited schedule if a force majeure event creates any delay.
47. SPP's practice in calculating the operating reserve requirement is to base it on 100% of the largest SPP generating unit, plus 50% of the second largest.
48. If approved and built, the Project would become the largest generating unit in the SPP system.
49. Although SWEPCO believes that the effect on reserves costs would be only a little over \$200,000, it based its estimate on SPP setting the requirement on an hourly basis.
50. SPP currently sets the reserve requirement on a daily basis.
51. Both the MIPA and the EPC agreements are fixed-cost agreements, and SWEPCO's witnesses' testimony as to the estimated costs of additional items was credible.
52. Public Service Company of Oklahoma (PSO) is in a position to estimate accurately the costs of the Project on other facilities.
53. The Wind Facility, although huge, is not as complex as SWEPCO's Turk Plant, a super-critical coal plan, which encountered significant cost overruns.
54. Although Invenergy has never constructed a wind farm of this magnitude, there is nothing in the record to suggest it is incapable of doing so in a timely fashion.
55. SWEPCO's environmental permitting, although not complete, is on schedule and other considerations raised by intervenors and Staff are unlikely to significantly increase the cost of the Wind Facility.
56. SWEPCO presented a reasonable and credible estimate of the Wind Facility costs.
57. The Gen-Tie contract is a fixed-cost agreement, with certain additional costs to be determined.
58. SWEPCO's environmental permitting for the Gen-Tie is on schedule.
59. SWEPCO presented a credible and reasonable estimate of the Gen-Tie's costs.

60. The length and location of the Gen-Tie raise greater possibilities of some additional delays and costs.
61. The record does not include a reliable calculation of the reserve costs based on a daily calculation.

**Economic Evaluation Methodology and Assumptions (PO Issues 12 and 14)**

***Evaluation Methodology***

62. To evaluate the economics of the Projects, SWEPCO developed and compared three “cases”—three alternative resource procurement paths.
63. The first case—the “Base Case”—assumed no new development or purchase of any wind resources between 2021 and 2045. The second case—the “Project Case”—reflected the development of the Project.
64. To determine the estimated benefits of the Project, SWEPCO compared the difference between the Base Case and the Project Case for the period modeled, 2021 to 2045.
65. The third case—the “Generic Wind Case”—assumed the procurement of 1,900 MW of wind generation at 24 different wind sites across SPP.
66. SWEPCO estimated that the Project would produce approximately \$685 million more in customer savings than the Generic Wind Case would relative to the Base Case.
67. The three cases were modeled using PROMOD® and PLEXOS® simulation tools to estimate the production-related costs and benefits of each case. SWEPCO used both models because neither was sufficient on its own to analyze the Project’s lifetime impact.
68. The PROMOD model is available only for two years (2020 and 2025), and is set up to analyze only cost impacts for individual SPP transmission zones such as the AEP zone, in the aggregate.
69. The PLEXOS model is not set up to simulate the entire SPP footprint and does not simulate transmission constraints or marginal losses. Therefore, SWEPCO input data for 2020 and 2025 into the PROMOD model, interpolated between those two points, and then extrapolated that trend going outward for the life of the Project.
70. SWEPCO used that data in PLEXOS to estimate the costs and the benefits of the Project for SWEPCO customers.
71. SWEPCO and PSO, in the fall of 2016, issued a request for proposal soliciting bids to construct a wind-energy project.

72. The 2016 projects would have connected to the SPP system in congested areas and did not account for economic curtailment costs.
73. The competitive market would not have provided the Project and the timing of a request for proposal would have precluded the construction of the Project in time to take full advantage of the PTCs.
74. SWEPCO's evaluation methodology was reasonable.

**Assumptions Impacting Locational Marginal Prices**

***Natural Gas Prices***

75. Future natural gas prices are an essential element of the Project benefits calculation. Basically, the higher the expected future natural gas prices, the greater the expected benefits from the Project.
76. SWEPCO used AEP's Long-Term North American Energy Market Forecast (Fundamentals Forecast) to help forecast the expected Project benefits.
77. The Fundamentals Forecast was made available to all AEP operating companies on October 27, 2016.
78. Natural gas prices are important because fuel prices are a key component in determining the supply stack, or merit order, for the dispatch of generating units.
79. The 2016 Fundamentals Forecast employed a carbon dioxide dispatch burden on all existing fossil-fuel-fired generating units that escalated from \$2.92 per ton in 2024 to \$26.31 per ton in 2032 to achieve national mass-based emission targets similar to those proposed in the national Clean Power Plan.
80. Each of AEP's past forecasts, dating back to 2007, has been on the high side of actual natural gas prices.
81. Although the 2016 Fundamentals Forecast was weather-normalized, the evidence did not quantify the impact of abnormal weather on prior forecasts.
82. SWEPCO's forecasts start out higher than current prices and have been higher than actual prices for several years.
83. The methodologies of the Southwestern Public Service Company (SPS) and Entergy Texas, Inc. (ETI) forecasts were not explained by any witnesses or otherwise explored at the hearing.

84. The use of New York Mercantile Exchange (NYMEX) futures prices to forecast natural gas prices is problematic, considering the purpose of the futures market and the lack of long-term data for future years.
85. In assessing the benefits of the Project, the Commission must determine what estimate of costs is most reliable and most likely reflects the future price of natural gas.
86. The 2018 Energy Information Administration Annual Energy Outlook (EIA AEO) reference forecast is the most reliable estimate of future natural gas prices presented in this proceeding.
87. EIA's natural gas price forecasting methodology is reasonable and impartial.
88. The EIA reference case is more reliable than an average of all the EIA cases because the higher EIA cases appear to be outliers to recent trends, and pull the average upwards.
89. Although the lowest EIA case has been the most accurate in recent years, that trend may not continue, depending on future technological and legal developments.
90. The levelized natural gas price forecast from EIA's 2018 reference case for the years 2021-2045 is approximately \$6.36 per MMBtu.
91. A decrease of \$1 per MMBtu in gas prices would reduce the estimated base-case savings for the Project by approximately \$392 million net present value (NPV).
92. Using the 2018 EIA reference case in lieu of SWEPCO's Base Case would reduce the anticipated Project benefits by approximately \$388 million NPV.

***Cost of Carbon***

93. SWEPCO's three cases employ a carbon dioxide dispatch burden (allowance price) on all existing fossil-fuel-fired generating units.
94. SWEPCO designed that carbon burden to achieve emission targets similar to those proposed in the federal Clean Power Plan.
95. In the Base Case, that carbon burden is zero in 2021 to 2023, then escalates from \$2.92 per ton in 2024 to \$26.31 in 2032.
96. Although it is possible that a carbon tax will be imposed in the future, such a tax has not been imposed in the past, there is not one in place now, and there was no credible evidence to show that the imposition of such a tax is likely in the future.

97. SWEPCO's modeling of the locational marginal prices (LMPs) should not have included the carbon-burden component, and the calculation of the estimated benefits of the Project should be reduced accordingly.
98. Removing the carbon-burden assumption would reduce SWEPCO's projected net benefits in its Base Case by approximately \$550 million NPV.

***Other Assumptions***

99. SWEPCO's modeling understated the amount of new wind generation by approximately 6,000 MW.
100. An increase of 6,000 MW of wind generation would cause a reduction in LMPs of approximately 4% at the Project's Tulsa injection node, and thus reduce the estimated value of the Project by approximately 4%.
101. The changes to the expected wind generation would yield an annual reduction in Project benefits of \$18.44 million, for a nominal reduction over 25 years of \$460 million, or a reduction of approximately \$203 million NPV.
102. SWEPCO's modeling did not ignore potential transmission build-out in calculating transmission costs.
103. SWEPCO's calculated congestion costs are likely too high due to high estimated natural gas prices.

***Net Capacity Factor***

104. A crucial measure of generation output is the Wind Facility's net capacity factor (NCF), which is the ratio of the actual output of a generating unit over a period of time to its potential output at full nameplate capacity.
105. Based on the results of two studies, SWEPCO estimates a Project NCF of 51.1%.
106. Each 1% drop in NCF would lead to a \$95.6 million drop in NPV project benefits, considering both production cost savings and lower PTCs.
107. Based on the site-specific studies, SWEPCO's 51.1% NCF estimate is reasonable.
108. SWEPCO's estimate of the availability of the completed Gen-Tie is reasonable.

***Projected Benefits of Wind Catcher***

109. The Project would provide net estimated benefits of approximately \$354 million NPV.



***Production Tax Credits (PO Issues 25 and 26)***

110. The PTC is a tax credit against federal income taxes based on every kWh of energy that is produced by a wind generator over the first 10 years of operation.
111. Because construction was commenced on the Project before December 31, 2016, and completion is projected within four years, by December 31, 2020, SWEPCO anticipates receiving 100% of available PTCs.
112. SWEPCO's PTC projection depends upon timely regulatory approvals.
113. The IRS safe-harbor deadline for the PTCs in December 31, 2020, although there are provisions that would allow a company to qualify even if that deadline is not met.
114. The IRS has provided a non-exclusive list of construction disruptions that will not be considered as indicating that a taxpayer has failed to maintain a continuous program of construction or continuous efforts to advance toward completion of a qualifying facility. That list includes:
  - (a) severe weather conditions;
  - (b) natural disasters;
  - (c) delays in permitting;
  - (d) delays at the written request of a federal, state, local, or Indian tribal government regarding matters of public safety, security, or similar concerns;
  - (e) interconnection-related delays, such as those relating to the construction of a new transmission line or upgrades;
  - (f) delays in the manufacture of custom components;
  - (g) labor stoppages;
  - (h) inability to obtain specialized equipment;
  - (i) the presence of endangered species;
  - (j) financing delays; and
  - (k) supply shortages.
115. The Project is more likely than not to qualify for the PTCs at a 100% level even if timely completion does not take place.
116. Although SWEPCO believes that delays related to the Gen-Tie would be considered an excusable disruption under the IRS guidelines, SWEPCO has contracted with GridLiance Holdco, LP (GridLiance) for an alternative point of interconnection in case the Gen-Tie is not completed in time.
117. The GridLiance alternative is a 50 MW connection that would be rotated among the functioning Wind Facility turbines until they are all placed in service.

118. The projected PTCs are likely to be available to SWEPCO, either through the safe-harbor provision or because the reason for Project delay is one of the exceptions set out by the IRS.

***Capacity Value of the Wind Facility (PO Issue 14)***

119. SWEPCO calculated the future capacity value of the Wind Facility and included that calculation, \$269 million on an NPV basis, as one of the financial benefits of the Project.
120. The forecasted incremental value was based on the deferral of a future natural gas combined-cycle (NGCC) unit from 2026 to 2033 and the avoidance of a second NGCC unit from 2038 through the end of the modeling period, 2045.
121. SWEPCO's capacity value estimate is reasonable and should be used to help determine the expected net benefits of the Project in this proceeding.

**SWEPCO's Proposed Conditions**

122. SWEPCO proposed a cost cap for the Wind Facility, Gen-Tie, and all SPP-assigned generation interconnection costs of \$3.339 billion, which is 109% of the estimated cost of SWEPCO's 70% share of the Project. This cost cap does not include allowance for AFUDC.
123. SWEPCO's cost cap includes exceptions for force majeure and any change in law.
124. SWEPCO's proposed cost cap does not provide a firm guarantee against cost overruns for the benefit of customers.
125. A cost cap of \$1.087 billion, including AFUDC for the Wind Project and cost cap inclusive of the Gen-Tie line that does not exceed \$2,302.75 per kW of nameplate capacity as measured on a total parent-company gross-plant basis, without exception for force majeure and change in law provides a firm guarantee for the benefit of customers and should be imposed as a condition on the CCN.
126. SWEPCO proposed a guaranteed net capacity factor of 44.7%, which is 87% of the capacity projected in its Application. This guarantee includes exceptions for force majeure and change in law.
127. SWEPCO's NCF guarantee does not provide a sufficient guarantee to customers because of the exceptions for force majeure or change in law.
128. A reasonable NCF guarantee is 44.7% without exceptions for force majeure or change in law and should be imposed as a condition on the CCN.

129. SWEPCO's proposed PTC guarantee of eligibility for 100% of the PTCs at a 51.1% capacity factor with exceptions for force majeure and change in law does not provide a sufficient guarantee to customers.
130. The availability of PTCs is controlled entirely by the federal government.
131. A PTC guarantee of eligibility for 100% of the PTCs at a 51.1% capacity factor with an exception for change in law but without an exception for force majeure should be imposed as a condition of the CCN.
132. SWEPCO has agreed to flow to customers 100% of the incremental off-system energy sales margins that would not have occurred but for the Project and the net proceeds from the sale of renewable energy credits associated with the Project.
133. SWEPCO offers a 10-year look-back proposal based on the following formula:  
***Net Benefit for Customers = Fuel Savings + Project Capacity Value + PTCs + Minimum Net Capacity Factor Guarantee Payments + RECs Value + Carbon Savings – Project Revenue Requirement***
134. If the net benefit for customers at the end of the ten-year period is positive, SWEPCO will not owe customers any compensation under this guarantee. If the net benefit calculation for customers at the end of the ten-year period is negative, SWEPCO will compensate customers for that amount under the formula.
135. SWEPCO's look-back proposal is unlikely to yield a calculation of savings given that the methodology does not look at the actual price on the SPP market, and instead looks at SWEPCO's bid stack to determine what SWEPCO's generation cost would have been had the resources been placed into the market.
136. SWEPCO's look-back proposal likely overstates customer benefits and is not adopted.
137. No other party presented sufficient evidence to adopt a different look-back proposal.
138. SWEPCO proposed a most favored nation guarantee such that if terms more favorable to customers related to: (1) the GWh output of the Production Guarantee; (2) the PTC Eligibility; or (3) the Cost Cap percentage are agreed to by PSO or SWEPCO in any of the state utility commission proceedings under which they are seeking approval of the Project, SWEPCO will disclose the terms and incorporate them into the guarantees for the benefit of SWEPCO Texas customers.
139. The most favored nations guarantee provides a concrete guarantee to Texas customers that customers in other jurisdictions will not be treated more favorably and should be adopted.

**Staff or Intervenor Proposed Conditions**

- 140. Depreciation of the Wind Facility over 30 years as recommended by Staff would align the depreciation rate with the predicted life of the Wind Facility.
- 141. Depreciation of the Gen-Tie line over 50 years is reasonable because it may be used for other purposes after the end of the life of the Wind Facility.
- 142. Golden Spread's proposed condition to require SWEPCO not to seek revenue through the SPP OATT is not adopted.
- 143. Rate case expenses will be addressed in a subsequent base rate case.
- 144. No evidence was presented regarding the necessity of coordination between SWEPCO and any other utilities.

**Other CCN Issues**

- 145. SWEPCO has continued to evaluate whether the Project is in the public interest.
- 146. The Project is located entirely outside of the State of Texas and Texas' community values, parks, historical sites, and environment are unaffected.
- 147. Texas has met its renewable energy goals.
- 148. Approval of the CCN will have no effect on Lubbock Power & Light's or Rayburn Country Electric Cooperative's proposal to become part of the Electric Reliability Council of Texas.

**CCN for Economic Purposes**

- 149. The Commission has determined that it may grant a CCN for economic purposes.

**Ratemaking Treatments**

- 150. Recovering costs of the Project through the fuel clause is not appropriate because SWEPCO is not purchasing any fuel for the Project or experiencing volatility in purchased fuel costs.
- 151. Recovering costs of the Project through the fuel clause would shift the risk of regulatory lag from SWEPCO to its customers.
- 152. There are other mechanisms for SWEPCO to avoid regulatory lag.

153. SWEPCO proposes to limit the return on any deferred tax asset balance to a combination of SWEPCO's then-approved weighted average cost of capital on 60% of the deferred tax asset balance and (2) the current cost of debt on 40% of the deferred tax asset balance. SWEPCO will also cap its deferred tax asset balance associated with the Project so that the balance will not exceed a cumulative, annual average of \$560 million. Also, if the PTCs are not used after year 13 of the Project, SWEPCO agrees to no return on the asset through retail rates after year 13.
154. SWEPCO's proposal to limit its return on its deferred tax asset balance should be imposed as a condition of the CCN.
155. PTC should flow through fuel to reflect the actual bid price and to allow customers to pay the actual price for the energy.
156. SWEPCO's request to defer a portion of the PTCs for later years should be denied because there are too many uncertainties that could change in the future.
157. Allocation issues should be addressed in a rate case.
158. All net proceeds from renewable energy credits should be credited to customers as they accrue.

**B. Conclusions of law**

1. The Commission has jurisdiction over this matter pursuant to Public Utility Regulatory Act, Texas Utilities Code §§ 14.001, 36.203, 36.204, 37.051, 37.053, 37.056, and 37.057 (PURA).
2. SOAH has jurisdiction over this proceeding, including the preparation of this proposal for decision with findings of fact and conclusions of law, pursuant to PURA § 14.053 and Texas Government Code § 2003.049.
3. Notice of the Application was provided in compliance with PURA § 37.054 and 16 Texas Administrative Code § 22.55 because the Project is an out-of-state facility.
4. Utilities may obtain a CCN for general economic purposes not just when there is an increase in demand necessitating additional generation. *See Application of Southwestern Public Company for Approval of Transactions with ESI Energy, LLC and Invenergy Wind Development North America LLC, to Amend a Certificate of Convenience and Necessity for Wind Generation Projects and Associated Facilities in Hale County, Texas, and Roosevelt County, New Mexico and for Related Approvals*, Docket No. 46936 (SOAH Docket No. 473-17-3539) (pending application filed Mar. 21, 2017).
5. SWEPCO is not entitled to a special circumstances exception under 16 Texas Administrative Code (TAC) § 25.236.

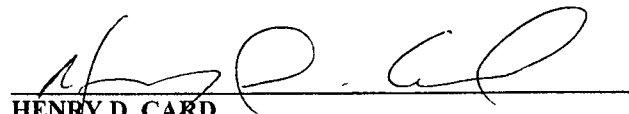
6. SWEPCO is not implementing customer choice. PURA §§ 39.501(b); 39.502(b); 16 Texas Administrative Code § 25.422(e)
7. SWEPCO has shown that the Project will result in the probable lowering of costs to retail customers pursuant to PURA § 37.056(c)(4)(e).
8. PURA §14.101 does not apply to this case.
9. Texas has met its renewable energy goals under PURA § 39.904(a).
10. To ensure that customers realize a net reduction in costs pursuant to PURA § 37.056, SWEPCO should be required to provide certain guarantees.
11. SWEPCO is entitled to approval of the Application with conditions.

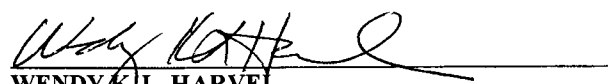
**C. Ordering paragraphs**

In accordance with these findings of fact and conclusions of law, the Commission issues the following Order:

1. The Application is approved and SWEPCO's CCN for the Wind Catcher Project is granted with conditions as outlined in the findings of fact and conclusions of law.
2. All other motions, requests for entry of specific findings of fact or conclusions of law, and any other requests for general or specific relief, if not expressly granted herein, are denied.

**SIGNED May 18, 2018.**

  
HENRY D. CARD  
ADMINISTRATIVE LAW JUDGE  
STATE OFFICE OF ADMINISTRATIVE HEARINGS

  
WENDY K. L. HARVEL  
ADMINISTRATIVE LAW JUDGE  
STATE OFFICE OF ADMINISTRATIVE HEARINGS

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**STYLE/CASE:** SOUTHWESTERN ELECTRIC POWER COMPANY (47461)  
**SOAH DOCKET NUMBER:** 473-17-5481  
**REFERRING AGENCY CASE:** 47461

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**STATE OFFICE OF ADMINISTRATIVE  
HEARINGS**

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**ADMINISTRATIVE LAW JUDGE  
ALJ HENRY D. CARD**

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