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April 27, 2023

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2023 APR 28 PM 12:58
LA PUBLIC SERVICE
COMMISSION

VIA: FEDERAL EXPRESS

Ms. Terri Bordelon
Records Division
Louisiana Public Service Commission
602 N. 5th Street
Baton Rouge, LA 70802

Re: *Application of Southwestern Electric Power Company for Certification and Approval of the Acquisition of Certain Renewable Resources and Natural Gas Capacity Contracts in Accordance with the MBM Order, the 1983 and 1994 General Orders*

Docket: U-36385

Dear Terri:

On behalf of Southwestern Electric Power Company (SWEPCO), and in accordance with the paragraph 3(d) in the Settlement Term Sheet dated March 10, 2023 in the captioned proceeding. Please find enclosed the Proposal for Decision (PFD) from the Texas State Office of Administrative Hearings (SOAH) Docket No. 473-22-00991, PUCT Docket No. 53625, addressing the status of the Selected Facilities' approval proceedings in other jurisdictions.

Please provide us with a stamped copy of this letter once filed with the Commission. As always, we appreciate your continued assistance and cooperation.

With best regards, I am

Yours very truly,

WILKINSON, CARMODY & GILLIAM



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Attachment

Fed ex

State Office of Administrative Hearings

Kristofer S. Monson
Chief Administrative Law Judge

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Pegah Nasrollahzadeh, CLERK

April 18, 2023

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ADMINISTRATIVE HEARINGS
Pegah Nasrollahzadeh, CLERK

VIA EFILE TEXAS

Stephen Journey, Commission Counsel
Commission Advising and Docket Management
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1701 N. Congress, 7th Floor
Austin, Texas 78701

2023 APR 28 PM 12:58
LA PUBLIC SERVICE
COMMISSION

**RE: SOAH Docket No. 473-22-00991; PUC Docket No. 53625;
*Application of Southwestern Electric Power Company for Certificate
of Convenience and Necessity Authorization and Related Relief for the
Acquisition of Generation Facilities***

Dear Mr. Journey:

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. Please notify the undersigned Administrative Law Judges 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.

Enclosure

CC: Service List

**BEFORE THE
STATE OFFICE OF ADMINISTRATIVE
HEARINGS**

**APPLICATION OF SOUTHWESTERN ELECTRIC POWER
COMPANY FOR CERTIFICATE OF CONVENIENCE AND
NECESSITY AUTHORIZATION AND RELATED RELIEF FOR
THE ACQUISITION OF GENERATION FACILITIES**

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LIST OF ACRONYMS AND ABBREVIATIONS

AEO	Annual Energy Outlook
AEP	American Electric Power
AEPSC	American Electric Power Service Corporation
ALJ	Administrative Law Judge
CARD	Cities Advocating Reasonable Deregulation
CCN	Certificate of Convenience and Necessity
CCR	Coal Combustion Residual
COD	Commercial Operation Date
CoL	Conclusion of Law
Commission or PUC	Public Utility Commission of Texas
Company or SWEPCO	Southwestern Electric Power Company
CPA	Capacity Purchase Agreement
DTA	Deferred Tax Asset
EBAP	East Bottom Ash Pond
EIA	Energy Information Administration
ELCC	Effective Load Carrying Capability
ELG	Effluent Limitation Guidelines
EPA	United States Environmental Protection Agency
ERCOT	Electric Reliability Council of Texas
ETEC	East Texas Electric Cooperative, Inc.
ETEC-NTEC	ETEC and NTEC, collectively
FERC	Federal Energy Regulatory Commission
FoF	Finding of Fact
GAAP	Generally Accepted Accounting Principles
GCRR	Generation Cost Recovery Rider
GE	General Electric
IRA	Inflation Reduction Act
IRP	Integrated Resource Plan
Invenergy	Invenergy LLC and its affiliates
kW	Kilowatt
kWh	Kilowatt-hours
LCOE	Levelized Cost of Energy
LNCOE	Levelized Net Cost of Energy

MW	Megawatt
MWh	Megawatt-hour
NTEC	Northeast Texas Electric Cooperative, Inc.
OPUC	Office of Public Utility Counsel
PBA	Performance-Based Accreditation
P.O.	Preliminary Order
PPA	Purchased Power Agreement
PRM	Planning Reserve Margin
PSA	Purchase and Sale Agreement
PTC	Production Tax Credit
PURA	Public Utility Regulatory Act
REC	Renewable Energy Credit
RFP	Request for Proposals
RTO	Regional Transmission Organization
Selected Facilities	The three renewable energy generation projects that are the subject of SWEPCO's application (Wagon Wheel wind project, Diversion wind project, and Mooringsport solar project).
SOAH	State Office of Administrative Hearings
SPP	Southwest Power Pool
SPS	Southwestern Public Service Company
Staff	Commission staff
TIEC	Texas Industrial Energy Consumers
TPWD	Texas Parks and Wildlife Department
USFWS	United States Fish and Wildlife Service
WACC	Weighted Average Cost of Capital
WBAP	West Bottom Ash Pond

**BEFORE THE
STATE OFFICE OF ADMINISTRATIVE
HEARINGS**

**APPLICATION OF SOUTHWESTERN ELECTRIC POWER
COMPANY FOR CERTIFICATE OF CONVENIENCE AND
NECESSITY AUTHORIZATION AND RELATED RELIEF FOR
THE ACQUISITION OF GENERATION FACILITIES**

PROPOSAL FOR DECISION

Southwestern Electric Power Company (SWEPCO or the Company) seeks a certificate of convenience and necessity (CCN) to acquire three renewable energy generation projects to meet its expected generation capacity need. The projects consist of two wind facilities in Oklahoma and Texas, and one solar facility in Louisiana (collectively, the Selected Facilities), with a total of 999 megawatts (MW) of nameplate and 237 MW of accredited capacity, of which 87 MW would be allocated to Texas. The Selected Facilities are estimated to cost \$2.175 billion.¹ The Selected Facilities have an expected levelized cost of energy (LCOE) of \$43 per

¹ SWEPCO Ex. 1 (Application), Attachment B at 3; SWEPCO Ex. 7 (DeRuntz Dir.) at 12.

megawatt-hour (MWh) and a levelized net cost of energy (LNCOE) of negative (-) \$1.38 per MWh.

The Public Utility Commission of Texas (Commission or PUC) staff (Staff), Office of Public Utility Counsel (OPUC) Texas Industrial Energy Consumers (TIEC), and Cities Advocating Reasonable Deregulation (CARD) all recommend that any approval of the Selected Facilities be subject to certain conditions. East Texas Electric Cooperative, Inc. and Northeast Texas Electric Cooperative, Inc. (ETEC-NTEC) oppose certifying the Selected Facilities.

The administrative law judges (ALJs) recommend that the Commission grant the CCN for the Selected Facilities with one unopposed condition to ensure that customers receive 100% of the value of the federal tax credits associated with the facilities.

I. NOTICE, JURISDICTION, AND PROCEDURAL HISTORY

Notice and jurisdiction are undisputed and therefore addressed in the findings of fact and conclusions of law without further discussion here.

SWEPCO's application was filed on May 27, 2022, and referred to the State Office of Administrative Hearings (SOAH) on June 2, 2022. On June 17, 2022, the application was deemed sufficient for further review. On June 23, 2022, the Commission issued its Preliminary Order identifying the issues to be addressed in

this proceeding. On July 14, 2022, the Commission issued a Supplemental Preliminary Order identifying additional issues to be addressed.

On October 3, 2022, SWEPCO filed supplemental direct testimony to address the impacts of the Inflation Reduction Act (IRA).

The following parties intervened and filed testimony: TIEC, CARD, OPUC, and ETEC-NTEC. Staff filed testimony as well.

On January 13, 2023, SWEPCO filed the direct testimony of Brett Mattison who adopted and sponsored the pre-filed direct testimony of A. Malcolm Smoak.

The hearing on the merits commenced on January 18, 2023, and concluded on January 20, 2023, via videoconference. The record initially closed on February 17, 2023, with the filing of post-hearing reply briefs. On February 22, 2023, the ALJs reopened the record to admit ALJs Exhibit 1. On March 22, 2023, the ALJs again reopened the record to admit ALJs Exhibits 2 and 3. Those additional exhibits address SWEPCO's regulatory approvals for the Selected Facilities in other jurisdictions.

Concurrently with filing its application with the Commission, SWEPCO also filed applications with the Arkansas and Louisiana public service commissions, and the Federal Energy Regulatory Commission (FERC), for approval of the Selected Facilities.² During the pendency of this proceeding, SWEPCO has settled its cases

² SWEPCO Ex. 3 (Brice Dir.) at 12; SWEPCO Ex. 1 (Application) at 7-8.

before the Arkansas and Louisiana public service commissions,³ and received approval by FERC.⁴

II. PROJECT DESCRIPTION AND COST

In 2021, SWEPCO entered into purchase and sale agreements (PSAs) with affiliates of Invenergy LLC (Invenergy) for the Selected Facilities, which consist of two wind projects and one solar project.⁵ The Selected Facilities total 999 MW of nameplate capacity, with 237 MW of Southwest Power Pool (SPP) accredited capacity.⁶

The two wind projects, referred to as Wagon Wheel and Diversion, will be engineered to have a design life of 30 years and will consist of General Electric (GE) 3.4 MW wind turbine generators.⁷ They will be equipped with a cold weather package for low temperature operation and dynamic balancing to avoid shut down due to imbalance from icing.⁸ The solar project, referred to as Mooringsport, will be engineered to have a design life of 35 years and be composed of photovoltaic modules with single-axis tracking systems.⁹ These projects are summarized as follows:¹⁰

³ ALJs Exs. 1 and 2.

⁴ ALJs Ex. 3.

⁵ SWEPCO Ex. 6 (Jeffries Dir.) at 2-3; SWEPCO Ex. 1 (Application) at 2-3.

⁶ SWEPCO Ex. 1 (Application) at 2.

⁷ SWEPCO Ex. 7 (DeRuntz Dir.) at 3.

⁸ SWEPCO Ex. 2 (Smoak Dir.) at 12.

⁹ SWEPCO Ex. 7 (DeRuntz Dir.) at 3.

¹⁰ SWEPCO Ex. 1 (Application) at 1; SWEPCO Ex. 2 (Smoak Dir.) at 4.

PROJECT OVERVIEW

	Wind		Solar
	Wagon Wheel	Diversion	Mooringsport
Size (Nameplate MW)	598.4	200.6	200
Developer	Invenergy	Invenergy	Invenergy
Planned COD¹¹	12/2025	12/2024	12/2025
State	OK	TX	LA
County/Parish	Multiple ¹²	Baylor	Caddo
Location (RTO¹³)	SPP	SPP	SPP

As explained more fully below, SWEPCO’s capacity need arises in March 2023. To bridge the gap between the 2023 capacity need and the expected in-service date of newly acquired resources, SWEPCO also entered into three short-term Capacity Purchase Agreements (CPAs).¹⁴

A. ESTIMATED COST (PRELIMINARY ORDER (P.O.) ISSUES 5-6, 45-46, AND 81-82)

The total capital cost for the Selected Facilities is estimated at \$2,174,788,145. That amount includes each project’s purchase price and owner’s costs.¹⁵ The owner’s costs include overheads, contingency, and Allowance for Funds Used During Construction.¹⁶

¹¹ The acronym “COD” means commercial operation date.

¹² Wagon Wheel is located in the following counties in Oklahoma: Garfield, Kingfisher, Logan, and Noble.

¹³ The acronym “RTO” means regional transmission operator.

¹⁴ SWEPCO Ex. 2 (Smoak Dir.) at 10-11.

¹⁵ SWEPCO Ex. 7 (DeRuntz Dir.) at 12; SWEPCO Ex. 7A (DeRuntz Dir.) (HSPM), Exh. JGD-4.

¹⁶ SWEPCO Ex. 7 (DeRuntz Dir.) at 12.

In view of the cost, SWEPCO emphasizes the projects' benefits. The Selected Facilities are expected to qualify for approximately \$1.079 billion in federal Production Tax Credits (PTCs).¹⁷ SWEPCO witness James F. Martin, the Director of Resource Planning Strategy for American Electric Power Service Corporation (AEPSC), testified that the value of the PTCs, together with the value of the energy, capacity, and renewable energy certificates, are expected to exceed the costs.¹⁸ The LNCOE—which captures the net effect of all of the costs and benefits of a resource¹⁹—of the Selected Facilities is expected to be negative (-) \$1.38 per MWh over their 30- or 35-year lives.²⁰

In highly sensitive portions of its initial brief, TIEC argues that costs may increase due to certain aspects of the PSAs, namely, certain terms that make the projects “a very risky proposition for ratepayers.”²¹

SWEPCO responds that TIEC's concerns are overstated. The PSAs contain terms to mitigate risk to SWEPCO and its customers,²² which SWEPCO witness Amy Jeffries, Director of Regulated Infrastructure Development, testified

¹⁷ SWEPCO Ex. 9A (Hodgson Supp. Dir.) at 1-2 (Selected Wind Facilities) and 2 (Selected Solar Facility).

¹⁸ SWEPCO Ex. 14 (Martin Reb.) at 9.

¹⁹ SWEPCO Ex. 14 (Martin Reb.) at 7-8.

²⁰ SWEPCO Ex. 14 (Martin Reb.) at 9, Table 3.

²¹ TIEC Initial Brief at 3-4; TIEC Reply Brief at 3-4. The ALJs have avoided discussing protected material in the body of this proposal for decision. Therefore, the referenced citations should be consulted for a more complete understanding of TIEC's and SWEPCO's arguments.

²² SWEPCO Initial Brief at 19-20 (HSPM); SWEPCO Reply Brief at 4-5 (HSPM); SWEPCO Ex. 6A (Jeffries Dir.) (HSPM) at 20-21 (Bates 000003-4).

were negotiated to “place risk on the most appropriate party to manage, mitigate and economically clear the identified risks.”²³ These provisions include review and audit rights to ensure only appropriate costs are passed through to customers.²⁴ Moreover, project director Joseph DeRuntz testified that the costs for each project already include a contingency amount to account for potential cost increases.²⁵ Ms. Jeffries testified that based on her experience and expertise with recent renewable purchase evaluations, the PSAs are reasonable and consistent with industry practice.²⁶ Additionally, SWEPCO points out that customers are protected by a future prudence review of the costs before they can be recovered through rates.

The ALJs have reviewed the highly sensitive portions of TIEC’s and SWEPCO’s briefs and the evidence referenced therein and find that, for the reasons SWEPCO identified, the PSAs contain adequate safeguards against unreasonable price increases.

B. DEVELOPMENT STATUS AND PROPOSED COMMERCIAL OPERATION DATES (P.O. ISSUES 3-4, 43-44, AND 79-80)

Under the PSAs, Invenergy is responsible for the development; land acquisition; environmental studies; permitting; engineering; interconnection; procurement of all necessary equipment and materials; construction; and

²³ SWEPCO Ex. 6 (Jeffries Dir.) at 18; SWEPCO Ex. 6A (Jeffries Dir.) (HSPM) at 18-19 (Bates 000001-2).

²⁴ SWEPCO Ex. 16A (Jeffries Dir.) (HSPM) at 6 (Bates 000004).

²⁵ SWEPCO Ex. 7 (DeRuntz Dir.) at 12

²⁶ SWEPCO Ex. 6 (Jeffries Dir.) at 21.

commissioning of the Selected Facilities.²⁷ SWEPCO will purchase the project companies holding the Selected Wind Facilities (Wagon Wheel and Diversion) and the Selected Solar Facility (Mooringsport) upon their commercial operation dates (CODs) and mechanical completion dates, respectively.²⁸ The major construction milestones, including the commercial operation and mechanical completion dates, for the Selected Facilities are set forth in the following table:

²⁷ SWEPCO Ex. 7 (DeRuntz Dir.) at 5; SWEPCO Ex. 7A (DeRuntz Dir.) (HSPM) at 12-13 (Bates 000001-2).

²⁸ SWEPCO Ex. 6 (Jeffries Dir.) at 19.

Selected Facility Construction Milestones²⁹

Milestone Description	Wagon Wheel	Diversion	Mooringsport
Execute Generator Interconnection Agreement	Feb. 2021	March 2022	July 2023
Purchase Order Issued for GSU ³⁰ Transformers	May 2023	Sept. 2022	July 2023
Start Engineering	May 2023	Nov. 2022	April 2023
Contractor Mobilization	April 2024	July 2023	July 2024
Start Underground Cable Installation	July 2024	Jan. 2024	N/A
Start Equipment Delivery	July 2024	April 2024	Modules Nov. 2024
Turbine/Rack Foundations Complete	Feb. 2025	May 2024	Feb. 2025
Electrical Back Feed	March 2025	July 2024	May 2025
Start Turbine Commissioning	April 2025	July 2024	N/A
Mechanical Completion	Aug. 2025	Sept. 2024	Oct. 2025
COD	Dec. 2025	Dec. 2024	Dec. 2025

Invenergy is required to (1) develop project schedules that tie the work relationships between its contractors and major equipment suppliers; and (2) track deliverables from engineering and design activities, major equipment procurement and delivery, and construction and commissioning status.³¹ As set forth in the PSAs, the Company has (1) review rights of the engineering, design, and procurement of major equipment for the Selected Facilities; and (2) oversight rights of all

²⁹ SWEPCO Ex. 7 (DeRuntz Dir.) at 10.

³⁰ This acronym was not defined by the applicant.

³¹ SWEPCO Ex. 7 (DeRuntz Dir.) at 11.

construction and testing activities via provisions stipulated in the PSAs.³² AEPSC and Invenergy have agreed to specifications for the major electrical equipment, engineering and design reviews, construction quality oversight rights, and scheduling and monitoring requirements.³³ Further, AEPSC, on behalf of SWEPCO, will have experienced personnel on site to monitor Invenergy's construction progress and ensure that Invenergy adheres to the scopes of work and project schedules under the PSAs.³⁴ AEPSC's role is intended to ensure that the facilities are engineered and constructed to the agreed-to design standards and that SWEPCO is involved and informed of the construction activities influencing the Selected Facilities' timely completion by the COD.³⁵

Finally, AEPSC reviewed and determined that the construction schedules are reasonable, demonstrate a clear path toward constructability, and are capable of achieving the target COD required to qualify for the planned federal tax credits.³⁶

³² SWEPCO Ex. 7 (DeRuntz Dir.) at 5.

³³ SWEPCO Ex. 7 (DeRuntz Dir.) at 5-6.

³⁴ SWEPCO Ex. 7 (DeRuntz Dir.) at 11.

³⁵ SWEPCO Ex. 7 (DeRuntz Dir.) at 6.

³⁶ SWEPCO Ex. 7 (DeRuntz Dir.) at 10-11.

III. CCN ISSUES

A. CCN STANDARD (P.O. ISSUES 8, 48, AND 84)

Pursuant to Public Utility Regulatory Act (PURA)³⁷ section 37.056(b), the Commission may grant or amend a CCN if the certificate “is necessary for the service, accommodation, convenience, or safety of the public.” When making this determination, the Commission must consider:

- (1) the adequacy of existing service;
- (2) the need for additional service;
- (3) the effect of granting the certificate on the recipient of the certificate and any electric utility serving the proximate area; and
- (4) other factors, such as:
 - (A) community values;
 - (B) recreational and park areas;
 - (C) historical and aesthetic values;
 - (D) environmental integrity;
 - (E) the probable improvement of service or lowering of cost to consumers in the area if the certificate is granted, including any potential economic or reliability benefits associated with dual fuel and fuel storage capabilities in areas outside the ERCOT [Electric Reliability Council of Texas] power region; and

³⁷ Public Utility Regulatory Act, Tex. Util. Code §§ 11.001-66.016 (PURA).

- (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].³⁸

These factors reflect potentially competing policies and interests whose relative weight will vary with the particular circumstances of each case. Consequently, “[n]one of the statutory factors is intended to be absolute in the sense that any one shall prevail in all possible circumstances,” but must instead be balanced to the end of furthering “the *overall* public interest.”³⁹

B. ADEQUACY OF EXISTING SERVICE AND NEED FOR ADDITIONAL SERVICE (P.O. ISSUES 9, 10, 12, 49, 50, 52, AND 82-88)

1. Adequacy of Existing Service

No party disputes that SWEPCO’s existing service is adequate.

2. Need for Additional Service

CARD, ETEC-NTEC, TIEC, OPUC, and Staff do not dispute that SWEPCO has a need for additional service, but argue that the need was unnecessarily created

³⁸ PURA § 37.056(c).

³⁹ *Pub. Util. Comm’n of Tex. v. Texland Elec. Co.*, 701 S.W.2d 261, 267 (Tex. App.—Austin 1985, writ ref’d n.r.e.).

by SWEPCO's decision to retire the Pirkey plant, a lignite-fired plant located in Harrison County, before the end of its useful life.

SWEPCO's need for generation capacity is driven by the retirement of aging generation units, including the retirement of five natural gas-fired units in 2019 and 2020,⁴⁰ the retirement of the Dolet Hills lignite-fired generation plant in 2021,⁴¹ and the retirement of the Pirkey plant in March of 2023.⁴² At the time SWEPCO filed its application in May 2022, SWEPCO faced a capacity deficit in 2023 that grows to approximately 1,574 MW in 2028.⁴³ That capacity need has since grown. In July 2022, SPP announced an increase to the summer planning reserve margin (PRM) requirement from 12% to 15% effective for the capacity year starting in Summer 2023. This increase added 130 MW to SWEPCO's capacity need.⁴⁴ SPP also adopted performance-based accreditation (PBA), which modifies the methodology for assessing capacity accreditation of thermal generation resources. SWEPCO estimates that this change will reduce the capacity credit of its thermal resources by 45 MW by the time SPP phases in PBA over the next five years.⁴⁵

Without the Selected Facilities, the Company will need to add other generation capacity to address this capacity need. That could prove difficult given

⁴⁰ The five gas-fired units were placed in service between 1949 and 1956. The retirement decisions were reviewed and unchallenged in SWEPCO's most recent base-rate case, *Application of Southwestern Electric Power Company for Authority to Change Rates*, Docket No. 51415. SWEPCO Ex. 2 (Smoak Dir.) at 8.

⁴¹ No party contested the decision to retire the Dolet Hills plant, a lignite-fired plant put into service in 1986, in Docket No. 51415. SWEPCO Ex. 2 (Smoak Dir.) at 8.

⁴² SWEPCO Ex. 2 (Smoak Dir.) at 6.

⁴³ SWEPCO Ex. 2 (Smoak Dir.) at 7.

⁴⁴ SWEPCO Ex. 14 (Martin Reb.) at 4.

⁴⁵ SWEPCO Ex. 14 (Martin Reb.) at 5.

the competition for new and existing capacity that SPP’s actions induced and the time it takes to get new generation capacity online.⁴⁶ SWEPCO’s capacity position shows a shortfall of 1,834 MW by 2028, as shown on the table below, taken from page 6 of Mr. Martin’s rebuttal testimony.

Column	1	2	3	4	5	6	7 = sum (3 - 6)	8
Capacity Requirement and Going-In Capacity Position (MW)				Cumulative Utility Scale Additions by Year (SPP Accredited MW)				
Year	Load Responsibility + 15% Reserve	Existing Resources Capacity *	"Going-In" Excess / (Shortfall)	Selected Facilities	Rocking R **	Short-Term Capacity Purchases	Net Surplus / (Shortfall) Capacity (MW)	Reserve Margin With New Additions
2023	5,079	4,788	(312)			250	(62)	13.6%
2024	5,082	4,797	(286)			350	64	16.5%
2025	5,110	4,788	(325)	29	41	350	95	17.1%
2026	5,127	4,888	(482)	237	41	200	16	15.4%
2027	5,138	4,382	(757)	237	41		(479)	4.3%
2028	5,151	3,318	(1,834)	237	41		(1,556)	(19.7%)
* Amounts do not tie to originally file Table 5 due to small adjustments in resource accreditation and the phase in of SPP's Performance-Based Accreditation (PBA). ** Rocking R 72.5 MW nameplate solar facility.								

SWEPCO’s projections establishing need presented in the above table are undisputed. As discussed below, the ALJs find SWEPCO’s decision to retire the Pirkey plant was reasonable; therefore, the ALJs find SWEPCO has established the need for the Selected Facilities.

⁴⁶ SWEPCO Ex. 14 (Martin Reb.) at 4-5.

a) SWEPCO's Decision to Retire Pirkey

SWEPCO owns a 580 MW share of the lignite-fired Pirkey plant that went into service in 1985.⁴⁷ In November of 2020, SWEPCO decided to retire the Pirkey plant rather than continue to operate it. The timing of that decision was driven primarily by environmental regulation requirements. Specifically, the Pirkey plant includes two unlined surface impoundments, the east bottom ash pond (EBAP) and the west bottom ash pond (WBAP), that collect coal combustion residuals (CCR), including fly ash, bottom ash, and gypsum, that are generated at coal- and lignite-fired power plants.⁴⁸ Such plants cannot operate without the CCR impoundments; therefore, a closure of impoundments results in the retirement of the associated plant. In September of 2000, the U.S. Environmental Protection Agency (EPA) finalized rules requiring that the impoundments either be retrofitted with appropriate liners or that they be closed.⁴⁹ The rules required that operators make an election to close or retrofit by November 30, 2020.⁵⁰

In response to the regulatory changes, SWEPCO's parent company American Electric Power (AEP) conducted the 2020 CCR/ELG Analysis to determine whether six of its coal and lignite plants should be retrofitted to comply with the new CCR and effluent limitation guidelines (ELGs)⁵¹ going into effect. The analysis concluded that two plants, Pirkey and Welsh, should be retired, while the remaining

⁴⁷ SWEPCO Ex. 2 (Smoak Dir.) at 9; OPUC Ex. 1 (Nalepa Dir.) at 16.

⁴⁸ SWEPCO Ex. 15 (Spitznogle Reb.) at 4-5.

⁴⁹ SWEPCO Ex. 25.

⁵⁰ SWEPCO Ex. 14 (Martin Reb.) at 14; 40 C.F.R. § 257.103(f)(3)(i)(C).

⁵¹ ELGs are standards for wastewater discharged to surface waters that were also amended by EPA.

plants' impoundments should be retrofitted.⁵² The financial aspects of the 2020 CCR/ELG Analysis and the parties' critiques of it are discussed in more detail in Section III.C.

The ALJs note that some parties point to the relatively low cost to implement CCR compliance at Pirkey as compared to the cost to acquire new generation as a basis for continuing to operate the plant. However, Mr. Martin testified that there were other reasons to retire Pirkey:

Pirkey's 2023 retirement is for the benefit of customers due to its high fuel costs and non-fuel operating costs. Even if some set of circumstances could exist that would allow the plant to operate through 2028 or later, it would be more expensive for customers to do so, **even if zero cost for CCR and ELG compliance were required to enable that to happen.**⁵³

Therefore, although the analysis of whether to retire Pirkey or retrofit the ponds was triggered by the CCR rule deadline, the retirement decision was not based on the costs of the retrofitting alone, but the overall high cost to provide fuel for and operate the plant.

b) EPA's Coal Combustion Residual Rule Changes

As noted above, the deadline to notify EPA whether SWEPCO would retrofit or close the EBAP and WBAP was November 2020. The default closure timeline

⁵² SWEPCO Ex. 14 (Martin Reb.) at 13-14.

⁵³ SWEPCO Ex. 14 (Martin Reb.) at 2 (emphasis added).

required operators to cease placing CCR into unlined impoundments by April 11, 2021.⁵⁴ However, the rules provided an avenue to extend the operation of unlined impoundments that met certain criteria (e.g., no alternative disposal capacity on- or off-site, potential risks to human health and the environment have been mitigated).⁵⁵ SWEPCO timely submitted site-specific information to EPA stating that the Pirkey EBAP and WBAP met the criteria for extended operation. Pursuant to the rule, the size of an impoundment determines the closure date. Impoundments less than 40 acres in size must be closed by October 17, 2023, and for those larger than 40 acres, the closure deadline is October 17, 2028.⁵⁶ The EBAP and WBAP are less than 40 acres each; therefore, the October 17, 2023 deadline applies.⁵⁷

Staff and ETEC-NTEC dispute the October 17, 2023 deadline. They argue that the two ponds should be combined into one that is larger than 40 acres such that the October 17, 2028 deadline would apply. ETEC-NTEC argue there is precedent for combining ponds, citing to the Miami Fort facility in North Bend, Ohio.⁵⁸ SWEPCO argues that the ponds cannot be combined, and the ALJs agree.

First, the potential for combining smaller ponds to qualify for the 2028 deadline was specifically addressed and rejected in the preamble to the CCR rule published in the Federal Register. A utility company requested a procedure to combine smaller ponds into a pond that is more than 40 acres to qualify for the 2028

⁵⁴ 40 C.F.R. § 257.101(a)(1).

⁵⁵ 40 C.F.R. § 257.103(f)(2).

⁵⁶ 40 C.F.R. § 257.103(f)(2)(iv).

⁵⁷ SWEPCO Ex. 15 (Spitznogle Reb.) at 6.

⁵⁸ ETEC-NTEC Ex. 2a (Striedel Dir.) at 24.

deadline. In response, the EPA stated that the commenters “did not provide a compelling argument for changing the deadlines from the proposal,” and declined to change the rule as requested.⁵⁹ Therefore, no procedure for combining independent bottom ash ponds exists in the CCR rules.

Second, the EBAP and WBAP are independent surface impoundments that are separately regulated ash storage units under the CCR rule. According to SWEPCO witness Gary O. Spitznogle, Vice President of Environmental Services for AEPSC:

Each pond has its own groundwater monitoring system and separate annual reports are filed for each. Each pond also has a separate and unique operating record that must be maintained on a publicly accessible website in order to demonstrate compliance with the CCR rule.⁶⁰

Mr. Spitznogle also stated that the Pirkey ponds operate in parallel as independent, redundant systems that allow the plant to operate using one bottom ash pond while the other undergoes maintenance. This is unlike the operation of the two ponds at the Miami Fort facility in Ohio where the ponds are operated in a series with a single wastewater treatment system that covers both.⁶¹ ETEC-NTEC witness James E. Striedel, Managing Director at the engineering and consulting firm GDS Associates, Inc., notes that the Miami Fort facility owner sent a letter to EPA requesting that the two ponds be treated as one pond larger than 40 acres under the

⁵⁹ 85 Fed. Reg. 53549-50 (Aug. 28, 2020).

⁶⁰ SWEPCO Ex. 15 (Spitznogle Reb.) at 7-8.

⁶¹ SWEPCO Ex. 15 (Spitznogle Reb.) at 7-8; ETEC-NTEC Ex. 2a (Striedel Dir.) at 24.

CCR rule; however, there is no evidence that EPA approved the request. To the contrary, the EPA letter attached to Mr. Striedel's testimony states:

EPA has not made any decision on whether to approve your request. The demonstration will undergo further review to make such a determination. After this review, EPA will publish its proposed decision for public comment in a docket on www.regulations.gov. After consideration of the comments, EPA will issue its final decision on the demonstration.⁶²

The ALJs agree with SWEPCO that the EBAP and WBAP are independent surface impoundments, are materially different than those at the Miami Fort facility, and there is no established framework to combine them to extend the deadline of their operation to October 2028.

Third, Mr. Spitznogle testified that the Company twice spoke with EPA about combining ponds and both times was told that independent ponds could not be combined to satisfy the greater than 40-acre requirement for a longer period of operation. The first inquiry was made regarding a different SWEPCO plant with a similar pond configuration. The second inquiry was made on January 19, 2023, specifically with respect to the EBAP and WBAP at Pirkey.⁶³ The ALJs find that SWEPCO has made diligent efforts to enquire about combining the ponds and decline to recommend that SWEPCO further pursue that course of action.

⁶² ETEC-NTEC Ex. 2a (Striedel Dir.), Exh. JES-7.

⁶³ SWEPCO Ex. 15 (Spitznogle Reb.) at 6 and Transcript (Tr). at 475-77 with respect to a different plant with a similar pond configuration; Tr. at 480, 484 specifically with respect to the ponds at Pirkey.

c) Staff's Other Requests Regarding Pirkey

Staff makes several additional requests regarding the operation of Pirkey. First, Staff witness Sherryhan Ghanem states that SWEPCO should be required to line the ponds to keep the plant running.⁶⁴ SWEPCO witness Spitznogle testified that it would take two to three years to complete the design, engineering, and construction process to line the ponds. That would require the plant to cease operations completely for most of that time as the plant cannot run without the EBAP and WBAP in place to treat the CCR generated from running the plant.⁶⁵ The evidence shows that lining the ponds is impractical. SWEPCO has demonstrated the high cost to keep Pirkey running, and shutting it down for years before re-starting will only add to those costs. The ALJs decline to recommend ordering SWEPCO to do so.

Next, Ms. Ghanem requests that the Pirkey plant remain running until Commission-approved generation resources are in commercial operation.⁶⁶ As stated above, SWEPCO has demonstrated that it cannot keep the plant operating without running afoul of the requirements of the CCR rules, which would result in violations of numerous environmental regulations that could result in large fines. The ALJs decline to recommend that Pirkey remain in operation.

⁶⁴ Staff Ex. 1 (Ghanem Dir.) at 5. Ms. Ghanem is an engineering specialist in the Engineering Section of the Commission's Infrastructure Division.

⁶⁵ SWEPCO Ex. 15 (Spitznogle Reb.) at 12.

⁶⁶ Staff Ex. 1 (Ghanem Dir.) at 5.

C. CONSIDERATION OF ALTERNATIVES AND RFP PROCESS (P.O. ISSUES 11, 51, AND 91)

1. Consideration of Alternatives

SWEPCO and its parent company AEP conducted several analyses to study and evaluate alternatives prior to deciding upon the Selected Facilities. The 2020 CCR/ELG Analysis was performed first and concluded that retirement of the Pirkey and Welsh plants at the pertinent times was the most economic option for those resources. SWEPCO then conducted its Q1 2021 Analysis in January of 2021. The Q1 2021 Analysis was an internal analysis that used the PLEXOS® resource planning model which identified a capacity deficit beginning in 2023 and evaluated and selected least-cost solutions to meet the capacity needs identified.⁶⁷ SWEPCO issued three Requests for Proposals (RFPs) in June of 2021 for the solutions identified—wind, solar, and short-term capacity purchases. SWEPCO then prepared the 2021 Arkansas Integrated Resource Plan (IRP) Analysis in December 2021, which confirmed the need identified by the Q1 2021 Analysis, and identified a similar set of optimal resource types.⁶⁸

After receiving bids, SWEPCO contractors performed a Confirmation Analysis to confirm whether the Selected Facilities were the least-cost options to meet the capacity needs.⁶⁹ Due to rising construction costs industry-wide since the prior analyses were performed, the Confirmation Analysis used higher cost data for

⁶⁷ SWEPCO Ex. 4 (Martin Dir.) at 5-6.

⁶⁸ SWEPCO Ex. 4 (Martin Dir.) at 7-9.

⁶⁹ SWEPCO Ex. 4 (Martin Dir.) at 17.

wind and solar resources, among other updated data, in the modeling. Despite the increase in costs, the Confirmation Analysis chose the Selected Facilities as part of the least-cost plan to meet capacity needs.⁷⁰ The criticisms of each analysis are discussed in more detail below.

a) The 2020 CCR/ELG Analysis

The 2020 CCR/ELG Analysis analyzed the cost to continue to operate the Pirkey plant and provide the lignite required to run it. The analysis was performed under two scenarios, one without a carbon tax (the no carbon scenario) and one with a carbon tax of \$15 per ton (the carbon scenario). Based on the analysis, the lifetime net present value of the savings resulting from closing Pirkey in 2023 is \$329.9 million in the no carbon scenario and \$462.4 million in the carbon scenario. The nominal (undiscounted) savings is calculated to be \$739 million for the no carbon scenario and \$1.168 billion for the carbon scenario. According to Mr. Martin, “[t]he nominal savings is what customers will actually save in their bills.”⁷¹ The cost of energy for the no carbon case was projected to be around \$70-80 per MWh from 2023 onward, with the carbon case adding about \$15 per MWh, which performs poorly against the LCOE for the Selected Facilities of \$43/MWh.⁷² The cost to provide the plant with lignite is one of the drivers of the cost to operate Pirkey.

⁷⁰ SWEPCO Ex. 5 (Augustine Dir.) at 11-14.

⁷¹ SWEPCO Ex. 14 (Martin Reb.) at 23.

⁷² SWEPCO Ex. 14 (Martin Reb.) at 25.

Pursuant to the below chart from Mr. Martin’s rebuttal testimony, the cost of fuel increased by a magnitude of 3.5 times over just 15 years.⁷³

TABLE 6 - Pirkey Fuel Cost History *	
	Delivered Cost per Ton
2005	20.516
2010	30.963
2015	42.39
2018	41.34
2019	48.72
2020	72.44
* FERC Form 1 page 403.1	

Additionally, the projected fuel cost for Pirkey for 2021-2037 was predicted to be far higher than any other SWEPCO solid fuel plant on a per-MWh basis.⁷⁴

The intervenors and Staff take issue with the 2020 CCR/ELG Analysis. First, ETEC-NTEC, CARD, and Staff argue that the analysis is flawed because natural gas prices rose after Winter Storm Uri in 2021 and were subsequently higher than at the time of the analysis. Therefore, these parties argue, the 2020 CCR/ELG Analysis is unreliable and must be updated with current natural gas pricing data.⁷⁵ AEP used the Energy Information Administration’s (EIA) 2020 Annual Energy Outlook (AEO) Reference Case Henry Hub gas price forecast in performing the analysis.⁷⁶ Although

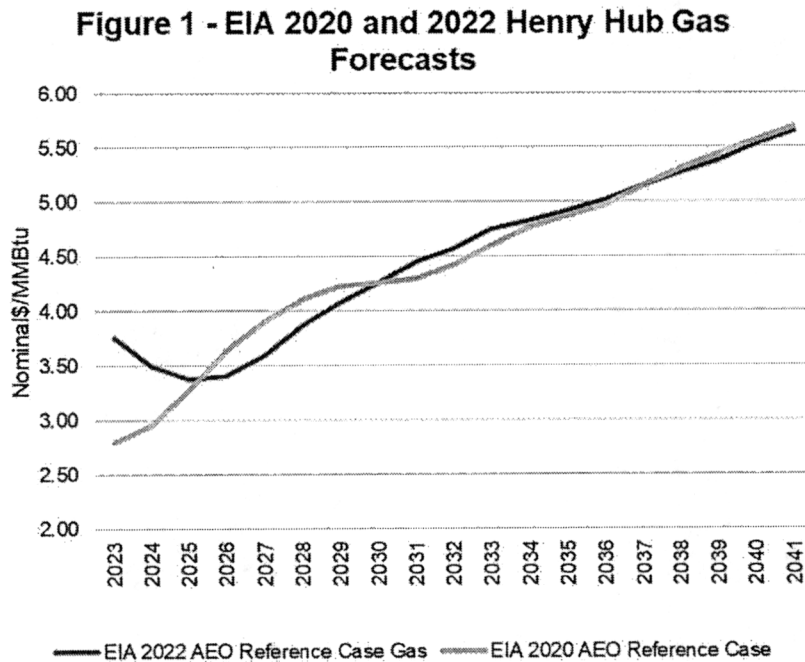
⁷³ SWEPCO Ex. 14 (Martin Reb.) at 26.

⁷⁴ SWEPCO Ex. 14A (Martin Reb.) (HSPM) at 27 (Bates 000004) (HSPM table showing the costs of fuel at Pirkey and other solid fuel plants).

⁷⁵ CARD Ex. 1 (Norwood Dir.) at 8, 15; ETEC-NTEC Ex. 2a (Striedel Dir.) at 18; Staff Ex. 1 (Ghanem Dir.) at 8.

⁷⁶ SWEPCO Ex. 14 (Martin Reb.) at 20.

SWEPCO admits that natural gas prices began to spike around the time of Winter Storm Uri, the prices have since decreased. Further, the Company subsequently compared EIA’s 2020 AEO Reference Case with EIA’s 2022 AEO Reference case, and the forecasts are substantially similar in the long-term, as shown in Mr. Martin’s rebuttal testimony, reproduced below.



SWEPCO also points out that resource planning decisions are made based on the best available information at the time the decision was made.⁷⁷ The ALJs agree. Additionally, the ALJs agree that despite the temporary spike in natural gas prices, the prices have come back down such that the long-term pricing forecast is substantially similar to that used in the 2020 CCR/ELG Analysis. Therefore, the

⁷⁷ SWEPCO Ex. 14 (Martin Reb.) at 14.

evidence does not show that a more current update to the natural gas prices used in the analysis would make a material difference in the results.

Relatedly, ETEC-NTEC argue that Pirkey's continued operation would have been more competitive in the 2020 CCR/ELG Analysis if Pirkey were run at a higher capacity factor. This is because Pirkey's mostly fixed lignite mining and transportation costs have been spread over fewer generation hours, which drives up the average fuel costs.⁷⁸ SWEPCO witness Martin admits that operating Pirkey at a higher capacity factor would result in it performing more favorably in the 2020 CCR/ELG Analysis, but not enough to change the results. He re-ran the numbers with Pirkey at a 53% capacity factor rather than the 35% assumed in the 2020 CCR/ELG Analysis and with no other changes.⁷⁹ The results show a LCOE at Pirkey of \$59/MWh in the no carbon case and \$74/MWh in the carbon case, which is still higher than the LCOE for the Selected Facilities at \$43/MWh.⁸⁰ The analysis still shows that significant savings result from retiring Pirkey. Looking at the nominal (undiscounted) energy margin, the analysis results in \$479 million in savings for the no carbon case (compared to \$739 million at a 35% capacity factor) and \$1,030 million in savings for the carbon case (compared to \$1.168 billion at a 35% capacity factor).⁸¹ The ALJs find that, even under an assumed higher capacity factor, retiring Pirkey in 2023 results in significant savings over the acquisition of the Selected Facilities.

⁷⁸ ETEC-NTEC Ex. 2a (Striedel Dir.) at 16.

⁷⁹ SWEPCO Ex. 14 (Martin Reb.) at 28. Mr. Martin notes, however, that fuel costs are understated in this analysis because they were not adjusted upwards to account for the increased energy production. Therefore, the savings to retire Pirkey in this analysis are understated.

⁸⁰ SWEPCO Ex. 14 (Martin Reb.) at 28-30.

⁸¹ SWEPCO Ex. 14 (Martin Reb.) at 28-30.

b) Gas Conversion or New Gas Boilers at Pirkey

CARD argues that SWEPCO should have considered converting the Pirkey plant to a gas-fired option or siting new gas-fired boilers at Pirkey. SWEPCO states that these options were considered, but not included in an analysis to compare with the cost of the Selected Facilities. For either scenario, SWEPCO states that it would need to invest a significant amount of money to obtain pipeline capacity to transport gas to the Pirkey site.⁸² SWEPCO noted that it conducted a gas-siting study in March 2020. Pirkey was the third best out of three Texas sites and tied for the fourth out of SWEPCO's six sites overall. The other Texas sites were ranked higher due to access to natural gas and the size and voltage of their electrical interconnections, among other factors.⁸³ Therefore, other sites would be prioritized for gas-siting over Pirkey.

Additionally, SWEPCO determined that Pirkey was a poor candidate for conversion to a gas-fired plant due to the design of its furnace. SWEPCO witness Martin explained that lignite furnaces must be much larger than coal boilers because lignite has a higher ash content and a higher rate of ash slagging such that more volume is needed to cool the ash when it impinges on furnace walls. That volume, however, would result in a lower heat rate when converted to gas, requiring more gas to be burned. This results in reducing the efficiency of the unit and increasing the cost of power generated. The Pirkey furnace has a volume of 1,021,020 cubic feet, while the Welsh furnaces are only 491,028 cubic feet. SWEPCO continues to analyze

⁸² SWEPCO Ex. 14A (Martin Reb.) (HSPM) at 35 (Bates 000006).

⁸³ SWEPCO Ex. 14 (Martin Reb.) at 32.

the Welsh plant as a candidate for natural gas conversion because it does not have the potential for efficiency losses that Pirkey does.⁸⁴

In addition, the cost of a gas conversion at Pirkey is estimated to cost more than the conversion at Welsh, which is \$130 million. SWEPCO estimates Pirkey's gas conversion annual revenue requirement to be approximately \$5.89 per kilowatt (kW)/month based on a lower than likely project cost of \$130 million (using the Welsh estimate) to calculate a \$41 million annual cost of service. The \$5.89 per kW/month is higher than the cost of the CPAs and is also far higher than the life extensions for other plants.⁸⁵ Given that the Selected Facilities have a negative LNCOE, SWEPCO argues that gas conversion at Pirkey is more expensive than the other available options to satisfy need.⁸⁶

The evidence shows that Pirkey was not a good candidate for gas conversion due to its furnace size and the natural gas pipeline and conversion costs. Therefore, the ALJs find that it was reasonable for SWEPCO to omit gas conversion of the Pirkey plant from the alternatives analyzed by the modeling.

⁸⁴ SWEPCO Ex. 14 (Martin Reb.) at 36.

⁸⁵ SWEPCO Ex. 14A (Martin Reb.) (HSPM) at 38 (Bates 000007).

⁸⁶ SWEPCO Ex. 14 (Martin Reb.) at 37-38.

c) 2021 Arkansas IRP Analysis and Confirmation Analysis's Assumed Retirement of Pirkey and Welsh

CARD contends that the Q1 2021 Analysis and the Confirmation Analysis should not have assumed that Pirkey and Welsh would be retired.⁸⁷ SWEPCO responds that the CCR rules required a decision by November 2020. SWEPCO had to make that decision based on the information it had at the time. Once that decision was made and the EPA was informed, there was no option to continue running the plants. The ALJs find that CARD did not present sufficient evidence supporting the need to include Pirkey and Welsh in the analyses after the decision had been made to retire burning solid fuels at the plants.

d) Costs of Renewables in the Analyses

CARD argues that the cost of new wind and solar facilities were understated in the Q1 2021 Analysis making those facilities more likely to be chosen. CARD witness Scott Norwood testified that the Q1 2021 Analysis used capital cost assumptions for wind and solar resources ranging from \$1,100 per kW to \$1,356 per kW, while the final bid cost was nearly \$2,200 per kW—representing a 79% increase over the assumptions.⁸⁸ SWEPCO responds that it used the best information available at the time the analysis was performed. Specifically, SWEPCO used cost estimates based on information from EIA and from AEP's own new wind resources,

⁸⁷ CARD Initial Brief at 14.

⁸⁸ CARD Ex. 1 (Norwood Dir.) at 19.