BEFORE THE

LOUISIANA PUBLIC SERVICE COMMISSION

IN RE: APPLICATION OF SOUTHWESTERN ELECTRIC POWER COMPANY FOR THE CERTIFICATION AND APPROVAL TO CONSTRUCT THE HALLSVILLE NATURAL GAS PLANT AND TO CONVERT WELSH UNITS 1 AND 3 TO NATURAL GAS, IN ACCORDANCE WITH THE MBM ORDER AND THE COMMISSION'S 1983 ORDER	DOCKET NO. U-_____

DIRECT TESTIMONY OF

MATTHEW J. DECOURCEY

FOR

SOUTHWESTERN ELECTRIC POWER COMPANY

DECEMBER 2024

TESTIMONY INDEX

EXHIBITS

I. INTRODUCTION

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

A. My name is Matthew DeCourcey and I am a Vice President in the Energy Practice at Charles River Associates (CRA). My business address is 200 Clarendon Street, Boston, MA 02116.

Q. PLEASE DESCRIBE CRA'S ENERGY PRACTICE.

A. The experts in CRA's Energy Practice provide advisory services to utilities, investors, and other market participants across the energy supply chain to support effective decision-making, navigate uncertainty, and create stakeholder value. The practice's areas of focus include ratemaking and regulation, market analysis, transactions, disputes, and strategy.

Q. WOULD YOU BRIEFLY DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A. I joined CRA in August 2024. From 2021 to 2024, I was the Vice President of Rates and Regulatory Strategy for Liberty Utilities (Liberty), a utility holding company owned by Algonquin Power and Utilities, in which capacity I was responsible for all elements of ratemaking, participation in regulatory proceedings, and regulatory strategy, for each of the company's utilities. Liberty owns electric, gas, water, and wastewater distribution utilities, as well as electric transmission, serving customers in a total of nineteen jurisdictions in the U.S., Canada, Bermuda, and Chile. Prior to joining Liberty, I held roles with several consultancies providing advisory services to utilities and other industry stakeholders. Most recently, I was a Managing Director with FTI Consulting's Power & Utilities Practice. In total, I have roughly 20 years' experience in the sector. I received an undergraduate degree in Political Science from the University of Massachusetts at Boston

and a Master of Business Administration with a specialization in Finance from the University of Massachusetts at Amherst.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY COMMISSION?

A. Yes. I have made numerous appearances as a witness before state and provincial regulators in the United States and Canada and before the Federal Energy Regulatory Commission. However, I have not previously testified before the Louisiana Public Service Commission.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony describes an analysis to quantify the benefit to customers from decisions made by the Southwestern Electric Power Company (SWEPCO, or the Company) regarding the retirement of the H.W. Pirkey Plant (Pirkey), investment in a new gas-fired generation facility at the Pirkey Site in Hallsville, Texas (Hallsville), and the cessation of the use of coal at the Welsh Power Plant Units 1 and 3 (Welsh) in 2028. That analysis, referred to as the Comparative Analysis throughout the remainder of my testimony, utilizes market simulations to forecast the costs and benefits to customers of the Pirkey, Welsh, and Hallsville facilities. The Comparative Analysis evaluated Welsh Units 1 and 3 as both coal-fired and with a conversion to become gas-fired units.

Q. WHAT WERE THE RESULTS OF THE COMPARATIVE ANALYSIS?

A. The results demonstrate the decisions the Company has made regarding these assets will lower customer costs by roughly $1.8 billion. That total includes $982 million from

constructing the Hallsville plant and $804 million from converting Welsh to natural gas. See Table 1, which also shows the benefits on a Net Present Value (NPV) basis.

Table 1. Customer Benefits from SWEPCO Decisions *($ millions)*

	$ nominal	**$ NPV**
Hallsville benefit	$982.3M	$582.0M
Welsh conversion benefit	$804.1M	$402.5M
Total customer benefit	$1,786.4M	$984.5M

For reasons I discuss below, these estimates are conservative because they are based on assumptions that are relatively favorable to continued lignite operations at Pirkey and burning coal at Welsh. Given different assumptions, savings to customers could be higher.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. A current copy of my resume is attached as Exhibit MJD-1 and an Expert Report describing the Comparative Analysis and its results in detail is attached as Exhibit MJD-2.

III. COMPARATIVE ANALYSIS

Q. WHAT WERE THE RESULTS OF THE COMPARATIVE ANALYSIS?

A. The Comparative Analysis shows that building Hallsville will save customers $982 million and that converting Welsh to burn natural gas instead of coal will save customers $804 million. The total benefit to customers is therefore $1.8 billion. Expressed on an NPV basis, the benefits total $985 million.[1]

Q. CAN YOU PLEASE BRIEFLY EXPLAIN THE APPROACH TAKEN FOR THE COMPARATIVE ANALYSIS?

[1] Exhibit MJD-2. Pg 5

A. My colleagues at CRA and I developed market simulations under several assumed scenarios that include various combinations of construction, retirement, conversion (from one fuel source to another), and continued operation for Pirkey, Welsh, and Hallsville, as well as other factors, to determine how each plant would operate, and at what cost, in each configuration. The all-in cost of ownership and operation under each set of assumptions was totaled and compared. The difference between total costs in each instance is the benefit to customers from SWEPCO's decision for each plant.

Q. WOULD THE CONTINUED OPERATION OF PIRKEY AND WELSH REQUIRE SWEPCO TO MAKE ANY INVESTMENTS IN THE PLANTS?

A. Yes. Because of changes to the Environmental Protection Agency's Coal Combustion Residuals Rules and Effluent Limitations Guideline Rule (together, the EPA Rules), upgrades would be required for each plant, the cost of which is included in the Comparative Analysis. Additional details are discussed later in my testimony and in my Exhibit MJD-2.

Q. CAN YOU PROVIDE AN EXAMPLE THAT ILLUSTRATES HOW THE CALCULATION OF BENEFIT WORKS?

A. Yes. For example, for Pirkey, the cost of continuing to operate the plant, inclusive of the investments required to maintain environmental compliance, other financial costs, and the costs of operating the plant, was calculated. The total was offset by the projected value of the plant's energy and capacity over the forecast period. The difference is the net cost to customers of SWEPCO's owning Pirkey. In the scenario in which Hallsville is built, the same calculations were conducted, yielding the net cost to customers of SWEPCO's owning Hallsville. The Comparative Analysis shows that customers' costs will be lower

when SWEPCO builds Hallsville; thus, the benefit to customers is calculated as the cost of owning Pirkey minus the cost of owning Hallsville. The same approach was taken to calculate the benefit of the decision to convert Welsh to operate on natural gas.

Q. HOW DOES THAT BENEFIT ACCRUE TO SWEPCO'S CUSTOMERS?

A. The amounts billed to the customers will be lower with the Company owning Hallsville and having converted Welsh. There is no ratemaking or bill adjustment attributable to the plant changes, rather, the revenue that the Company collects from customers will be less than the amount it would have collected if Pirkey had been kept in service and Welsh continued to burn coal.

Q. CAN YOU PLEASE SUMMARIZE SOME OF THE KEY INPUTS THAT WERE USED FOR THE COMPARATIVE ANALYSIS?

A. Yes, Exhibit MJD-2 contains descriptions of the inputs that the study utilizes in detail, including inputs that were applied globally and unit-specific inputs relevant to Pirkey, Welsh, and Hallsville. Important inputs include natural gas prices and the value of capacity in SPP. The natural gas price was derived from the "High Oil and Gas Supply" case in the EIA's 2023 AEO and is applied for all scenarios except one of the alternative scenarios, as described below.[2] The capacity price forecast is derived from an outlook of the Cost of New Entry (CONE) of capacity resources in SPP, which is a standard approach to estimating capacity value. In addition, the *Base Scenario* in the Comparative Analysis scenarios assumed no federal Greenhouse Gas / Carbon emissions regulations were in effect. Other global inputs described in Exhibit MJD-2 are the unit-specific inputs that apply to Pirkey, Welsh, and Hallsville.

[2] Exhibit MJD-2. Pg 12

Pirkey

Q. HOW MUCH WOULD IT HAVE COST CUSTOMERS TO CONTINUE OPERATING PIRKEY?

A. Roughly $1.1 billion over the period 2028-2043.[3]

Q. PLEASE EXPLAN THE BASIS OF THAT ESTIMATE.

A. To remain in service, changes in EPA Rules would have required more than $400 million in upgrades at Pirkey, plus ongoing capital costs.[4] While those investments would have allowed the plant to meet the environmental standards, Pirkey would still be an obsolete facility that burns expensive fuel and is therefore unable to compete effectively in the SPP market. As Exhibit MJD-2 explains in detail, Pirkey's margins would have been poor for the entirety of the forecast period, which is to say that its cost of generating energy would have been greater than the market value of the energy produced.[5] Pirkey's capacity would have had significant value because the plant's capacity would displace capacity that SWEPCO would otherwise have to obtain from some other source, but that value would have been offset by the fixed costs of owning Pirkey, including return on rate base, depreciation, fixed operating costs, and others. The sum of the value of its net energy revenue (energy revenues minus generation costs), its capacity value, and its fixed costs of ownership is projected to be $1.1 billion for the forecast period.

Q. HOW MUCH LESS WILL CUSTOMERS PAY BECAUSE OF THE DECISION TO CONTRUCT HALLSVILLE?

A. $982 Million.

Q. PLEASE EXPLAIN.

[3] Exhibit MJD-2. Pg 27
[4] Exhibit MJD-2. Pg 20
[5] Exhibit MJD-2. Pg 23

A. The cost of owning Hallsville is calculated in the same manner as the cost of owning Pirkey and totals $163 million. The individual components of that calculation are provided in Exhibit MJD-2.[6] The difference between the cost of continuing to operate Pirkey and that amount is the cost reduction (benefit) to customers attributable to the decision to construct Hallsville. Table 2 shows the totals and calculation of the benefits on both a nominal and NPV basis between 2028 - 2043.

Table 2. Customer Benefit from Constructing Hallsville *($millions)*[7]

	$ nominal	**$ NPV**
Pirkey continued operation	$1,144.9 M	$739.7 M
Hallsville	$162.6 M	$157.7 M
Difference (customer benefit)	$982.3 M	$582.0 M

Q. WHY IS THE COST OF OWNING HALLSVILLE LOWER THAN PIRKEY?

A. The difference is primarily attributable to the fact that Pirkey is expensive to own and operate. Its fuel costs are high, which means its energy margins are negative. It also has significant fixed costs, which are partly attributable to the cost of the environmental upgrades that would be required to keep the plant in operation. Hallsville's costs are lower and its operating margins improve during the forecast period.

Welsh

Q. DID YOU USE THE SAME GENERAL APPROACH TO ESTIMATE THE BENEFIT TO CUSTOMERS FROM CONVERTING WELSH TO OPERATE ON NATURAL GAS?

A. Yes. As explained in detail in the Exhibit MJD-2, a simulation was developed in which the investments required by the EPA Rules were made and Welsh continued to burn coal. In that scenario, Welsh 1 is assumed to retire in 2037 and Welsh 3 is operated through the

[6] Exhibit MJD-2. Pg 25
[7] Exhibit MJD-2. Pg 27

end of the forecast period, 2042. The total net cost to customers of owning Welsh for the period 2028-2042 is $357 million.[8] Alternatively, when SWEPCO is assumed to make the investment required to operate Welsh on gas instead of coal, total net cost to customers is -$447 million.[9] The difference of $804 million is the benefit to customers.

Q. WHY ARE THE COSTS OF OWNING WELSH HIGHER WHEN IT OPERATES ON COAL?

A. In its current configuration, Welsh burns coal from the Powder River Basin, whose cost is forecasted to rise faster than market prices for natural gas and electricity in SPP. [10] Because of this, Welsh is expected to operate less and generate less revenue and margin from energy sales than it has in the past.[11] The net cost to customers of owning Welsh exceeds the value of its generation and capacity beginning in the early 2030s.[12] When Welsh is converted to natural gas, its operating costs are lower and the plant is more competitive. Operating on gas, the plant's margins are positive, and its capacity factor increases steadily starting in the mid-2030s. Because those trends move in opposite directions – Welsh is increasingly expensive to own when operating on coal and increasingly economical following its conversion to gas – the benefits of the conversion grow steadily over the forecast period.

Q. HAVE YOU ALSO CALCULATED THE TOTAL BENEFIT TO CUSTOMERS FROM CONVERTING WELSH ON AN NPV BASIS?

A. Yes, I have. See Table 3 below.

Table 3. Customer Benefit from Welsh Conversion *($millions)* [13]

[8] Exhibit MJD-2. Pg 29
[9] When Welsh is converted to natural gas, the value of its energy and capacity is greater than its fixed and operating costs. As such, the net cost of the plant is negative.
[10] Exhibit MJD-2. Pg 20
[11] Exhibit MJD-2. Pg 27
[12] Exhibit MJD-2. Pg 28
[13] Exhibit MJD-2. Pg 29

	$ nominal	$ NPV
Welsh continued operation (coal)	$357.4 M	$166.2 M
Welsh conversion	($446.7) M	($236.4) M
Difference (customer benefit)	$804.1 M	$402.6 M

Q. IS THE CALCULATION OF COSTS AND BENEFITS LIMITED TO THE PERIOD 2028-2042?

A. Yes. Welsh is assumed to continue to operate on coal through 2027, consistent with its 2020 CCR/ELG rule compliance plan, in all the scenarios that were modeled.

Alternative Scenarios

Q. PREVIOUSLY, YOU EXPLAINED THAT SEVERAL ALTERANTIVE SCENARIOS WERE DEVELOPED; CAN YOU PLEASE SUMMARIZE THEM?

A. The Comparative Analysis includes alternative scenarios. First, CRA developed a *CO2 Price Scenario* in which the Hallsville and Welsh conversion benefits were calculated with an assumed CO2 price levied on emissions, a higher natural gas price forecast, and all other inputs held constant.[14] Second, a *Constrained Production Scenario* was developed in which production at the Sabine Mine, from which Pirkey's fuel was sourced, was limited to 2 million tons of lignite per year, causing an increase in the plant's per-unit fuel price.[15,16] The cost of Pirkey under this scenario was compared to Hallsville. Third, in the *Fuel Blend Scenario*, Welsh is modified to operate on a blend of 60% coal and 40% natural gas in 2028, instead of 100% natural gas.[17] The cost of operating with blended fuel was compared to the cost of continuing to operate on coal.

[14] Exhibit MJD-2. Pg 31
[15] Exhibit MJD-2. Pg 32
[16] The basis for constraining production to 2 million tons per year is discussions I had with AEP experts regarding the operation of the Sabine Mine. As I understand it, the mine operated multiple draglines, each of which can produce about 1 million tons of lignite per year, at full capacity. Operating each dragline at full capacity reduces per-unit costs by capturing available economies of scale. Assuming full utilization of two draglines reflects a realistic set of inputs for a scenario similar to that experienced in 2019 and 2020 in which lignite production will be reduced because SPP energy market prices remain depressed, limiting Pirkey's ability to profit from selling energy.
[17] Exhibit MJD-2. Pg 33

Q. WHAT DO THE ALTERNATIVE SCENARIOS SHOW?

A. Results from each of the alternative scenarios are consistent with those in the *Base Scenario*. In the *CO2 Scenario*, the benefits of the gas-fired options are greater because the impacts of a CO2 price on coal-fired generation are relatively greater, so continuing to operate Pirkey and Welsh on coal would be more expensive compared to the available alternatives. In the *Constrained Production Scenario*, Pirkey's fuel cost is higher, while other factors are held constant, which worsens the plant's already poor economic outlook when continued operation on coal is envisioned. In the *Fuel Blend Scenario,* Welsh requires a significant capital investment to partially convert the plant from coal to gas but still suffers from the fact that coal is a less economical fuel.[18] Primarily for this reason, the cost to own and operate Welsh is higher in the *Fuel Blend Scenario*. Benefits attributable to Hallsville and to the Welsh conversion for each of the sensitivity scenarios in Table 4 and Table 5 show the same results expressed on a Nominal and NPV basis.

Table 4. Alternative Scenario Benefits *($millions, nominal)*

Scenario	Hallsville Build	Welsh Conversion	Total Benefit
CO2 Price Scenario	$737	$816	$1,553
Constrained Production	$814		$814
Fuel Blend		($56)	($56)
Base	$982	$804	$1,786

Table 5. Alternative Scenario Benefits *($millions, NPV)*

Scenario	Hallsville Build	Welsh Conversion	Total Benefit
CO2 Price Scenario	$433	$392	$825
Constrained Production	$477		$477
Fuel Blend		($131)	($131)
Base	$582	$403	$985

[18] Exhibit MJD-2. Pg 34

Q. HOW DO YOU INTERPRET THESE RESULTS?

A. These results indicate that the primary conclusion supported by the *Base Scenario*, that Hallsville and the Welsh conversion create significant benefits for SWEPCO's customers. Put another way, these results show that the *Base Scenario* conclusions are robust.

Q. WHAT DO THESE RESULTS SHOW REGARDING THE MAGNITUDE OF THE BENEFITS FROM HALLSVILLE AND THE WELSH CONVERSION UNDER OTHER MARKET CONDITIONS?

A. They show that benefits could be higher if alternative market conditions were to materialize. That result is plausible. A CO2 price could be imposed. A reduction in production at Sabine was also possible. If either or both of those things happened, benefits to SWEPCO's customers could be greater than the results indicated in the *Base Scenario*.

Q. WHAT ABOUT THE FUEL BLEND SCENARIO?

A. The finding in the *Fuel Blend Scenario* simply highlights the poor economic outlook for continuing to burn coal.

IV. CONCLUSIONS

Q. PLEASE SUMMARIZE YOUR PRIMARY CONCLUSIONS

A. My testimony supports three primary conclusions:

First, building Hallsville will save SWEPCO's customers money,

Second, converting Welsh to operate on natural gas will save SWEPCO's customers money, and

Third, these conclusions hold under a wide range of analytical assumptions.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.