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Received - 2022-01-26 02:37:27 PM
Control Number - 52485
ItemNumber - 106

SOAH DOCKET NO. 473-22-1073
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APPLICATION OF SOUTHWESTERN PUBLIC SERVICE COMPANY TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY TO CONVERT HARRINGTON GENERATING STATION FROM COAL TO NATURAL GAS	**§**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

SOUTHWESTERN PUBLIC SERVICE COMPANY'S
RESPONSE TO ALLIANCE OF XCEL MUNICIPALITIES'
FIRST REQUEST FOR INFORMATION
QUESTION NOS. 1-1 THROUGH 1-25
(*Filename*: SPSRespAXM1st.doc; *Total Pages*: 90)

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SOUTHWESTERN PUBLIC SERVICE COMPANY'S RESPONSE TO ALLIANCE OF XCEL MUNICIPALITIES' FIRST REQUEST FOR INFORMATION QUESTION NOS. 1-1 THROUGH 1-25

Southwestern Public Service Company ("SPS") files this response to the Alliance of Xcel Municipalities' ("AXM") First Request for Information, Question Nos. 1-1 through 1-25. SPS has provided notice, by email, to all parties that SPS's Responses to AXM's First Request for Information and accompanying exhibits (excluding voluminous and exhibits provided pursuant to the protective order) have been filed with the Commission and are available for download from the Commission's Interchange website.

I. WRITTEN RESPONSES

SPS's written responses to AXM's First Request for Information are attached and incorporated by reference. Each response is stated on or attached to a separate page on which the request has been restated. SPS's responses are made in the spirit of cooperation without waiving SPS's right to contest the admissibility of any of these matters at hearing. In accordance with 16 Tex. Admin. Code § 22.144I(2)(A) ("TAC"), each response lists the preparer or person under whose direct supervision the response was prepared and any sponsoring witness. When SPS provides certain information sought by the request while objecting to the provision of other information, it

does so without prejudice to its objection in the interests of narrowing discovery disputes under 16 TAC § 22.144(d)(5). Pursuant to 16 TAC § 22.144(c)(2)(F), SPS stipulates that its responses may be treated by all parties as if they were made under oath.

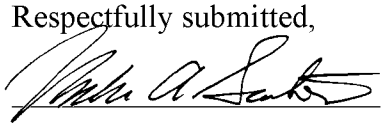
II. INSPECTIONS

If responsive documents are more than 100 pages but less than eight linear feet in length, the response will indicate that the attachment is voluminous ("(V)") and, pursuant to 16 TAC § 22.144(h)(2), the exhibit will be made available for inspection at SPS's voluminous room at 600 Congress Avenue, Suite 2000, Austin, Texas 78701; telephone number (512) 721-2700. Voluminous exhibits will also be provided via email through Coffin Renner LLP's file sharing link.

If a response or the responsive documents are provided pursuant to the protective order in this docket, the response will indicate that it or the attachment is either Confidential ("CONF") or Highly Sensitive ("HS") as appropriate under the protective order. Access to Confidential and Highly Sensitive materials will be available on SPS's file sharing platform to all parties that have signed and filed the certification under the protective order entered in this docket. Confidential and Highly Sensitive responsive documents will also be made available for inspection at SPS's voluminous room, unless they form a part of a response that exceeds eight linear feet in length; then they will be available at their usual repository in accordance with the following paragraph. Please call in advance for an appointment to ensure that there is sufficient space to accommodate your inspection.

If responsive documents exceed eight linear feet in length, the response will indicate that the attachment is subject to the FREIGHT CAR DOCTRINE, and, pursuant to 16 TAC § 22.144(h)(3), the attachment will be available for inspection at its usual repository, SPS's offices in Austin, Texas, unless otherwise indicated. SPS requests that parties wishing to inspect this material provide at least 48-hour notice of their intent by contacting Stephanie Tanner at Coffin Renner LLP PC, 1011 West 31st Street, Austin, Texas 78705; telephone number (512) 879-0900; facsimile transmission number (512) 879-0912; email address stephanie.tanner@crtxlaw.com Inspections will be scheduled to accommodate all requests with as little inconvenience to the requesting party and to SPS's operations as possible.

Respectfully submitted,



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ATTORNEYS FOR
SOUTHWESTERN PUBLIC SERVICE COMPANY

RESPONSES

QUESTION NO. AXM 1-1:

Please provide the study period, start date and end date for each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

The study period in the 2021 updated economic analysis is 2022 – 2041.

The study period in the 2019 economic analysis is 2019 – 2054.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-2:

Please provide the required start-up time (hours), ramp rate and load following capability of the converted Harrington units as reflected in each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

For the 2021 updated economic analysis, the minimum and maximum output of the Harrington Units 2 and 3 is 120 MW and 350 MW, respectively. The minimum and maximum output of Harrington Unit 1 is 120 MW and 345 MW, respectively. The ramp rate of each Harrington Unit was modeled at 2 MW per minute. After reviewing and testing preliminary results, and to speed up the processing time, SPS did not incorporate start-up times for SPS-owned generating units as it did not materially change the results.

For the 2019 economic analysis, the minimum and maximum output for the Harrington units is as follows:

Unit 1: 119 MW and 339 MW
Unit 2: 119 MW and 342 MW
Unit 3: 126 MW and 350 MW

As described in the Direct Testimony of Ben R. Elsey, the 2019 Harrington analysis was conducted in Strategist. As Strategist is not an hourly dispatch production cost model, hourly inputs such as start-up time, and sub-hourly inputs such as ramp rate were not included in the analysis.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-3:

Please provide the Company's forecasted native system peak demand and energy requirement for each year of each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

For the 2021 updated economic analysis please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF). System peak demand and energy requirement for each year is included on the worksheet "company annual".

For the 2019 economic analysis, please refer the Strategist output files provided in Exhibit SPS-SC 1-3(ii). System peak demand for each year is included on the worksheet "expansion plan" and energy requirements is included on the worksheet "energy mix".

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-4

Please provide the energy, capacity, fuel and emissions price forecasts used for each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

For the updated 2021 economic analysis, please refer to Question Nos. SPS-TIEC 1-2 for the natural gas forecast and SPS-TIEC 1-4 for the market energy price forecast.

For the 2019 economic analysis, please refer to Exhibit SPS-AXM 1-4 for the natural gas and market energy prices forecasts.

SPS did not include a cost for emissions in either analysis.

SPS does not forecast an expected price for capacity, instead, SPS relies upon recent capacity transactions as a proxy for determining the value of capacity. SPS currently values capacity at $2.40 kW-month (in 2018 dollars, escalated at 2% per year).

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-5:

Please provide the energy, capacity, fuel and emissions price forecasts used for the base case and each alternative scenario evaluated in the Company's most recent Integrated Resource Plan ("IRP").

RESPONSE:

SPS does not file an Integrated Resource Plan in Texas.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-6:

Please provide the Company's forecasted total firm capacity (MW) from owned generating resources and purchased power resources for each year of each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

For the 2021 updated economic analysis, please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF). Total firm capacity for each year is included on the worksheet "company annual".

For the 2019 economic analysis, please refer the Strategist output files provided in Exhibit SPS-SC 1-3(ii). Total firm capacity for each year is included on the worksheet "expansion plan".

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-7:

Please provide the Company's forecasted total carbon emissions from owned generating resources and purchased power resources for each year of each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

For the 2021 updated economic analysis, please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF). Total carbon emissions from owned generating resources and purchased power resources are included on the worksheet "Company Annual Emissions".

For the 2019 economic analysis, please refer the Strategist output files provided in Exhibit SPS-SC 1-3(ii). Total carbon emissions from owned generating resources and purchased power resources are included on the worksheet "Emissions".

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-8:

Please provide the underlying data for each year for each component (e.g., fuel, energy, capacity and O&M costs) of the estimated NPV benefits savings as reflected in each of the Tables included in Attachment BRE-1 of witness Elsey's direct testimony.

RESPONSE:

After consulting with AXM, AXM confirmed the page reference in the original RFI could be removed. SPS responds accordingly.

Please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF) for all underlying cost data for each year for the tables included in Attachment BRE-1.

Note: The NPV tables included in Attachment BRE-1 are included in each EnCompass output file on the worksheet "PVSC-PVRR" and additional cost information is summarized on the worksheet "Costs". The data SPS has supports the tables in Attachment BRE-1 and does not necessarily correspond to the items in the parenthetical in this request.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-9:

Please provide the following information for each existing and new generating unit and purchased power resource included in each year of each of the 2019 economic analyses performed prior to the finalized Agreed Order with TCEQ as referenced on page 6 of Company witness Elsey's direct testimony:

a. Net dependable capacity rating (MW)
b. Fixed O&M expense
c. Variable O&M expense
d. Fuel expense
e. Purchased capacity amount (MW) and cost
f. Purchased energy volume (MWh) and cost
g. Forced outage hours
h. Planned outage hours including refueling outages
i. Annual capital additions costs
j. Net generation, MWh
k. Average annual net heat rate
l. Annual net capacity factor
m. Carbon emissions volume
n. Carbon emissions cost

RESPONSE:

a) Please refer the Strategist output files provided in Exhibit SPS-SC 1-3(ii). The requested information for each thermal unit is included on the worksheet "Unit Detail" and the requested information for each renewable unit is included on the worksheet "Trans Detail". Each individual unit can be selected from the drop-down menu in Cell E2.

b) Please refer to subpart (a).

c) Please refer to subpart (a).

d) Please refer to subpart (a).

e) Please refer to subpart (a). The requested information for each purchased power agreement is included for selection using the drop-down menu in Cell E2.

Note: Where applicable, any cost of capacity is embedded in the total fixed cost associated with the purchased power units.

f) Please refer to subpart (a). The requested information for each purchased power agreement is included for selection using the drop-down menu in Cell E2.

g) Please refer to Exhibit SPS-AXM 1-9(g).

h) Please refer to Exhibit SPS-AXM 1-9(g).

i) Please refer the Strategist output files provided in Exhibit SPS-SC 1-3(ii). The requested information for each thermal unit is included on the worksheet "CER CapX".

j) Please refer to subpart (a).

k) Please refer to subpart (a).

l) Please refer to subpart (a).

m) Please refer to subpart (a).

n) SPS did not include a cost for carbon emissions.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-10:

Please provide the following information for each existing and new generating unit and purchased power resource included in each year of each of the 2021 updated economic analyses supporting SPS's decision to convert the Harrington units to operate on natural gas as referenced on page 6 of Company witness Elsey's direct testimony:

a. Net dependable capacity rating (MW)
b. Fixed O&M expense
c. Variable O&M expense
d. Fuel expense
e. Purchased capacity amount (MW) and cost
f. Purchased energy volume (MWh) and cost
g. Forced outage hours
h. Planned outage hours including refueling outages
i. Annual capital additions costs
j. Net generation, MWh
k. Average annual net heat rate
l. Annual net capacity factor
m. Carbon emissions volume
n. Carbon emissions cost

RESPONSE:

a. Please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF). The requested information for is included on the worksheet "Resource Annual"

b. Please refer to subpart (a).

c. Please refer to subpart (a).

d. Please refer to subpart (a).

e. Please refer to subpart (a).

Note: Where applicable, any cost of capacity is embedded in the total fixed cost associated with the purchased power units.

f. Please refer to subpart (a).

g. Please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF). The availability factor for each unit is included on the worksheet

"Resource Annual" and incorporates both forced and planned outages. For just the forced outage rate, please refer to the EnCompass input files provided in Exhibit SPS-SC 1-3(i)(CONF). The forced outage rate for each unit is included on the worksheet "Resource".

h. Please refer to the EnCompass input files provided in Exhibit SPS-SC 1-3(i)(CONF). The planned outage rate for each unit is included on the worksheet "TimeSeriesDatedChanges". Alternatively, the information can be calculated using the information provided in subpart (g).

i. Please refer to the EnCompass input files provided in Exhibit SPS-SC 1-3(i)(CONF). Annual capital additions for each unit are included on the worksheet "TimeSeriesDatedChanges".

j. Please refer to subpart (a).

k. Please refer to subpart (a).

l. Please refer to subpart (a).

m. Please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF). The requested information for is included on the worksheet "Resource Annual Emissions".

n. SPS did not include a cost for carbon emissions.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-11:

Please provide the commercial operation and retirement dates for each SPS existing and new generating unit for each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

Please refer to Exhibit SPS-AXM 1-11 for each of SPS's existing owned generating units.

For new resources included in the 2021 updated economic analysis, please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF).

For new resources included in the 2019 economic analysis, please refer the Strategist output files provided in Exhibit SPS-SC 1-3(ii).

Preparers: Ashley Gibbons, Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-12:

Please identify each fixed input or constraint placed on the resource type, resource capacity rating, annual resource additions (MW) or timing of addition of new generating resources as included in each year of each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony and explain the basis and purpose of such fixed inputs or constraints.

RESPONSE:

For the 2021 updated economic analysis, SPS included the following fixed inputs or constraints to the expansion plans:

- Only new resources proposed in SPS's 2020 request for information were available for selection until the end of year 2025, thereafter only generic resources were available for selection. This ensured the Harrington analysis incorporated market pricing for new resources and not generically priced units where possible.

- SPS limited the maximum number of combustion turbine generators to be added in any given year to 2 and the maximum number of combined cycle generators to be added in any given year to 1. This was done to prevent excessive addition of new generation in a single year.

- SPS fixed the addition of proposals W_002b, W_004d, and WB_001a in all scenarios. This was only done after several initial reiterations of the Harrington analysis in which these results were selected in every portfolio of resources. SPS then 'locked in' these resources to speed up future modeling solve times.

For the 2019 economic analysis, SPS included the following fixed inputs or constraints to the expansion plans:

- SPS 'locked in' the renewable expansion plan for each scenario. The purpose of locking in the renewable expansion plan was to evaluate each Harrington scenario assuming the likely event of a continued build-out of new renewable generation over the next decade. SPS opted against optimizing the renewable expansion due to the scheduled expiration of federal renewable tax credits. The cost of renewable generation substantially increases when federal renewable tax credits expire, often causing cost models to add large quantities of renewable generation in the final year federal tax credits are available and little-to-no renewable generation in other years. SPS attempted to smooth out the renewable build-out by locking in the renewable expansion plan.

- SPS's optimized thermal expansion plan limited the number of new combustion turbine generators ("CTGs") over the study period to a total of 40. This limit started at 0 new CTGs until 2022 – at the time this is the earliest SPS anticipated a new CTG could be placed into service. In 2022, Strategist could add up to 12 new CTGs in total. Each year thereafter, Strategist could add 4 additional CTGs until it reached the maximum limit of 40. The intent of this constraint was only to speed up processing time; SPS do not believe a portfolio consisting of more than 40 CTGs is feasible.

- SPS's optimized thermal expansion plan limited the number of new combined cycle generators ("CCs") over the study period to a total of 20. This limit started at 0 new CCs until 2024 – at the time, this is the earliest SPS anticipated a new CC could be placed into service. In 2024, Strategist could add up to 10 new CCs in total. Each year thereafter, Strategist could add 2 additional CCs until it reached the maximum limit of 20. The intent of this constraint was only to speed up processing time; SPS do not believe a portfolio consisting of more than 20 CCs is feasible.

Preparers: Ben R. Elsey, Mark Christner
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-13:

Please provide the levelized cost of energy over the study period for the Harrington generating units and each new generating unit resource evaluated in each of the 2019 and 2021 update economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

SPS has not calculated the levelized cost of energy ("LCOE") for the Harrington units, non-solar, or new wind generating units. Furthermore, SPS does not believe the LCOE is an appropriate measure for the Harrington units, which are anticipated to operate similarly to a peaking unit. SPS does not believe the LCOE is an appropriate measure for non-solar or new wind generating resources such as combustion turbines and battery energy storage, which are predominately capacity resources.

For the LCOE for new solar and wind generating units used in the 2021 updated economic analysis, please refer to Question No. SPS-TIEC 2-7.

For the LCOE for new solar and wind generating units in the 2019 economic analysis, please refer to Exhibit SPS-AXM 1-13 for the annual cost streams needed to calculate the LCOE for each resource.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-14:

Please provide the following information for each existing Company generating unit and purchased power resource for each of the last three calendar years:

a. Net dependable capacity rating (MW)
b. Non-fuel O&M expense
c. Fuel expense
d. Forced outage hours
e. Planned outage hours including refueling outages
f. Annual capital additions costs
g. Net generation, MWh
h. Average annual net heat rate
i. Annual net capacity factors
j. Carbon emissions volume
k. Carbon emissions cost
l. Purchased capacity amount (MW) and cost
m. Purchased energy volume (MWh) and cost

RESPONSE:

SPS has provided the following information below for each existing SPS generating unit and purchased power agreement ("PPA"), where applicable, for calendar years 2018, 2019, and 2020.

a. Please refer to Exhibit SPS-AXM 1-14(a).

b. Please refer to Exhibit SPS-AXM 1-14(b, c). Note: These expenses are provided at the plant level and not at the unit level.

c. Please refer to subpart (b).

d. Please refer to Exhibit SPS-AXM 1-14(d, e) for SPS's owned generating units. SPS does not track forced or planned outages for its purchased PPA resources.

e. Please refer to subpart (d).

f. Please refer to Exhibit SPS-AXM 1-14(f) for the annual capital additions costs.

g. Please refer to Exhibit SPS-AXM 1-14(g, i). Please refer to subpart (m) below for the net generation for each of SPS's PPA resources.

h. Please refer to Exhibit SPS-AXM 1-14(h) for the average annual net heat rates of SPS's owned facilities. SPS does not track the average annual net heat rates for its PPA resources.

i. Please refer to subpart (g).

j. Please refer to Exhibit SPS-AXM 1-14(j). These volumes are only provided at the plant level for Blackhawk 1 and 2.

k. SPS does not have any carbon emissions costs.

l. Please refer to Exhibit SPS-AXM 1-14 (l, m) for the purchased capacity amount (MW) and cost, and for the purchased energy volume (MWh) and cost.

m. Please refer to subpart *(l)*.

Preparers: Allison Johnson, Ashley Gibbons, Brandon Manley, David Chapman, Sean Young
Sponsors: Ben R. Elsey, Mark Lytal

QUESTION NO. AXM 1-15:

Please provide the following information for each existing Company generating unit and purchased power resource for each year of the base case analysis for the preferred resource plan from SPS's most recent IRP:

a. Net dependable capacity rating (MW)
b. Fixed O&M expense
c. Variable O&M expense
d. Fuel expense
e. Purchased capacity amount (MW) and cost
f. Purchased energy volume (MWh) and cost
g. Forced outage hours
h. Planned outage hours including refueling outages
i. Annual capital additions costs
j. Net generation, MWh
k. Average annual net heat rate
l. Annual net capacity factors
m. Carbon emissions volume
n. Carbon emissions cost

RESPONSE:

SPS does not file an Integrated Resource Plan in Texas.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-16:

Please provide the total modeled production costs by major cost category (e.g., fuel, O&M, capital additions, purchased energy, purchased capacity) for each year of each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

Please refer to the response to Question No. AXM 1-8 for the updated 2021 economic analysis.

For the 2019 economic analysis, please refer to the Strategist output files provided in Exhibit SPS-SC 1-3(ii). Additional cost information is summarized on the worksheets "PVRR results" and "System Costs". All underlying cost assumptions are provided within the workbook.

Note: The cost data is not necessarily grouped in the example cost components identified in the parenthetical in this request. Instead, SPS is providing the information in the format it has in its possession.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-17:

Please provide the total cumulative net present value of modeled production costs by major cost category (e.g., fuel, O&M, capital additions, purchased energy, purchased capacity) over the study periods for each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

For the 2021 updated economic analysis, please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF). The requested information is contained in the worksheet "Costs" and all underlying cost assumptions are provided within the workbook.

For the 2019 economic analysis, please refer the Strategist output files provided in Exhibit SPS-SC 1-3(ii). The requested information is contained in the worksheet "PVRR results" and all underlying cost assumptions are provided within the workbook.

Note: The cost data is not necessarily grouped in the example cost components identified in the parenthetical in this request. Instead, SPS is providing the information in the format it has in its possession.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-18:

Please provide SPS solicitations for purchased capacity and/or energy since January of 2019 and the resultant volume and prices of bids received in response to each of those solicitations.

RESPONSE:

Please refer to Exhibit SPS-AXM 1-18 for SPS's request for information ("RFI") issued on September 9, 2020. Please refer to Attachment DDK-1 to the Direct Testimony of Dean Koujak for more information on the volume of proposals received. Please refer to Exhibit SPS-SC 1-4I(ii)(CONF) for each of the proposals received in the RFI.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-19:

Please identify the types and cost of resources selected to replace the Harrington coal units when they retired in the base case scenarios for the preferred resource plan as reflected in the Company's most recent two IRPs.

RESPONSE:

SPS does not file an Integrated Resource Plan in Texas.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-20:

Reference page 8, lines 16-20 of Company witness Elsey's direct testimony, please provide the estimated cumulative NPV cost impact associated with replacement capacity due to retirement of the Harrington coal units at the end of 2024 when compared to costs that would be incurred if the units are converted to operate on natural gas.

RESPONSE:

Please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF), specifically rows 87 to 156 on the worksheet "Costs".

To conduct the requested analysis, Cells B1 and B2 should be Hourly_2021 IRP_SC2_FL_400TRX (i.e., all Harrington units converted to gas) and Hourly_2021 CCN_EarlyRetire_FL_400TRX (i.e., all Harrington units are retired end of year 2024). Other scenarios can be evaluated by changing the cells in B1 and B2 – this should be done by changing the scenarios in the worksheet "Selection", Cells H2:I3.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-21:

Reference page 8, lines 16-20 of Company witness Elsey's direct testimony, please provide the estimated cumulative NPV cost increase to customers associated with accelerated collection of the remaining depreciation expense due to retirement of the Harrington coal units at the end of 2024 when compared to costs that would be incurred if the units are converted to operate on natural gas.

RESPONSE:

Please refer to Question AXM 1-20.

Note: SPS has not conducted an analysis of depreciation expense on a plant-by-plant basis. Instead, the comparison shown on the worksheet "Costs" is for all existing and new SPS-owned generating units. Furthermore, the depreciation expense shown includes decommissioning costs.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-22:

Please provide the estimated net book value of the Harrington coal units by the end of 2024 assuming the units are not converted to operate on natural gas.

RESPONSE:

Please refer to Exhibit SPS-SC 1-4(d) in SPS's Second Supplemental Response to Sierra Club's First Request for Information.

Preparers: Sean Young, Mark Moeller
Sponsor: William A. Grant

QUESTION NO. AXM 1-23:

Reference page 8, lines 16-20 of Company witness Elsey's direct testimony, please provide the Commission rules or Orders that would require accelerated collection of the remaining depreciation expense in the event of retirement of the Harrington coal units at the end of 2024.

RESPONSE:

The reference to accelerated collection of the remaining depreciation expense if Harrington units are retired at the end of 2024 at page 8, lines 16-20 of Mr. Elsey's Direct Testimony relies on traditional ratemaking principles in which the utility may recover capital investment costs, including depreciation, for property that is used by and useful to the utility in providing service. Tex. Util. Code §§36.051, 36.053; 16 TAC § 25.231I(2). Assuming for the sake of this response that The Harrington units would be retired at the end of 2024, depreciation expense would need to be recalculated to recover the undepreciated value of the Harrington units over a shorter period of time than currently built into existing depreciation rates.

Preparer: Counsel
Sponsor: William A. Grant

QUESTION NO. AXM 1-24:

Reference page 8, lines 20-22 of Company witness Elsey's direct testimony, please provide the estimated cumulative NPV cost increase to customers associated with earlier incurrence of decommissioning costs which would result from retirement of the Harrington coal units at the end of 2024 as compared to costs that would be incurred if the units are converted to operate on natural gas.

RESPONSE:

Please refer to Question SPS-AXM 1-21.

Preparer: Ben R. Elsey
Sponsor: Ben R. Elsey

QUESTION NO. AXM 1-25:

Reference page 8, lines 16-20 of Company witness Elsey's direct testimony, please provide the Commission rules or Orders that would require accelerated collection of the remaining depreciation expense in the event of retirement of the Harrington coal units at the end of 2024.

RESPONSE:

Please refer to Question SPS-AXM 1-23.

Preparer: Counsel
Sponsor: William A. Grant

CERTIFICATE OF SERVICE

I certify that, unless otherwise ordered by the presiding officer, notice of the filing of this document was provided to all parties of record via electronic mail on January 26, 2022, in accordance with the Order Suspending Rules, issued in Project No. 50664.

Mark A. Santos

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-Jan-19																		2019	12.24	9.56
1-Feb-19																		2020	12.35	9.83
1-Mar-19																		2021	12.48	10.03
1-Apr-19	2.71	2.48	0.88	2.12	0.88	2.13	1.97	27.04	20.89	8.97	6.34	22.23	19.84	22.96	19.55	23.58	21.39	2022	12.94	10.43
1-May-19	2.67	2.41	0.90	1.93	0.90	2.03	2.03	28.33	21.86	10.09	7.48	22.21	18.97	21.90	17.94	23.87	20.83	2023	13.26	10.72
1-Jun-19	2.71	2.41	1.12	1.98	1.06	2.08	2.03	29.83	21.63	14.60	9.89	24.15	19.66	21.19	17.67	26.17	22.92	2024	13.49	10.94
1-Jul-19	2.76	2.48	1.18	2.08	1.17	2.27	2.03	35.32	24.87	16.54	12.37	33.36	25.42	30.09	20.56	33.75	26.22	2025	13.83	11.23
1-Aug-19	2.79	2.52	1.22	2.17	1.21	2.25	2.04	35.20	25.72	16.79	12.75	36.19	28.12	30.06	21.20	34.04	26.45	2026	14.07	11.44
1-Sep-19	2.79	2.51	1.20	2.19	1.20	2.17	2.05	32.82	22.43	15.96	11.10	33.12	26.77	27.18	20.68	31.82	25.84	2027	14.30	11.64
1-Oct-19	2.81	2.57	1.48	2.19	1.40	2.24	2.06	30.36	20.37	18.15	10.10	28.03	25.33	25.89	19.96	29.70	24.15	2028	14.54	11.85
1-Nov-19	2.87	2.72	2.03	2.40	1.91	2.39	2.07	29.28	23.02	21.99	14.40	27.00	24.77	26.03	20.74	27.16	24.02	2029	14.79	12.06
1-Dec-19	3.01	3.09	2.30	2.60	2.17	2.60	2.07	30.94	24.53	24.97	18.78	31.93	28.96	27.96	22.10	28.90	25.59	2030	15.07	12.22
1-Jan-20	3.10	3.29	2.60	2.76	2.54	2.81	2.08	34.07	27.09	28.37	20.19	32.86	28.73	27.39	21.93	29.31	25.28	2031	15.39	12.47
1-Feb-20	3.04	3.20	2.53	2.64	2.44	2.71	2.08	32.20	23.67	26.55	17.73	29.68	26.26	25.52	20.68	28.17	23.78	2032	15.82	12.83
1-Mar-20	2.92	2.79	2.33	2.40	2.25	2.51	2.07	31.77	21.67	26.83	15.37	25.40	22.34	23.39	19.26	26.33	22.37	2033	16.18	13.10
1-Apr-20	2.63	2.45	1.99	2.03	1.91	2.19	2.05	25.46	20.20	21.85	12.33	22.82	20.43	21.62	18.06	24.13	21.12	2034	16.54	13.37
1-May-20	2.59	2.28	1.94	1.93	1.84	2.09	2.04	26.33	19.55	23.50	14.24	22.25	19.40	20.63	17.26	24.32	20.48	2035	17.05	13.73
1-Jun-20	2.61	2.31	2.01	2.01	1.91	2.12	2.03	28.12	20.22	25.34	14.48	24.23	20.50	21.11	17.31	25.57	21.35	2036	17.38	14.02
1-Jul-20	2.64	2.33	2.06	2.11	1.96	2.24	2.03	32.07	22.78	28.67	19.56	35.95	27.17	29.22	20.09	33.69	24.11	2037	17.76	14.31
1-Aug-20	2.65	2.34	2.10	2.14	2.00	2.23	2.02	33.03	22.45	28.41	19.50	36.53	28.41	28.72	20.47	33.90	24.83	2038	18.19	14.63
1-Sep-20	2.63	2.30	2.00	2.06	1.91	2.12	2.02	29.89	20.16	25.99	15.46	30.65	25.01	24.53	18.97	31.12	23.60	2039	18.81	15.11
1-Oct-20	2.66	2.34	1.99	2.09	1.88	2.17	2.02	28.27	17.30	26.46	10.88	25.69	22.53	23.70	18.68	26.73	21.27	2040	18.95	15.08
1-Nov-20	2.70	2.54	2.19	2.26	2.18	2.26	2.02	26.02	20.64	23.12	16.32	26.15	23.01	23.71	19.12	25.59	21.81	2041	19.35	15.40
1-Dec-20	2.85	2.91	2.43	2.46	2.39	2.47	2.03	30.41	22.69	24.97	19.24	28.92	25.54	25.33	20.43	27.34	23.17	2042	19.75	15.72
1-Jan-21	2.96	2.90	2.48	2.58	2.43	2.61	2.03	32.70	26.10	29.55	21.38	29.66	26.26	26.06	21.40	27.84	24.16	2043	20.16	16.04
1-Feb-21	2.92	2.85	2.38	2.52	2.34	2.52	2.02	31.31	22.99	26.53	20.33	28.33	24.76	25.51	20.56	27.46	23.02	2044	20.58	16.38
1-Mar-21	2.79	2.59	2.17	2.31	2.14	2.32	2.02	27.72	20.89	27.57	16.04	25.12	22.90	21.86	18.73	23.95	20.96	2045	21.01	16.72
1-Apr-21	2.53	2.28	1.89	1.97	1.85	2.04	2.00	23.28	17.56	20.53	9.97	21.98	20.41	19.47	17.04	20.60	18.72	2046	21.45	17.07
1-May-21	2.50	2.21	1.86	1.95	1.83	1.97	1.99	25.25	17.87	22.64	13.55	21.69	19.40	19.17	16.45	21.26	18.37	2047	21.91	17.43
1-Jun-21	2.53	2.20	1.88	1.97	1.86	1.99	1.98	25.88	19.76	24.65	14.40	23.21	20.16	19.92	16.57	22.40	19.38	2048	22.37	17.80
1-Jul-21	2.57	2.25	1.90	1.99	1.87	2.15	1.98	32.00	23.34	29.13	18.92	32.09	25.06	26.71	18.61	29.56	21.80	2049	22.83	18.17
1-Aug-21	2.58	2.26	1.91	2.01	1.88	2.11	1.98	31.81	23.18	26.03	19.08	32.42	26.06	26.31	19.26	29.18	22.46	2050	23.31	18.55
1-Sep-21	2.57	2.28	1.95	2.08	1.92	2.08	1.98	29.09	19.03	25.88	16.25	28.28	24.40	23.45	18.42	26.59	21.39	2051	23.80	18.94
1-Oct-21	2.60	2.30	2.04	2.12	2.00	2.14	1.98	25.77	16.89	24.93	12.39	24.88	22.13	22.99	18.26	25.36	20.73	2052	24.29	19.33
1-Nov-21	2.66	2.47	2.10	2.25	2.07	2.22	1.98	26.27	19.48	23.76	16.33	25.33	22.37	22.55	18.50	23.69	20.44	2053	24.80	19.74
1-Dec-21	2.84	2.69	2.30	2.45	2.26	2.43	1.98	28.58	20.24	24.22	21.07	27.67	24.43	24.75	20.23	25.80	22.30	2054	25.32	20.15
1-Jan-22	2.92	2.79	2.41	2.53	2.37	2.60	1.97	31.73	24.84	28.51	22.87	28.65	25.96	24.70	21.11	25.83	23.30	2055	25.85	20.57
1-Feb-22	2.87	2.74	2.31	2.45	2.29	2.50	1.97	28.81	21.74	26.26	21.63	26.78	24.05	24.18	20.32	25.35	22.05	2056	26.38	21.00
1-Mar-22	2.77	2.57	2.16	2.26	2.14	2.32	1.97	27.31	19.02	23.25	17.37	24.24	22.47	20.81	18.34	22.55	19.95	2057	26.94	21.44
1-Apr-22	2.54	2.31	1.92	2.00	1.90	2.08	1.96	22.16	16.41	19.62	11.64	21.20	20.21	18.38	16.64	19.75	18.25			
1-May-22	2.52	2.23	1.89	1.95	1.86	2.01	1.96	23.63	17.36	22.11	13.12	20.70	19.18	17.94	16.07	20.23	18.29			
1-Jun-22	2.54	2.22	1.93	1.99	1.90	2.04	1.95	24.68	19.73	22.32	15.30	22.69	20.20	18.93	16.38	21.33	19.33			
1-Jul-22	2.58	2.27	1.95	2.02	1.92	2.18	1.96	30.47	23.50	27.44	19.03	30.23	24.70	25.70	19.10	27.80	21.77			
1-Aug-22	2.60	2.27	1.95	2.03	1.93	2.15	1.96	30.91	22.27	25.67	18.59	31.87	27.04	24.93	18.93	27.57	21.92			
1-Sep-22	2.59	2.27	1.94	2.04	1.92	2.09	1.96	27.51	18.44	24.48	16.62	26.88	23.74	22.38	18.21	24.86	20.90			
1-Oct-22	2.60	2.33	2.03	2.09	1.99	2.16	1.96	23.87	17.64	23.69	13.35	24.55	22.43	21.91	18.00	24.13	20.19			
1-Nov-22	2.68	2.48	2.10	2.22	2.07	2.25	1.96	23.75	18.58	21.50	16.33	24.85	22.85	21.61	18.31	22.69	20.22			
1-Dec-22	2.84	2.65	2.28	2.40	2.24	2.41	1.96	25.53	20.04	22.65	22.18	26.80	24.30	23.73	19.78	24.65	21.64			
1-Jan-23	2.94	2.78	2.40	2.53	2.36	2.60	1.97	32.29	24.55	29.37	25.31	27.73	24.90	25.58	21.95	26.26	23.11			
1-Feb-23	2.91	2.74	2.41	2.50	2.37	2.54	2.02	27.98	21.93	26.75	23.67	26.54	23.96	25.45	21.29	25.91	22.38			
1-Mar-23	2.84	2.63	2.30	2.35	2.25	2.42	2.01	28.04	19.78	25.44	19.05	23.14	22.10	21.31	19.01	23.48	20.97			
1-Apr-23	2.67	2.40	2.10	2.15	2.06	2.21	2.00	23.78	18.72	21.83	14.12	20.62	20.15	19.72	17.60	21.10	19.39			
1-May-23	2.65	2.35	2.09	2.11	2.05	2.15	2.00	24.16	18.84	23.65	15.82	20.30	19.63	19.18	17.41	21.33	19.37			
1-Jun-23	2.65	2.33	2.13	2.12	2.08	2.17	2.00	26.49	21.13	25.87	17.81	22.14	20.43	20.08	17.41	22.64	20.27			
1-Jul-23	2.71	2.38	2.15	2.18	2.11	2.33	2.00	33.40	25.34	29.59	21.73	29.99	24.81	27.40	20.82	29.30	22.97			

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-Aug-23	2.73	2.40	2.18	2.21	2.14	2.31	2.00	34.02	24.52	28.63	21.27	32.03	27.67	26.96	21.12	28.98	23.32			
1-Sep-23	2.73	2.40	2.18	2.24	2.14	2.25	2.00	28.94	20.08	27.08	18.83	26.70	24.00	24.58	20.32	26.47	22.32			
1-Oct-23	2.73	2.43	2.18	2.26	2.14	2.31	2.01	25.10	17.44	25.38	13.25	24.60	22.47	23.23	19.39	25.19	21.33			
1-Nov-23	2.83	2.60	2.29	2.43	2.24	2.41	2.00	27.32	18.52	25.51	16.51	25.13	23.55	24.31	20.51	24.94	21.76			
1-Dec-23	2.96	2.75	2.41	2.56	2.37	2.54	2.01	27.00	22.15	25.22	23.11	27.32	25.19	25.99	21.92	26.51	23.00			
1-Jan-24	3.06	2.91	2.52	2.67	2.47	2.73	2.01	32.12	26.18	28.77	22.25	28.58	25.94	26.38	22.89	26.82	23.87			
1-Feb-24	3.08	2.88	2.46	2.61	2.41	2.69	2.06	28.94	22.58	26.82	20.01	25.29	23.58	24.57	21.16	25.51	22.67			
1-Mar-24	3.04	2.79	2.38	2.48	2.33	2.59	2.05	29.14	21.82	23.61	19.05	23.58	23.24	21.97	20.18	23.57	21.80			
1-Apr-24	2.93	2.63	2.23	2.32	2.18	2.43	2.04	24.17	20.14	21.71	12.78	21.50	22.81	20.18	18.89	21.56	20.89			
1-May-24	2.87	2.53	2.21	2.30	2.16	2.36	2.05	24.80	20.37	22.78	13.88	21.02	21.31	19.82	18.23	21.78	20.05			
1-Jun-24	2.86	2.51	2.22	2.28	2.18	2.36	2.04	27.73	22.23	26.09	17.92	24.16	22.50	20.72	18.70	22.96	20.99			
1-Jul-24	2.94	2.54	2.26	2.36	2.21	2.50	2.04	33.91	25.93	29.79	22.15	31.19	26.18	28.52	22.00	30.12	23.88			
1-Aug-24	2.96	2.56	2.28	2.37	2.24	2.50	2.05	36.24	26.03	30.02	21.79	32.26	28.25	27.90	22.57	29.83	24.65			
1-Sep-24	2.94	2.57	2.30	2.40	2.26	2.43	2.05	30.04	21.33	27.50	19.36	27.91	24.67	25.55	21.26	27.86	23.65			
1-Oct-24	2.94	2.59	2.27	2.41	2.22	2.47	2.05	25.39	18.39	25.04	14.11	24.75	23.66	23.95	20.59	25.75	22.24			
1-Nov-24	3.04	2.77	2.39	2.59	2.34	2.59	2.05	26.36	20.99	23.78	18.23	27.16	25.96	25.49	21.80	26.33	23.14			
1-Dec-24	3.17	2.92	2.51	2.72	2.46	2.72	2.05	28.77	22.16	24.96	20.78	29.07	27.47	27.29	23.30	27.71	24.15			
1-Jan-25	3.33	3.11	2.66	2.86	2.61	2.91	2.05	32.99	26.54	28.08	22.80	30.30	27.54	27.73	24.51	28.55	25.52			
1-Feb-25	3.29	3.07	2.66	2.84	2.61	2.87	2.10	31.24	23.67	27.10	22.45	27.62	25.61	27.28	23.48	27.94	24.41			
1-Mar-25	3.17	2.89	2.51	2.62	2.46	2.71	2.10	30.36	21.91	25.44	19.80	24.11	23.57	22.42	20.79	24.10	22.31			
1-Apr-25	3.05	2.75	2.38	2.51	2.33	2.55	2.09	25.16	20.28	22.14	13.81	22.54	23.30	21.06	19.94	22.18	21.71			
1-May-25	3.07	2.70	2.41	2.50	2.36	2.51	2.09	25.83	20.97	24.70	15.40	22.25	23.05	21.03	19.88	23.04	22.35			
1-Jun-25	3.10	2.68	2.42	2.48	2.37	2.54	2.08	27.87	22.86	26.45	19.67	25.45	23.61	21.67	19.52	24.29	22.26			
1-Jul-25	3.15	2.72	2.52	2.56	2.47	2.69	2.09	35.45	27.16	33.12	23.67	33.32	28.24	30.68	23.90	32.77	26.39			
1-Aug-25	3.17	2.73	2.55	2.60	2.50	2.68	2.09	38.53	26.91	33.00	24.24	34.36	29.99	31.05	25.23	32.93	27.54			
1-Sep-25	3.16	2.77	2.54	2.65	2.49	2.65	2.09	32.12	22.02	29.73	21.18	31.37	28.16	28.37	23.29	30.93	25.86			
1-Oct-25	3.16	2.81	2.51	2.67	2.46	2.70	2.09	27.07	18.99	26.64	15.77	28.40	26.09	26.36	22.74	28.61	24.60			
1-Nov-25	3.26	2.99	2.62	2.89	2.56	2.82	2.09	28.12	22.33	25.06	20.25	29.51	27.82	28.14	24.19	28.50	25.11			
1-Dec-25	3.43	3.18	2.76	2.98	2.71	2.95	2.09	29.38	25.01	26.75	23.82	32.14	29.77	30.38	25.85	30.73	26.58			
1-Jan-26	3.58	3.36	2.92	3.17	2.87	3.15	2.10	34.53	29.09	31.83	23.97	33.16	30.57	31.34	27.88	31.70	28.47			
1-Feb-26	3.57	3.33	2.85	3.12	2.79	3.12	2.15	33.54	26.52	28.59	22.16	29.96	27.95	30.46	26.37	30.76	27.07			
1-Mar-26	3.40	3.12	2.65	2.88	2.60	2.89	2.14	32.84	23.61	27.13	18.01	25.77	25.03	24.69	22.67	25.56	23.70			
1-Apr-26	3.27	2.93	2.52	2.66	2.47	2.73	2.13	26.30	21.35	23.88	14.94	23.40	23.72	22.81	21.33	23.92	23.20			
1-May-26	3.26	2.88	2.51	2.67	2.46	2.69	2.13	28.09	22.28	24.77	17.81	23.05	23.41	22.67	20.86	24.52	23.37			
1-Jun-26	3.31	2.88	2.56	2.70	2.51	2.73	2.13	30.49	23.87	28.02	19.83	24.69	24.03	23.75	20.91	26.34	23.87			
1-Jul-26	3.36	2.90	2.67	2.78	2.62	2.87	2.13	37.85	29.42	34.24	24.90	34.43	30.21	33.20	26.55	34.59	28.72			
1-Aug-26	3.36	2.92	2.70	2.78	2.65	2.87	2.13	41.05	29.07	34.63	25.15	36.17	32.12	33.42	28.16	34.77	29.77			
1-Sep-26	3.37	2.95	2.66	2.85	2.60	2.82	2.13	35.05	23.14	30.35	21.30	32.17	29.51	30.44	25.59	32.23	27.68			
1-Oct-26	3.38	2.99	2.66	2.87	2.61	2.88	2.14	28.75	20.45	27.62	16.98	28.73	26.61	28.06	24.04	29.86	25.54			
1-Nov-26	3.49	3.20	2.75	3.08	2.70	3.02	2.13	29.26	24.67	25.60	20.30	30.57	28.55	29.63	25.73	29.71	26.87			
1-Dec-26	3.67	3.41	2.92	3.21	2.86	3.18	2.14	33.14	27.04	27.77	24.22	33.44	30.90	32.70	27.77	32.56	28.39			
1-Jan-27	3.79	3.55	3.05	3.35	3.00	3.33	2.14	38.92	30.55	33.17	24.87	34.17	31.53	32.87	29.04	33.52	29.97			
1-Feb-27	3.76	3.51	2.97	3.30	2.92	3.28	2.19	33.79	27.63	29.29	23.97	30.10	28.71	31.90	27.43	32.50	28.37			
1-Mar-27	3.59	3.30	2.77	3.05	2.71	3.04	2.18	33.25	25.46	29.46	20.20	26.20	26.52	25.97	23.76	27.13	25.36			
1-Apr-27	3.43	3.07	2.60	2.83	2.55	2.86	2.17	28.58	23.34	23.49	15.43	23.29	24.30	23.53	22.50	24.35	24.02			
1-May-27	3.41	3.01	2.64	2.82	2.59	2.82	2.18	29.17	23.55	27.38	17.02	23.62	24.04	23.57	21.82	25.52	24.09			
1-Jun-27	3.45	3.02	2.68	2.83	2.62	2.87	2.17	31.64	24.69	29.76	20.30	26.12	25.53	24.68	22.02	27.81	25.72			
1-Jul-27	3.53	3.04	2.76	2.90	2.70	3.01	2.17	39.14	30.82	35.40	25.42	35.39	31.69	34.71	28.16	36.89	30.53			
1-Aug-27	3.54	3.05	2.77	2.94	2.71	2.99	2.17	41.40	30.01	37.62	25.28	36.67	33.47	34.88	30.00	36.58	31.63			
1-Sep-27	3.53	3.09	2.76	3.00	2.70	2.95	2.18	35.44	24.52	31.36	22.19	32.46	30.17	31.35	26.49	33.55	28.82			
1-Oct-27	3.58	3.14	2.75	2.99	2.69	3.02	2.18	29.93	21.45	30.06	18.11	29.63	27.98	29.25	25.14	31.79	27.18			
1-Nov-27	3.71	3.38	2.88	3.21	2.83	3.18	2.18	29.47	26.58	26.03	22.08	30.66	29.74	30.53	26.56	31.73	28.31			
1-Dec-27	3.88	3.56	3.07	3.34	3.01	3.34	2.18	34.03	26.82	30.85	24.94	32.96	31.15	33.38	28.58	33.95	29.67			
1-Jan-28	4.02	3.72	3.15	3.51	3.09	3.49	2.18	39.56	31.28	34.68	26.20	35.20	32.72	35.18	30.43	35.18	31.06			
1-Feb-28	3.99	3.69	3.08	3.47	3.03	3.45	2.23	36.25	27.63	29.51	22.63	30.36	29.28	32.68	28.25	32.65	28.86			

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-Mar-28	3.76	3.44	2.88	3.19	2.82	3.17	2.23	35.25	25.95	27.62	20.76	26.93	27.52	26.93	25.29	27.61	26.43			
1-Apr-28	3.63	3.22	2.71	2.94	2.65	3.01	2.22	30.52	22.95	24.71	16.54	24.01	25.45	24.68	23.37	24.92	25.02			
1-May-28	3.63	3.15	2.73	2.92	2.68	2.95	2.22	29.53	23.31	26.84	17.91	23.43	24.95	24.14	22.79	25.89	25.15			
1-Jun-28	3.67	3.14	2.81	2.95	2.75	2.99	2.21	32.90	26.31	31.07	21.95	26.76	26.45	25.86	23.05	28.27	26.34			
1-Jul-28	3.73	3.18	2.88	3.08	2.82	3.16	2.22	41.84	31.10	37.63	26.32	35.91	32.78	38.00	31.01	38.54	32.30			
1-Aug-28	3.75	3.20	2.92	3.09	2.86	3.16	2.22	42.43	31.14	36.94	26.97	37.96	35.56	37.09	32.46	38.47	34.04			
1-Sep-28	3.77	3.26	2.92	3.14	2.86	3.12	2.22	36.14	26.77	32.58	24.14	33.56	31.40	33.62	28.33	35.72	30.70			
1-Oct-28	3.82	3.33	2.94	3.21	2.88	3.23	2.22	32.12	22.84	29.10	19.64	30.63	29.11	31.75	26.98	33.60	28.82			
1-Nov-28	3.93	3.56	3.04	3.42	2.98	3.36	2.22	34.26	25.67	29.47	21.66	31.65	31.09	33.25	28.67	33.02	29.55			
1-Dec-28	4.10	3.73	3.17	3.52	3.11	3.51	2.23	33.32	30.31	30.39	27.77	34.71	32.89	35.62	30.58	35.36	31.01			
1-Jan-29	4.27	3.95	3.31	3.71	3.25	3.72	2.22	39.52	32.72	34.74	27.23	36.34	33.49	37.03	32.49	36.68	32.72			
1-Feb-29	4.23	3.90	3.27	3.66	3.21	3.66	2.28	36.66	29.50	31.95	26.48	32.06	30.88	35.96	30.91	35.16	30.83			
1-Mar-29	3.99	3.64	3.02	3.38	2.96	3.37	2.27	35.44	27.00	29.00	22.18	27.59	28.64	28.17	26.63	28.51	27.46			
1-Apr-29	3.78	3.36	2.79	3.06	2.73	3.15	2.26	30.03	23.26	25.18	16.90	24.36	28.08	25.31	26.00	25.81	28.53			
1-May-29	3.79	3.28	2.82	3.06	2.76	3.09	2.27	27.89	23.24	27.39	19.17	22.83	25.16	24.85	23.93	25.74	25.61			
1-Jun-29	3.80	3.27	2.86	3.10	2.80	3.12	2.26	32.27	25.12	31.27	21.41	26.07	27.77	26.43	24.24	27.88	28.16			
1-Jul-29	3.85	3.29	2.98	3.17	2.91	3.25	2.26	40.53	30.31	37.93	26.87	36.62	33.92	38.64	32.37	39.54	33.77			
1-Aug-29	3.88	3.31	3.02	3.17	2.95	3.26	2.26	40.74	30.00	38.40	26.66	38.31	36.84	38.55	33.65	39.50	34.58			
1-Sep-29	3.90	3.36	2.97	3.24	2.91	3.22	2.27	35.15	25.38	33.33	23.72	34.51	32.48	34.74	29.30	35.84	31.08			
1-Oct-29	3.96	3.44	3.00	3.30	2.94	3.33	2.27	31.16	20.99	29.30	18.96	31.06	30.70	31.57	27.43	33.19	29.44			
1-Nov-29	4.06	3.68	3.10	3.54	3.04	3.50	2.27	33.70	25.32	29.16	21.69	32.69	31.73	33.61	29.61	33.59	30.35			
1-Dec-29	4.27	3.89	3.27	3.66	3.20	3.66	2.27	33.75	29.76	31.35	27.25	35.76	33.81	36.85	31.92	36.37	32.16			
1-Jan-30	4.40	4.10	3.40	3.83	3.34	3.85	2.27	39.31	33.08	35.44	27.49	37.46	35.07	37.45	32.96	37.47	33.44			
1-Feb-30	4.35	4.04	3.33	3.79	3.26	3.79	2.33	36.67	30.38	31.82	25.91	32.38	31.75	36.31	31.67	35.20	31.29			
1-Mar-30	4.04	3.72	3.09	3.43	3.02	3.43	2.32	35.07	26.62	29.28	22.77	28.37	29.62	28.31	26.99	28.94	28.54			
1-Apr-30	3.87	3.45	2.87	3.15	2.81	3.22	2.31	28.17	22.66	25.26	18.27	23.77	27.93	24.55	25.46	24.44	27.46			
1-May-30	3.89	3.40	2.90	3.14	2.83	3.17	2.31	28.46	23.62	27.93	18.73	23.25	25.44	24.22	23.32	24.87	24.89			
1-Jun-30	3.93	3.38	2.97	3.18	2.91	3.21	2.30	31.74	26.47	31.78	22.88	26.84	28.06	26.99	24.45	28.69	27.80			
1-Jul-30	4.00	3.45	3.11	3.33	3.05	3.40	2.31	40.92	31.23	38.52	27.62	38.03	36.58	38.68	33.73	39.28	34.97			
1-Aug-30	4.04	3.49	3.15	3.34	3.09	3.42	2.31	42.24	31.10	39.30	27.83	39.73	39.82	39.06	35.77	39.70	36.86			
1-Sep-30	4.06	3.52	3.14	3.41	3.08	3.37	2.31	36.39	26.86	34.31	25.10	36.32	34.87	35.23	30.51	36.50	32.35			
1-Oct-30	4.12	3.62	3.15	3.51	3.08	3.49	2.31	32.48	22.96	30.16	19.54	32.18	32.49	32.73	28.97	33.60	30.31			
1-Nov-30	4.25	3.86	3.30	3.74	3.24	3.66	2.31	36.01	25.95	29.95	23.09	33.67	33.24	35.00	30.85	34.76	31.36			
1-Dec-30	4.43	4.06	3.45	3.91	3.39	3.84	2.32	37.95	29.13	33.49	27.43	36.57	35.43	38.89	33.46	37.86	33.45			
1-Jan-31	4.57	4.24	3.56	4.03	3.49	4.01	2.31	41.59	36.52	36.45	29.61	38.25	36.28	38.45	34.11	38.56	34.84			
1-Feb-31	4.54	4.20	3.49	3.96	3.42	3.96	2.37	38.40	31.98	33.33	27.58	33.79	32.78	36.48	32.53	36.29	32.75			
1-Mar-31	4.23	3.91	3.26	3.61	3.19	3.63	2.36	38.24	27.94	30.27	23.98	29.11	30.13	28.99	27.66	29.70	28.96			
1-Apr-31	4.05	3.63	3.03	3.36	2.96	3.42	2.35	29.73	25.32	25.75	17.95	23.56	27.83	24.85	26.26	25.12	28.08			
1-May-31	4.04	3.58	3.08	3.31	2.99	3.37	2.36	32.02	24.51	28.74	20.29	24.00	26.50	24.36	24.06	25.69	26.37			
1-Jun-31	4.10	3.58	3.15	3.36	3.06	3.40	2.35	33.46	28.19	32.45	23.79	27.12	29.21	26.69	25.34	28.37	28.74			
1-Jul-31	4.17	3.62	3.27	3.51	3.18	3.58	2.35	42.39	32.19	40.18	28.53	38.97	37.43	40.03	33.95	40.72	35.50			
1-Aug-31	4.20	3.65	3.31	3.50	3.21	3.60	2.35	44.93	32.30	40.94	28.75	41.91	40.16	39.82	36.42	40.94	37.50			
1-Sep-31	4.22	3.70	3.31	3.56	3.22	3.56	2.36	38.28	28.15	35.36	25.65	36.78	36.09	35.62	31.08	37.43	33.31			
1-Oct-31	4.26	3.77	3.28	3.61	3.19	3.67	2.36	34.09	23.72	31.20	20.09	33.09	32.22	32.77	28.68	34.82	30.75			
1-Nov-31	4.42	4.03	3.41	3.89	3.32	3.83	2.36	33.58	30.28	30.32	25.26	34.22	33.97	34.83	31.20	35.05	31.94			
1-Dec-31	4.58	4.18	3.58	4.01	3.47	3.97	2.36	36.99	32.19	32.97	29.01	36.64	35.57	38.41	34.09	38.24	34.37			
1-Jan-32	4.72	4.35	3.63	4.13	3.52	4.11	2.36	40.92	37.19	36.32	29.69	38.94	37.27	38.72	34.66	39.41	35.45			
1-Feb-32	4.67	4.30	3.55	4.07	3.45	4.06	2.42	37.25	31.15	32.16	26.57	33.40	32.50	35.75	32.10	35.91	32.60			
1-Mar-32	4.43	4.08	3.41	3.81	3.30	3.81	2.41	37.64	30.14	30.64	24.11	29.48	31.71	30.62	28.71	32.18	30.55			
1-Apr-32	4.23	3.78	3.17	3.48	3.04	3.58	2.40	30.47	26.92	26.12	18.70	24.61	28.63	25.19	25.50	26.74	28.33			
1-May-32	4.24	3.74	3.23	3.47	3.09	3.54	2.40	31.27	25.18	29.90	20.88	24.62	27.58	25.42	25.15	27.26	27.36			
1-Jun-32	4.31	3.75	3.28	3.51	3.14	3.59	2.39	34.25	28.50	33.19	24.33	28.52	30.18	27.93	26.22	30.99	29.49			
1-Jul-32	4.39	3.77	3.40	3.64	3.26	3.71	2.40	43.17	34.19	41.04	29.59	40.42	39.54	41.21	35.59	42.95	37.61			
1-Aug-32	4.42	3.80	3.45	3.68	3.31	3.74	2.40	44.85	33.78	41.90	29.74	42.80	42.15	41.39	37.80	43.22	39.62			
1-Sep-32	4.40	3.85	3.46	3.72	3.32	3.72	2.40	39.84	28.06	36.23	26.11	38.52	37.53	36.92	32.40	39.78	34.86			

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-Oct-32	4.46	3.93	3.43	3.77	3.29	3.82	2.41	33.41	25.32	30.55	21.01	33.70	33.55	33.92	29.62	36.40	32.00			
1-Nov-32	4.59	4.20	3.58	4.03	3.43	4.00	2.41	34.71	29.36	30.55	26.12	35.24	36.31	36.32	32.18	37.05	33.55			
1-Dec-32	4.81	4.39	3.75	4.22	3.61	4.17	2.41	39.29	32.36	34.73	29.98	39.87	38.63	40.61	35.55	40.36	35.86			
1-Jan-33	4.96	4.58	3.85	4.35	3.70	4.32	2.41	44.08	38.47	38.46	30.81	40.24	38.66	40.06	36.32	40.57	36.93			
1-Feb-33	4.94	4.55	3.79	4.30	3.64	4.28	2.47	40.20	35.41	34.55	29.23	36.17	35.26	39.10	34.79	39.14	34.99			
1-Mar-33	4.60	4.25	3.59	3.98	3.44	3.99	2.46	39.59	30.72	31.76	25.55	30.87	33.00	30.86	29.57	32.54	31.48			
1-Apr-33	4.44	3.97	3.39	3.72	3.24	3.77	2.45	32.23	27.19	28.17	20.24	25.57	30.91	26.72	27.69	27.83	30.49			
1-May-33	4.43	3.93	3.42	3.67	3.27	3.73	2.45	32.70	26.79	30.56	21.47	25.49	29.36	26.24	26.42	28.19	28.96			
1-Jun-33	4.51	3.93	3.50	3.72	3.35	3.79	2.44	34.53	30.92	34.63	25.99	30.12	31.82	29.53	27.44	32.46	30.62			
1-Jul-33	4.61	3.97	3.59	3.80	3.44	3.91	2.45	45.97	36.09	42.90	30.58	42.10	41.20	42.30	36.88	44.37	39.32			
1-Aug-33	4.64	4.00	3.67	3.84	3.52	3.93	2.45	46.24	35.66	43.63	30.82	44.00	44.16	42.63	39.02	44.82	41.33			
1-Sep-33	4.62	4.06	3.65	3.97	3.50	3.91	2.45	41.85	31.39	36.77	27.63	39.73	39.26	38.81	34.42	41.23	36.68			
1-Oct-33	4.68	4.12	3.61	3.99	3.46	4.00	2.46	35.65	26.89	30.87	23.36	35.24	35.67	34.88	31.06	37.17	33.33			
1-Nov-33	4.80	4.38	3.76	4.23	3.61	4.17	2.45	36.93	31.16	32.08	25.19	37.28	38.57	37.90	34.22	38.65	35.32			
1-Dec-33	4.99	4.55	3.91	4.37	3.76	4.32	2.46	41.01	33.98	35.38	30.84	40.34	39.58	41.51	36.88	41.16	37.12			
1-Jan-34	5.17	4.79	4.02	4.57	3.86	4.50	2.46	46.09	38.63	39.06	30.79	43.00	40.95	42.29	38.37	42.21	38.68			
1-Feb-34	5.15	4.75	3.95	4.49	3.80	4.46	2.52	42.16	36.23	34.45	29.66	37.24	37.33	40.67	36.84	40.12	37.01			
1-Mar-34	4.75	4.41	3.69	4.17	3.54	4.13	2.51	41.77	31.14	30.73	23.97	31.41	34.22	32.21	31.14	33.16	32.29			
1-Apr-34	4.58	4.12	3.51	3.90	3.36	3.90	2.50	34.16	27.81	27.29	18.84	26.50	31.29	27.70	27.78	28.53	29.90			
1-May-34	4.59	4.08	3.51	3.85	3.35	3.87	2.50	32.72	28.40	30.05	20.85	26.12	30.56	26.59	27.14	28.45	29.39			
1-Jun-34	4.67	4.09	3.59	3.91	3.43	3.93	2.49	36.72	32.11	34.79	25.51	31.18	33.61	31.23	28.74	33.73	31.35			
1-Jul-34	4.75	4.12	3.68	3.96	3.53	4.05	2.50	47.45	37.34	43.25	30.79	43.74	42.67	44.12	38.79	45.68	40.46			
1-Aug-34	4.79	4.16	3.74	4.03	3.58	4.08	2.50	48.29	36.91	43.68	31.92	45.68	46.04	44.71	41.19	46.41	42.63			
1-Sep-34	4.77	4.22	3.75	4.11	3.60	4.05	2.50	42.24	32.50	37.61	28.42	41.31	40.86	40.38	36.03	42.61	37.88			
1-Oct-34	4.81	4.30	3.76	4.19	3.61	4.15	2.51	37.73	28.43	31.79	23.27	37.16	37.65	36.90	32.70	38.83	35.09			
1-Nov-34	4.97	4.57	3.87	4.47	3.72	4.33	2.50	39.10	32.91	32.51	24.78	37.94	40.30	39.11	35.76	39.23	36.11			
1-Dec-34	5.19	4.76	4.05	4.62	3.90	4.50	2.51	42.36	36.66	35.24	32.34	42.02	41.89	43.71	38.93	42.97	39.29			
1-Jan-35	5.35	4.99	4.20	4.80	4.04	4.69	2.50	48.13	41.16	39.66	32.45	44.78	42.88	43.87	40.39	43.78	40.50			
1-Feb-35	5.33	4.96	4.14	4.74	3.98	4.65	2.57	44.78	37.16	35.97	31.61	38.21	38.25	42.03	38.18	41.57	38.14			
1-Mar-35	4.94	4.61	3.84	4.35	3.68	4.29	2.56	43.62	34.76	32.47	26.51	32.34	35.60	34.05	32.95	35.25	34.32			
1-Apr-35	4.71	4.30	3.60	4.05	3.45	4.03	2.55	36.17	29.16	27.64	20.99	27.04	30.69	29.10	28.05	29.58	29.25			
1-May-35	4.75	4.26	3.64	4.08	3.48	4.00	2.55	33.59	29.40	30.80	20.63	26.84	30.92	29.39	28.46	30.47	29.93			
1-Jun-35	4.83	4.29	3.73	4.13	3.57	4.08	2.54	39.47	32.27	36.90	26.14	32.14	34.79	33.54	31.43	35.58	33.66			
1-Jul-35	4.90	4.33	3.88	4.21	3.71	4.22	2.55	49.02	40.04	45.19	32.60	46.13	45.66	46.85	41.47	47.97	42.69			
1-Aug-35	4.95	4.37	3.92	4.28	3.74	4.25	2.55	51.13	40.01	45.98	33.18	48.58	48.94	47.13	42.84	48.67	44.06			
1-Sep-35	4.90	4.38	3.87	4.30	3.70	4.18	2.55	48.19	33.83	38.66	29.22	44.01	43.50	42.00	37.24	44.11	39.39			
1-Oct-35	4.97	4.47	3.91	4.38	3.74	4.28	2.55	38.62	29.31	32.39	23.39	38.35	40.47	37.88	34.27	39.55	36.56			
1-Nov-35	5.11	4.74	4.03	4.62	3.85	4.48	2.55	40.61	33.15	34.03	25.70	40.05	40.90	40.77	36.86	41.09	37.52			
1-Dec-35	5.30	4.88	4.19	4.75	4.00	4.61	2.56	43.06	38.64	36.72	32.71	43.14	43.30	44.56	39.69	43.75	39.94			
1-Jan-36	5.48	5.09	4.32	4.93	4.11	4.80	2.55	48.73	41.99	40.45	32.92	46.81	45.06	44.89	41.15	44.59	41.28			
1-Feb-36	5.45	5.05	4.28	4.84	4.07	4.75	2.62	44.33	37.52	36.40	30.88	38.12	40.22	41.65	38.90	41.16	38.93			
1-Mar-36	5.02	4.70	3.97	4.51	3.77	4.39	2.61	44.43	33.87	32.91	26.68	33.19	35.64	34.64	33.07	35.10	33.81			
1-Apr-36	4.81	4.38	3.75	4.20	3.55	4.11	2.60	33.56	31.20	28.16	20.82	28.08	32.86	29.24	30.10	29.57	31.09			
1-May-36	4.83	4.34	3.78	4.19	3.58	4.08	2.60	34.22	29.75	31.44	21.85	28.95	33.56	29.88	29.38	30.98	31.05			
1-Jun-36	4.92	4.37	3.86	4.26	3.65	4.16	2.59	38.22	33.69	36.09	27.32	33.61	36.24	34.35	32.53	36.33	34.56			
1-Jul-36	4.99	4.42	4.00	4.34	3.79	4.31	2.60	49.15	39.62	45.72	32.67	46.69	47.06	47.90	42.64	48.66	43.81			
1-Aug-36	5.04	4.46	4.05	4.38	3.84	4.34	2.60	52.61	39.53	47.46	34.03	48.71	48.98	47.91	43.76	49.21	45.05			
1-Sep-36	5.07	4.53	4.04	4.45	3.84	4.33	2.60	47.14	35.51	39.48	30.09	44.44	45.48	42.93	38.18	45.25	40.46			
1-Oct-36	5.12	4.60	4.04	4.53	3.83	4.41	2.61	39.12	29.54	33.22	24.65	39.22	41.04	38.60	35.25	40.05	37.09			
1-Nov-36	5.26	4.86	4.18	4.77	3.96	4.60	2.60	39.86	35.31	33.19	28.06	40.24	42.83	41.21	37.95	41.25	38.37			
1-Dec-36	5.49	5.05	4.37	4.95	4.15	4.77	2.61	43.84	38.94	37.72	33.64	44.61	45.18	46.02	41.25	44.99	41.18			
1-Jan-37	5.67	5.24	4.48	5.13	4.24	4.97	2.61	51.13	44.21	42.88	34.48	45.84	46.14	45.96	43.01	45.56	43.11			
1-Feb-37	5.63	5.21	4.42	5.07	4.18	4.93	2.67	46.31	40.51	38.17	32.60	40.06	40.84	44.35	41.09	43.42	40.57			
1-Mar-37	5.19	4.85	4.16	4.70	3.92	4.55	2.66	44.54	35.97	33.92	27.76	33.94	36.68	36.25	34.57	36.66	35.29			
1-Apr-37	5.04	4.56	3.92	4.40	3.68	4.30	2.65	34.39	31.37	28.94	20.36	28.54	33.73	30.76	30.73	30.96	32.13			

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-May-37	5.03	4.54	3.95	4.41	3.71	4.27	2.65	35.23	30.33	32.65	23.11	29.36	33.78	31.94	31.32	32.90	32.76			
1-Jun-37	5.13	4.55	4.06	4.43	3.81	4.34	2.64	39.78	33.36	38.11	27.84	35.13	38.55	35.69	33.65	37.93	36.29			
1-Jul-37	5.21	4.60	4.15	4.55	3.89	4.48	2.65	49.51	41.68	47.86	34.56	47.24	48.29	49.29	43.24	49.80	44.47			
1-Aug-37	5.24	4.64	4.20	4.59	3.94	4.53	2.65	53.49	40.97	48.80	35.56	49.71	50.73	49.01	45.53	50.30	46.62			
1-Sep-37	5.25	4.69	4.19	4.65	3.93	4.49	2.65	47.20	35.58	40.67	31.88	44.35	46.72	43.73	39.30	45.58	41.33			
1-Oct-37	5.30	4.76	4.20	4.69	3.93	4.58	2.66	39.11	32.12	34.30	25.54	40.03	41.63	39.30	36.40	40.83	38.05			
1-Nov-37	5.48	5.04	4.37	4.98	4.10	4.80	2.65	39.59	37.49	33.86	29.83	42.22	43.82	42.47	39.63	42.26	39.81			
1-Dec-37	5.77	5.29	4.59	5.22	4.32	5.00	2.66	46.71	40.45	39.68	35.04	45.95	46.87	47.60	43.34	46.60	43.06			
1-Jan-38	5.92	5.48	4.71	5.38	4.43	5.18	2.66	52.51	46.33	43.96	36.26	47.92	48.07	47.74	44.86	47.08	44.74			
1-Feb-38	5.89	5.45	4.65	5.30	4.37	5.14	2.72	47.96	41.87	39.30	33.50	41.23	43.01	45.78	42.42	44.55	42.06			
1-Mar-38	5.47	5.07	4.36	4.92	4.08	4.74	2.72	45.15	38.07	34.84	28.42	33.80	38.21	37.31	36.21	37.56	36.61			
1-Apr-38	5.24	4.74	4.10	4.57	3.82	4.45	2.70	35.03	33.37	29.55	21.90	29.08	35.03	31.06	31.51	31.37	32.77			
1-May-38	5.25	4.69	4.13	4.53	3.85	4.40	2.71	36.67	29.98	33.19	23.91	28.90	33.51	31.28	31.42	32.10	32.54			
1-Jun-38	5.32	4.69	4.22	4.59	3.95	4.47	2.70	39.32	34.76	38.87	28.29	35.20	38.74	36.59	34.43	38.52	36.77			
1-Jul-38	5.40	4.74	4.32	4.69	4.04	4.63	2.70	50.03	42.93	49.19	35.87	48.17	49.42	49.82	44.29	50.05	45.30			
1-Aug-38	5.43	4.77	4.39	4.74	4.11	4.67	2.71	53.81	42.53	53.36	36.70	51.11	51.49	49.84	46.21	50.72	47.13			
1-Sep-38	5.44	4.83	4.37	4.79	4.09	4.62	2.71	47.57	36.05	41.32	32.57	45.09	48.05	44.27	40.52	46.15	42.50			
1-Oct-38	5.48	4.90	4.37	4.87	4.09	4.70	2.71	38.82	32.42	34.58	25.48	39.52	42.30	40.78	37.24	42.11	38.39			
1-Nov-38	5.65	5.18	4.50	5.12	4.22	4.91	2.71	39.38	38.75	34.12	30.54	41.20	45.80	43.05	40.75	42.86	40.55			
1-Dec-38	5.94	5.46	4.75	5.38	4.47	5.15	2.71	47.88	41.76	40.04	36.25	46.75	48.49	48.22	44.65	46.98	44.11			
1-Jan-39	6.09	5.66	4.88	5.56	4.59	5.34	2.71	53.69	46.30	45.35	38.11	49.30	49.29	48.23	45.84	47.69	45.93			
1-Feb-39	6.05	5.63	4.86	5.50	4.57	5.29	2.78	46.97	43.90	40.74	35.59	41.24	43.50	46.27	43.42	44.90	43.33			
1-Mar-39	5.60	5.18	4.46	5.01	4.18	4.81	2.77	45.50	38.27	35.16	29.86	34.17	38.43	37.25	36.32	37.39	36.79			
1-Apr-39	5.36	4.84	4.29	4.66	4.01	4.55	2.76	35.56	33.21	31.10	22.90	28.67	36.31	31.52	32.22	31.69	33.51			
1-May-39	5.38	4.80	4.32	4.67	4.03	4.51	2.76	35.62	31.17	33.92	24.36	28.37	34.28	31.92	32.17	32.64	33.41			
1-Jun-39	5.46	4.81	4.40	4.74	4.12	4.59	2.75	39.62	37.26	40.48	31.28	36.45	40.31	37.62	35.88	39.16	37.92			
1-Jul-39	5.54	4.86	4.54	4.84	4.25	4.74	2.76	51.56	43.59	51.12	38.05	49.19	50.80	50.90	46.34	50.85	46.97			
1-Aug-39	5.59	4.89	4.59	4.88	4.31	4.76	2.76	54.34	43.06	54.86	38.45	52.20	54.08	50.83	48.50	51.65	49.22			
1-Sep-39	5.61	4.96	4.54	4.94	4.26	4.73	2.76	48.31	38.35	41.99	34.20	45.68	48.67	45.88	42.25	47.61	44.12			
1-Oct-39	5.67	5.06	4.58	5.03	4.29	4.84	2.77	40.73	33.91	35.94	28.41	41.79	44.56	42.45	38.28	43.72	40.09			
1-Nov-39	5.85	5.36	4.70	5.32	4.42	5.05	2.76	43.83	38.39	37.20	30.25	43.53	48.48	45.85	43.17	45.26	42.90			
1-Dec-39	6.07	5.59	4.93	5.56	4.64	5.27	2.77	48.58	42.56	41.25	38.08	48.28	50.15	50.76	46.76	48.61	45.72			
1-Jan-40	6.26	5.85	5.08	5.78	4.78	5.48	2.77	53.16	47.18	46.42	39.22	52.43	51.79	50.94	48.20	49.55	47.44			
1-Feb-40	6.24	5.80	5.04	5.64	4.75	5.41	2.84	48.12	43.86	40.66	37.60	42.28	44.95	46.58	44.57	44.89	43.66			
1-Mar-40	5.77	5.34	4.61	5.15	4.32	4.92	2.83	46.56	39.10	35.54	30.18	33.04	39.72	37.68	37.37	37.35	37.30			
1-Apr-40	5.53	4.99	4.40	4.83	4.11	4.64	2.81	37.54	32.70	30.70	23.94	28.78	34.66	32.79	32.79	32.13	32.76			
1-May-40	5.56	4.94	4.48	4.82	4.19	4.59	2.82	35.28	33.12	35.50	25.94	29.43	36.02	33.44	33.41	33.96	34.21			
1-Jun-40	5.64	4.95	4.57	4.88	4.28	4.69	2.81	41.98	36.42	42.30	31.78	37.29	41.29	37.93	36.26	39.19	38.02			
1-Jul-40	5.74	5.02	4.70	4.98	4.41	4.87	2.82	51.76	45.11	53.71	38.87	49.69	52.03	51.71	47.16	51.75	47.70			
1-Aug-40	5.79	5.06	4.76	5.05	4.47	4.91	2.82	55.10	44.41	55.49	40.55	52.50	56.02	50.79	49.93	51.79	50.84			
1-Sep-40	5.77	5.11	4.72	5.11	4.42	4.87	2.82	48.31	39.32	43.95	35.48	46.12	49.78	46.77	43.36	48.31	44.91			
1-Oct-40	5.79	5.17	4.69	5.18	4.40	4.93	2.82	42.43	33.09	36.98	28.19	42.74	46.61	42.97	39.56	44.01	40.71			
1-Nov-40	5.94	5.44	4.81	5.43	4.52	5.12	2.82	43.77	39.62	37.57	31.25	44.44	49.37	46.30	43.74	45.41	42.71			
1-Dec-40	6.21	5.71	5.07	5.69	4.77	5.36	2.82	48.49	44.85	42.26	39.46	50.18	52.37	51.87	47.71	49.21	46.25			
1-Jan-41	6.39	5.97	5.18	5.90	4.88	5.59	2.83	54.25	48.15	47.37	40.03	53.51	52.85	51.99	49.19	50.56	48.42			
1-Feb-41	6.37	5.92	5.14	5.76	4.85	5.52	2.90	49.11	44.76	41.50	38.37	43.15	45.87	47.54	45.48	45.81	44.56			
1-Mar-41	5.89	5.45	4.71	5.26	4.41	5.02	2.89	47.51	39.91	36.27	30.80	33.71	40.53	38.46	38.14	38.11	38.07			
1-Apr-41	5.64	5.09	4.49	4.93	4.19	4.73	2.87	38.31	33.37	31.33	24.43	29.37	35.37	33.46	33.46	32.79	33.43			
1-May-41	5.67	5.05	4.57	4.92	4.28	4.69	2.88	36.00	33.80	36.23	26.47	30.03	36.76	34.12	34.10	34.66	34.91			
1-Jun-41	5.76	5.06	4.67	4.98	4.37	4.79	2.87	42.84	37.17	43.17	32.43	38.05	42.14	38.71	37.00	39.99	38.80			
1-Jul-41	5.86	5.13	4.79	5.08	4.50	4.97	2.87	52.83	46.04	54.82	39.67	50.71	53.09	52.77	48.12	52.81	48.67			
1-Aug-41	5.91	5.17	4.86	5.15	4.56	5.01	2.88	56.23	45.32	56.63	41.38	53.58	57.17	51.83	50.95	52.85	51.88			
1-Sep-41	5.89	5.21	4.81	5.21	4.52	4.97	2.88	49.30	40.13	44.85	36.21	47.06	50.81	47.73	44.25	49.30	45.83			
1-Oct-41	5.91	5.28	4.78	5.28	4.49	5.03	2.88	43.30	33.76	37.74	28.77	43.61	47.56	43.85	40.37	44.91	41.54			
1-Nov-41	6.06	5.56	4.91	5.54	4.61	5.22	2.88	44.67	40.43	38.34	31.89	45.35	50.38	47.25	44.64	46.34	43.58			

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-Dec-41	6.33	5.83	5.17	5.81	4.87	5.47	2.88	49.49	45.77	43.13	40.27	51.20	53.44	52.94	48.69	50.21	47.19			
1-Jan-42	6.52	6.10	5.29	6.03	4.98	5.71	2.88	55.36	49.14	48.35	40.85	54.61	53.94	53.06	50.21	51.61	49.42			
1-Feb-42	6.50	6.05	5.25	5.88	4.95	5.64	2.96	50.12	45.68	42.35	39.17	44.04	46.82	48.52	46.42	46.75	45.48			
1-Mar-42	6.01	5.56	4.80	5.37	4.50	5.12	2.95	48.49	40.73	37.02	31.44	34.41	41.37	39.25	38.92	38.90	38.85			
1-Apr-42	5.76	5.20	4.58	5.04	4.28	4.83	2.93	39.10	34.06	31.98	24.93	29.98	36.10	34.15	34.15	33.46	34.12			
1-May-42	5.79	5.15	4.67	5.02	4.37	4.79	2.94	36.74	34.50	36.97	27.02	30.65	37.52	34.83	34.80	35.38	35.63			
1-Jun-42	5.88	5.16	4.77	5.08	4.46	4.89	2.93	43.73	37.93	44.06	33.10	38.84	43.00	39.51	37.76	40.82	39.60			
1-Jul-42	5.98	5.23	4.89	5.19	4.59	5.08	2.93	53.91	46.99	55.95	40.48	51.76	54.19	53.86	49.12	53.90	49.68			
1-Aug-42	6.04	5.28	4.96	5.26	4.66	5.12	2.93	57.39	46.26	57.80	42.24	54.68	58.34	52.90	52.00	53.94	52.95			
1-Sep-42	6.01	5.32	4.91	5.32	4.61	5.07	2.94	50.32	40.95	45.77	36.95	48.03	51.85	48.72	45.16	50.32	46.77			
1-Oct-42	6.03	5.39	4.88	5.39	4.58	5.13	2.94	44.19	34.46	38.52	29.36	44.51	48.54	44.76	41.20	45.84	42.40			
1-Nov-42	6.19	5.67	5.01	5.65	4.70	5.33	2.94	45.59	41.26	39.13	32.55	46.28	51.42	48.22	45.56	47.29	44.48			
1-Dec-42	6.47	5.95	5.28	5.93	4.97	5.58	2.94	50.51	46.72	44.01	41.10	52.26	54.54	54.03	49.69	51.25	48.17			
1-Jan-43	6.66	6.22	5.40	6.15	5.09	5.83	2.94	56.52	50.17	49.36	41.70	55.75	55.07	54.16	51.25	52.68	50.44			
1-Feb-43	6.63	6.17	5.36	6.00	5.05	5.76	3.02	51.16	46.63	43.23	39.98	44.96	47.79	49.53	47.39	47.73	46.42			
1-Mar-43	6.13	5.68	4.90	5.48	4.59	5.23	3.01	49.50	41.58	37.79	32.09	35.12	42.23	40.06	39.73	39.71	39.66			
1-Apr-43	5.88	5.31	4.68	5.14	4.37	4.93	2.99	39.91	34.76	32.64	25.45	30.60	36.85	34.86	34.86	34.16	34.83			
1-May-43	5.91	5.26	4.77	5.13	4.46	4.89	3.00	37.51	35.21	37.74	27.58	31.29	38.30	35.55	35.52	36.11	36.37			
1-Jun-43	6.00	5.27	4.87	5.19	4.56	4.99	2.99	44.63	38.72	44.98	33.79	39.65	43.90	40.33	38.55	41.67	40.43			
1-Jul-43	6.10	5.34	5.00	5.29	4.69	5.18	2.99	55.04	47.96	57.11	41.33	52.84	55.32	54.98	50.14	55.03	50.71			
1-Aug-43	6.16	5.39	5.06	5.37	4.75	5.22	3.00	58.58	47.22	59.00	43.11	55.82	59.56	54.00	53.09	55.06	54.05			
1-Sep-43	6.13	5.43	5.01	5.43	4.71	5.18	3.00	51.36	41.80	46.73	37.72	49.03	52.93	49.73	46.10	51.37	47.75			
1-Oct-43	6.16	5.50	4.99	5.50	4.68	5.24	3.00	45.11	35.18	39.32	29.97	45.44	49.55	45.69	42.06	46.79	43.28			
1-Nov-43	6.32	5.79	5.11	5.77	4.80	5.44	3.00	46.54	42.12	39.94	33.23	47.25	52.49	49.22	46.50	48.28	45.41			
1-Dec-43	6.60	6.07	5.39	6.05	5.08	5.70	3.00	51.56	47.69	44.93	41.95	53.35	55.68	55.15	50.72	52.32	49.17			
1-Jan-44	6.80	6.35	5.51	6.28	5.19	5.95	3.01	57.70	51.21	50.39	42.57	56.91	56.22	55.29	52.32	53.78	51.50			
1-Feb-44	6.77	6.30	5.47	6.13	5.16	5.88	3.08	52.23	47.60	44.14	40.82	45.89	48.79	50.56	48.38	48.72	47.39			
1-Mar-44	6.26	5.80	5.01	5.59	4.69	5.34	3.07	50.54	42.44	38.58	32.76	35.86	43.11	40.90	40.56	40.54	40.49			
1-Apr-44	6.00	5.42	4.77	5.25	4.46	5.03	3.05	40.74	35.49	33.32	25.98	31.24	37.62	35.59	35.59	34.87	35.56			
1-May-44	6.03	5.37	4.86	5.23	4.55	4.99	3.06	38.29	35.95	38.53	28.16	31.94	39.10	36.29	36.26	36.87	37.13			
1-Jun-44	6.13	5.38	4.97	5.30	4.65	5.09	3.05	45.57	39.53	45.92	34.49	40.47	44.82	41.17	39.35	42.54	41.27			
1-Jul-44	6.23	5.45	5.10	5.41	4.78	5.29	3.06	56.19	48.97	58.30	42.19	53.94	56.47	56.13	51.18	56.17	51.77			
1-Aug-44	6.29	5.50	5.17	5.48	4.85	5.33	3.06	59.81	48.21	60.23	44.01	56.98	60.80	55.12	54.19	56.21	55.18			
1-Sep-44	6.26	5.55	5.12	5.54	4.80	5.28	3.06	52.44	42.68	47.70	38.51	50.05	54.04	50.77	47.06	52.44	48.74			
1-Oct-44	6.29	5.62	5.09	5.62	4.78	5.35	3.07	46.06	35.91	40.14	30.60	46.39	50.59	46.64	42.94	47.77	44.19			
1-Nov-44	6.45	5.91	5.22	5.89	4.90	5.56	3.06	47.51	43.00	40.78	33.92	48.23	53.59	50.25	47.47	49.28	46.35			
1-Dec-44	6.74	6.20	5.50	6.18	5.18	5.82	3.07	52.64	48.69	45.87	42.83	54.46	56.84	56.30	51.78	53.41	50.20			
1-Jan-45	6.94	6.49	5.63	6.41	5.30	6.07	3.07	58.90	52.28	51.44	43.46	58.10	57.39	56.45	53.41	54.90	52.57			
1-Feb-45	6.91	6.43	5.59	6.26	5.26	6.00	3.14	53.32	48.60	45.06	41.67	46.85	49.81	51.62	49.39	49.74	48.38			
1-Mar-45	6.39	5.92	5.11	5.71	4.79	5.45	3.13	51.59	43.33	39.38	33.45	36.61	44.01	41.76	41.41	41.39	41.33			
1-Apr-45	6.13	5.53	4.87	5.36	4.55	5.14	3.12	41.60	36.23	34.02	26.53	31.89	38.41	36.34	36.33	35.60	36.30			
1-May-45	6.16	5.48	4.97	5.34	4.65	5.09	3.13	39.09	36.70	39.33	28.74	32.61	39.91	37.05	37.02	37.64	37.91			
1-Jun-45	6.26	5.49	5.07	5.41	4.75	5.20	3.11	46.52	40.36	46.88	35.21	41.32	45.75	42.04	40.18	43.43	42.13			
1-Jul-45	6.36	5.57	5.21	5.52	4.88	5.40	3.12	57.36	49.99	59.52	43.07	55.07	57.65	57.30	52.25	57.35	52.85			
1-Aug-45	6.42	5.61	5.28	5.59	4.95	5.44	3.12	61.06	49.21	61.49	44.93	58.17	62.07	56.28	55.33	57.38	56.33			
1-Sep-45	6.39	5.66	5.23	5.66	4.90	5.39	3.13	53.53	43.57	48.70	39.31	51.10	55.17	51.83	48.04	53.54	49.76			
1-Oct-45	6.42	5.73	5.20	5.74	4.87	5.46	3.13	47.02	36.66	40.98	31.24	47.36	51.65	47.62	43.83	48.77	45.11			
1-Nov-45	6.59	6.03	5.33	6.01	5.01	5.67	3.13	48.50	43.90	41.63	34.63	49.24	54.71	51.30	48.47	50.31	47.32			
1-Dec-45	6.88	6.33	5.62	6.31	5.29	5.94	3.13	53.74	49.70	46.83	43.72	55.60	58.03	57.48	52.86	54.52	51.24			
1-Jan-46	7.09	6.62	5.75	6.55	5.41	6.20	3.13	60.13	53.38	52.51	44.37	59.31	58.59	57.63	54.53	56.05	53.67			
1-Feb-46	7.06	6.57	5.71	6.39	5.37	6.12	3.21	54.44	49.61	46.00	42.54	47.83	50.85	52.70	50.42	50.78	49.39			
1-Mar-46	6.53	6.05	5.22	5.83	4.89	5.57	3.20	52.67	44.23	40.21	34.14	37.37	44.93	42.63	42.27	42.25	42.20			
1-Apr-46	6.26	5.65	4.98	5.47	4.65	5.25	3.18	42.46	36.99	34.73	27.08	32.56	39.21	37.10	37.09	36.34	37.06			
1-May-46	6.29	5.59	5.07	5.45	4.74	5.20	3.19	39.91	37.47	40.16	29.34	33.29	40.75	37.83	37.80	38.42	38.70			
1-Jun-46	6.39	5.61	5.18	5.52	4.85	5.31	3.18	47.49	41.20	47.85	35.95	42.18	46.71	42.91	41.01	44.33	43.01			

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-Jul-46	6.49	5.69	5.32	5.63	4.99	5.51	3.19	58.56	51.03	60.76	43.97	56.22	58.85	58.50	53.35	58.55	53.95			
1-Aug-46	6.56	5.73	5.39	5.71	5.06	5.56	3.19	62.33	50.24	62.78	45.87	59.39	63.37	57.45	56.48	58.58	57.51			
1-Sep-46	6.53	5.78	5.34	5.78	5.01	5.51	3.19	54.65	44.48	49.72	40.13	52.17	56.32	52.91	49.05	54.65	50.80			
1-Oct-46	6.55	5.85	5.31	5.86	4.98	5.58	3.20	48.00	37.43	41.84	31.89	48.35	52.72	48.61	44.75	49.79	46.05			
1-Nov-46	6.72	6.16	5.44	6.14	5.11	5.79	3.19	49.52	44.82	42.50	35.36	50.27	55.85	52.37	49.48	51.36	48.31			
1-Dec-46	7.02	6.46	5.73	6.44	5.40	6.06	3.20	54.86	50.74	47.80	44.64	56.76	59.24	58.68	53.97	55.66	52.31			
1-Jan-47	7.24	6.76	5.87	6.69	5.53	6.33	3.20	61.39	54.50	53.62	45.30	60.56	59.82	58.84	55.67	57.23	54.80			
1-Feb-47	7.21	6.71	5.83	6.52	5.49	6.25	3.28	55.58	50.65	46.97	43.43	48.84	51.92	53.80	51.48	51.85	50.43			
1-Mar-47	6.67	6.17	5.33	5.95	4.99	5.68	3.27	53.77	45.16	41.05	34.86	38.16	45.87	43.52	43.16	43.14	43.08			
1-Apr-47	6.39	5.77	5.08	5.59	4.75	5.36	3.25	43.36	37.77	35.46	27.65	33.24	40.03	37.87	37.87	37.11	37.84			
1-May-47	6.42	5.71	5.18	5.57	4.84	5.31	3.26	40.75	38.25	41.00	29.96	33.99	41.60	38.62	38.59	39.23	39.51			
1-Jun-47	6.52	5.72	5.29	5.64	4.95	5.42	3.25	48.49	42.06	48.86	36.70	43.07	47.69	43.81	41.88	45.26	43.92			
1-Jul-47	6.63	5.81	5.43	5.75	5.09	5.63	3.25	59.79	52.10	62.04	44.89	57.40	60.09	59.73	54.47	59.77	55.09			
1-Aug-47	6.70	5.85	5.50	5.83	5.16	5.67	3.26	63.64	51.30	64.09	46.84	60.64	64.70	58.66	57.67	59.81	58.72			
1-Sep-47	6.67	5.90	5.45	5.90	5.11	5.62	3.26	55.80	45.41	50.76	40.98	53.26	57.50	54.02	50.08	55.80	51.87			
1-Oct-47	6.69	5.98	5.42	5.98	5.08	5.69	3.26	49.01	38.21	42.72	32.56	49.36	53.83	49.63	45.69	50.83	47.02			
1-Nov-47	6.87	6.29	5.55	6.27	5.22	5.92	3.26	50.55	45.76	43.39	36.10	51.32	57.02	53.47	50.52	52.44	49.32			
1-Dec-47	7.17	6.60	5.86	6.57	5.52	6.19	3.26	56.01	51.81	48.81	45.57	57.95	60.48	59.91	55.10	56.83	53.41			
1-Jan-48	7.39	6.90	5.99	6.83	5.64	6.47	3.27	62.69	55.65	54.75	46.26	61.84	61.08	60.08	56.85	58.44	55.96			
1-Feb-48	7.36	6.85	5.95	6.66	5.60	6.39	3.35	56.75	51.72	47.96	44.35	49.87	53.01	54.94	52.56	52.94	51.50			
1-Mar-48	6.81	6.30	5.44	6.08	5.10	5.80	3.34	54.91	46.12	41.92	35.60	38.96	46.84	44.44	44.07	44.05	43.99			
1-Apr-48	6.52	5.89	5.19	5.70	4.85	5.47	3.32	44.27	38.56	36.21	28.23	33.94	40.88	38.67	38.67	37.89	38.64			
1-May-48	6.56	5.83	5.29	5.69	4.94	5.42	3.33	41.61	39.06	41.86	30.59	34.71	42.48	39.44	39.40	40.06	40.34			
1-Jun-48	6.66	5.85	5.40	5.76	5.06	5.54	3.31	49.51	42.95	49.89	37.48	43.98	48.70	44.74	42.76	46.22	44.85			
1-Jul-48	6.77	5.93	5.54	5.87	5.20	5.75	3.32	61.05	53.20	63.35	45.84	58.61	61.36	60.99	55.62	61.04	56.25			
1-Aug-48	6.84	5.98	5.62	5.96	5.27	5.79	3.32	64.98	52.38	65.45	47.83	61.92	66.07	59.90	58.89	61.08	59.96			
1-Sep-48	6.81	6.03	5.56	6.03	5.22	5.74	3.33	56.98	46.37	51.83	41.84	54.39	58.72	55.16	51.13	56.98	52.96			
1-Oct-48	6.83	6.10	5.53	6.11	5.19	5.81	3.33	50.04	39.02	43.62	33.25	50.40	54.97	50.68	46.65	51.91	48.01			
1-Nov-48	7.01	6.42	5.67	6.40	5.33	6.04	3.33	51.62	46.72	44.31	36.86	52.41	58.23	54.60	51.58	53.55	50.37			
1-Dec-48	7.32	6.74	5.98	6.71	5.63	6.32	3.33	57.19	52.90	49.84	46.54	59.18	61.76	61.18	56.26	58.03	54.54			
1-Jan-49	7.54	7.05	6.12	6.97	5.76	6.60	3.34	64.01	56.82	55.90	47.23	63.14	62.37	61.35	58.05	59.67	57.13			
1-Feb-49	7.51	6.99	6.07	6.80	5.72	6.52	3.42	57.95	52.81	48.97	45.28	50.92	54.13	56.10	53.67	54.06	52.58			
1-Mar-49	6.95	6.43	5.55	6.21	5.20	5.92	3.41	56.07	47.09	42.80	36.35	39.78	47.83	45.38	45.00	44.98	44.92			
1-Apr-49	6.66	6.01	5.30	5.82	4.95	5.58	3.39	45.20	39.38	36.97	28.83	34.66	41.74	39.49	39.48	38.69	39.45			
1-May-49	6.69	5.96	5.40	5.80	5.05	5.53	3.40	42.48	39.89	42.75	31.24	35.44	43.38	40.27	40.23	40.90	41.19			
1-Jun-49	6.80	5.97	5.51	5.88	5.16	5.65	3.38	50.56	43.86	50.94	38.27	44.91	49.72	45.68	43.66	47.19	45.79			
1-Jul-49	6.91	6.05	5.66	6.00	5.31	5.87	3.39	62.34	54.33	64.68	46.81	59.84	62.65	62.27	56.79	62.32	57.44			
1-Aug-49	6.98	6.10	5.73	6.08	5.38	5.92	3.39	66.35	53.48	66.83	48.83	63.22	67.46	61.16	60.13	62.36	61.22			
1-Sep-49	6.95	6.15	5.68	6.15	5.33	5.86	3.40	58.18	47.35	52.92	42.72	55.53	59.95	56.33	52.21	58.18	54.08			
1-Oct-49	6.98	6.23	5.65	6.23	5.30	5.94	3.40	51.10	39.84	44.54	33.95	51.47	56.13	51.75	47.64	53.00	49.02			
1-Nov-49	7.16	6.56	5.79	6.54	5.44	6.17	3.40	52.71	47.71	45.24	37.64	53.51	59.45	55.75	52.67	54.68	51.43			
1-Dec-49	7.48	6.88	6.10	6.85	5.75	6.46	3.40	58.40	54.01	50.89	47.52	60.42	63.06	62.47	57.45	59.25	55.69			
1-Jan-50	7.70	7.20	6.24	7.11	5.88	6.74	3.40	65.35	58.01	57.07	48.22	64.46	63.67	62.63	59.26	60.91	58.33			
1-Feb-50	7.67	7.14	6.20	6.94	5.84	6.66	3.49	59.16	53.92	49.99	46.23	51.98	55.26	57.27	54.79	55.19	53.68			
1-Mar-50	7.09	6.57	5.67	6.34	5.31	6.05	3.48	57.24	48.07	43.69	37.11	40.61	48.82	46.33	45.94	45.91	45.86			
1-Apr-50	6.80	6.13	5.41	5.94	5.05	5.70	3.46	46.15	40.20	37.74	29.43	35.38	42.61	40.31	40.31	39.50	40.27			
1-May-50	6.83	6.08	5.51	5.93	5.15	5.65	3.47	43.37	40.72	43.64	31.89	36.18	44.28	41.11	41.07	41.76	42.05			
1-Jun-50	6.94	6.09	5.63	6.00	5.27	5.77	3.45	51.61	44.77	52.00	39.07	45.84	50.76	46.64	44.57	48.18	46.75			
1-Jul-50	7.06	6.18	5.78	6.12	5.42	5.99	3.46	63.64	55.46	66.03	47.79	61.09	63.96	63.57	57.97	63.62	58.63			
1-Aug-50	7.13	6.23	5.85	6.21	5.50	6.04	3.46	67.74	54.60	68.22	49.85	64.54	68.87	62.44	61.38	63.66	62.50			
1-Sep-50	7.09	6.28	5.80	6.28	5.44	5.98	3.47	59.39	48.34	54.03	43.62	56.69	61.20	57.50	53.30	59.39	55.21			
1-Oct-50	7.12	6.36	5.77	6.36	5.41	6.06	3.47	52.16	40.67	45.47	34.65	52.54	57.30	52.83	48.63	54.11	50.05			
1-Nov-50	7.31	6.69	5.91	6.67	5.55	6.30	3.47	53.81	48.70	46.19	38.42	54.63	60.69	56.92	53.77	55.82	52.50			
1-Dec-50	7.63	7.02	6.23	7.00	5.87	6.59	3.47	59.62	55.14	51.95	48.51	61.68	64.38	63.77	58.65	60.49	56.85			
1-Jan-51	7.86	7.35	6.37	7.26	6.01	6.88	3.48	66.71	59.22	58.26	49.22	65.80	65.00	63.93	60.50	62.18	59.54			

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-Feb-51	7.83	7.29	6.33	7.08	5.96	6.79	3.56	60.39	55.04	51.03	47.19	53.07	56.41	58.46	55.93	56.34	54.80			
1-Mar-51	7.24	6.71	5.79	6.47	5.42	6.17	3.55	58.43	49.08	44.60	37.88	41.46	49.84	47.29	46.90	46.87	46.81			
1-Apr-51	6.94	6.26	5.52	6.07	5.16	5.82	3.53	47.11	41.04	38.53	30.04	36.12	43.50	41.15	41.15	40.32	41.11			
1-May-51	6.98	6.21	5.62	6.05	5.26	5.77	3.54	44.27	41.57	44.55	32.56	36.93	45.21	41.96	41.93	42.63	42.93			
1-Jun-51	7.09	6.22	5.74	6.12	5.38	5.89	3.53	52.69	45.71	53.09	39.88	46.80	51.82	47.61	45.50	49.18	47.72			
1-Jul-51	7.20	6.31	5.90	6.25	5.53	6.12	3.53	64.96	56.62	67.41	48.78	62.37	65.29	64.90	59.18	64.95	59.86			
1-Aug-51	7.27	6.36	5.98	6.34	5.61	6.16	3.54	69.15	55.74	69.65	50.89	65.89	70.30	63.74	62.66	64.99	63.80			
1-Sep-51	7.24	6.41	5.92	6.41	5.55	6.11	3.54	60.63	49.35	55.16	44.53	57.88	62.48	58.70	54.41	60.63	56.36			
1-Oct-51	7.27	6.49	5.89	6.50	5.52	6.19	3.55	53.25	41.52	46.42	35.38	53.64	58.49	53.93	49.65	55.24	51.09			
1-Nov-51	7.46	6.83	6.03	6.81	5.67	6.43	3.54	54.93	49.72	47.15	39.22	55.77	61.96	58.10	54.89	56.99	53.60			
1-Dec-51	7.79	7.17	6.36	7.14	5.99	6.73	3.55	60.86	56.29	53.04	49.52	62.97	65.72	65.10	59.87	61.75	58.04			
1-Jan-52	8.03	7.50	6.51	7.41	6.13	7.02	3.55	68.10	60.45	59.48	50.25	67.17	66.36	65.27	61.76	63.48	60.79			
1-Feb-52	7.99	7.44	6.46	7.23	6.09	6.94	3.64	61.65	56.19	52.10	48.18	54.17	57.59	59.68	57.10	57.51	55.94			
1-Mar-52	7.39	6.85	5.91	6.60	5.54	6.30	3.62	59.65	50.10	45.54	38.67	42.33	50.88	48.28	47.88	47.85	47.79			
1-Apr-52	7.09	6.39	5.63	6.19	5.26	5.94	3.61	48.09	41.89	39.34	30.67	36.88	44.41	42.01	42.01	41.16	41.97			
1-May-52	7.12	6.34	5.74	6.18	5.37	5.89	3.61	45.20	42.43	45.48	33.24	37.71	46.15	42.84	42.81	43.52	43.83			
1-Jun-52	7.23	6.35	5.86	6.25	5.49	6.01	3.60	53.79	46.66	54.20	40.71	47.78	52.90	48.60	46.45	50.21	48.72			
1-Jul-52	7.35	6.44	6.02	6.38	5.65	6.24	3.61	66.32	57.80	68.82	49.80	63.67	66.66	66.25	60.42	66.31	61.11			
1-Aug-52	7.43	6.49	6.10	6.47	5.73	6.29	3.61	70.59	56.90	71.10	51.95	67.26	71.77	65.07	63.97	66.35	65.13			
1-Sep-52	7.39	6.55	6.04	6.54	5.67	6.24	3.61	61.90	50.38	56.31	45.45	59.08	63.78	59.93	55.55	61.90	57.54			
1-Oct-52	7.42	6.63	6.01	6.63	5.64	6.31	3.62	54.36	42.39	47.38	36.12	54.76	59.71	55.05	50.68	56.39	52.16			
1-Nov-52	7.61	6.98	6.16	6.95	5.79	6.56	3.62	56.08	50.76	48.13	40.04	56.93	63.25	59.32	56.04	58.17	54.72			
1-Dec-52	7.95	7.32	6.49	7.29	6.12	6.87	3.62	62.13	57.47	54.14	50.55	64.29	67.09	66.46	61.12	63.04	59.25			
1-Jan-53	8.19	7.65	6.64	7.57	6.26	7.17	3.62	69.52	61.71	60.72	51.30	68.58	67.74	66.63	63.05	64.81	62.05			
1-Feb-53	8.16	7.60	6.60	7.38	6.21	7.08	3.71	62.94	57.36	53.18	49.18	55.30	58.79	60.93	58.29	58.71	57.11			
1-Mar-53	7.55	6.99	6.03	6.74	5.65	6.43	3.70	60.90	51.14	46.49	39.48	43.21	51.95	49.29	48.88	48.85	48.79			
1-Apr-53	7.23	6.53	5.75	6.32	5.37	6.07	3.68	49.10	42.77	40.16	31.31	37.64	45.34	42.89	42.88	42.02	42.85			
1-May-53	7.27	6.47	5.86	6.30	5.48	6.01	3.69	46.14	43.32	46.43	33.93	38.49	47.11	43.73	43.70	44.42	44.74			
1-Jun-53	7.38	6.48	5.99	6.38	5.61	6.14	3.68	54.91	47.63	55.33	41.56	48.77	54.00	49.62	47.42	51.26	49.73			
1-Jul-53	7.51	6.57	6.15	6.51	5.77	6.38	3.68	67.70	59.00	70.25	50.84	65.00	68.05	67.64	61.68	67.69	62.38			
1-Aug-53	7.58	6.63	6.23	6.60	5.85	6.42	3.69	72.07	58.09	72.58	53.04	68.67	73.27	66.43	65.30	67.73	66.49			
1-Sep-53	7.55	6.68	6.17	6.68	5.79	6.37	3.69	63.19	51.43	57.48	46.40	60.32	65.12	61.18	56.71	63.19	58.74			
1-Oct-53	7.58	6.77	6.13	6.77	5.75	6.45	3.69	55.50	43.27	48.37	36.87	55.90	60.96	56.20	51.74	57.56	53.25			
1-Nov-53	7.77	7.12	6.29	7.10	5.91	6.70	3.69	57.25	51.82	49.14	40.88	58.12	64.57	60.56	57.21	59.39	55.86			
1-Dec-53	8.12	7.47	6.63	7.44	6.25	7.01	3.70	63.43	58.67	55.27	51.61	65.63	68.49	67.84	62.40	64.36	60.49			
1-Jan-54	8.37	7.81	6.78	7.73	6.39	7.32	3.70	70.97	63.00	61.98	52.37	70.01	69.15	68.02	64.36	66.16	63.35			
1-Feb-54	8.33	7.75	6.73	7.54	6.34	7.23	3.79	64.25	58.56	54.29	50.21	56.46	60.02	62.20	59.51	59.94	58.30			
1-Mar-54	7.70	7.13	6.16	6.88	5.77	6.57	3.78	62.17	52.21	47.46	40.30	44.11	53.03	50.32	49.90	49.87	49.80			
1-Apr-54	7.39	6.66	5.87	6.46	5.49	6.19	3.76	50.12	43.66	40.99	31.96	38.43	46.28	43.78	43.78	42.90	43.74			
1-May-54	7.42	6.60	5.98	6.44	5.60	6.14	3.77	47.10	44.22	47.40	34.64	39.30	48.10	44.65	44.61	45.35	45.67			
1-Jun-54	7.54	6.62	6.11	6.52	5.72	6.27	3.75	56.05	48.63	56.48	42.43	49.79	55.13	50.65	48.41	52.33	50.77			
1-Jul-54	7.66	6.71	6.27	6.65	5.89	6.51	3.76	69.12	60.23	71.72	51.90	66.35	69.47	69.05	62.96	69.10	63.68			
1-Aug-54	7.74	6.76	6.36	6.74	5.97	6.56	3.76	73.57	59.30	74.10	54.14	70.10	74.80	67.81	66.67	69.15	67.88			
1-Sep-54	7.70	6.82	6.30	6.82	5.91	6.50	3.77	64.51	52.50	58.68	47.37	61.58	66.47	62.45	57.89	64.51	59.96			
1-Oct-54	7.74	6.91	6.26	6.91	5.87	6.58	3.77	56.65	44.18	49.38	37.64	57.06	62.23	57.38	52.82	58.77	54.36			
1-Nov-54	7.94	7.27	6.42	7.25	6.03	6.84	3.77	58.44	52.90	50.16	41.73	59.33	65.92	61.82	58.40	60.63	57.02			
1-Dec-54	8.29	7.63	6.77	7.60	6.38	7.16	3.77	64.75	59.89	56.42	52.68	67.00	69.92	69.26	63.70	65.70	61.75			
1-Jan-55	8.54	7.98	6.92	7.89	6.52	7.47	3.78	72.46	64.32	63.28	53.46	71.47	70.60	69.44	65.71	67.54	64.67			
1-Feb-55	8.51	7.92	6.87	7.69	6.47	7.38	3.87	65.59	59.78	55.43	51.26	57.64	61.27	63.50	60.75	61.19	59.52			
1-Mar-55	7.87	7.28	6.29	7.03	5.89	6.71	3.86	63.46	53.30	48.45	41.14	45.03	54.14	51.37	50.94	50.91	50.84			
1-Apr-55	7.54	6.80	5.99	6.59	5.60	6.32	3.84	51.17	44.57	41.85	32.63	39.23	47.25	44.70	44.69	43.79	44.65			
1-May-55	7.58	6.74	6.11	6.57	5.71	6.26	3.85	48.09	45.15	48.39	35.36	40.12	49.10	45.58	45.54	46.30	46.63			
1-Jun-55	7.70	6.75	6.24	6.65	5.84	6.40	3.83	57.22	49.64	57.66	43.32	50.83	56.28	51.71	49.42	53.42	51.83			
1-Jul-55	7.82	6.85	6.41	6.79	6.01	6.64	3.84	70.56	61.49	73.22	52.98	67.74	70.92	70.49	64.28	70.55	65.01			
1-Aug-55	7.90	6.91	6.49	6.88	6.09	6.70	3.84	75.11	60.54	75.64	55.27	71.56	76.36	69.23	68.06	70.59	69.30			

	Natural Gas						Heating Oil	Power (less Carbon)										Coal (at mine mouth)		
								Minn Hub		SPP South		PV		Craig		4 Corners				
Date	Henry Hub	Ventura	Waha	CIG	Permian	PEPL	ULS Diesel	On	Off	On	Off	On	Off	On	Off	On	Off	Year	8800	8400
	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/mmBTU	$/gal	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr	$/MW-hr		$/ton	$/ton
1-Sep-55	7.86	6.97	6.43	6.96	6.03	6.64	3.85	65.85	53.60	59.91	48.36	62.86	67.86	63.76	59.10	65.86	61.21			
1-Oct-55	7.90	7.05	6.39	7.06	6.00	6.72	3.85	57.84	45.10	50.41	38.42	58.26	63.53	58.57	53.92	59.99	55.49			
1-Nov-55	8.10	7.42	6.55	7.40	6.16	6.98	3.85	59.66	54.00	51.21	42.60	60.57	67.30	63.11	59.62	61.89	58.21			
1-Dec-55	8.46	7.79	6.91	7.76	6.51	7.31	3.85	66.10	61.14	57.60	53.78	68.39	71.38	70.71	65.03	67.07	63.04			
1-Jan-56	8.72	8.14	7.07	8.05	6.66	7.63	3.85	73.97	65.66	64.60	54.58	72.96	72.07	70.89	67.08	68.95	66.02			
1-Feb-56	8.68	8.08	7.02	7.85	6.61	7.53	3.95	66.96	61.03	56.58	52.33	58.84	62.55	64.82	62.02	62.46	60.76			
1-Mar-56	8.03	7.44	6.42	7.17	6.01	6.85	3.94	64.79	54.41	49.46	42.00	45.97	55.27	52.44	52.00	51.97	51.91			
1-Apr-56	7.70	6.94	6.12	6.73	5.72	6.45	3.92	52.24	45.50	42.72	33.31	40.05	48.23	45.63	45.62	44.71	45.59			
1-May-56	7.74	6.88	6.24	6.71	5.83	6.39	3.93	49.09	46.09	49.40	36.10	40.95	50.12	46.53	46.49	47.26	47.60			
1-Jun-56	7.86	6.90	6.37	6.79	5.96	6.53	3.91	58.42	50.68	58.87	44.22	51.89	57.46	52.79	50.45	54.53	52.91			
1-Jul-56	7.99	6.99	6.54	6.93	6.13	6.78	3.92	72.03	62.77	74.74	54.09	69.15	72.40	71.96	65.62	72.02	66.37			
1-Aug-56	8.07	7.05	6.63	7.03	6.22	6.84	3.92	76.67	61.80	77.22	56.43	73.05	77.95	70.67	69.48	72.06	70.74			
1-Sep-56	8.03	7.11	6.56	7.11	6.16	6.77	3.93	67.23	54.71	61.16	49.37	64.17	69.28	65.09	60.33	67.23	62.49			
1-Oct-56	8.06	7.20	6.53	7.20	6.12	6.86	3.93	59.04	46.04	51.46	39.23	59.47	64.86	59.79	55.05	61.24	56.65			
1-Nov-56	8.27	7.58	6.69	7.55	6.29	7.13	3.93	60.91	55.13	52.28	43.49	61.84	68.70	64.43	60.86	63.18	59.43			
1-Dec-56	8.64	7.95	7.05	7.92	6.65	7.46	3.93	67.48	62.42	58.80	54.91	69.82	72.87	72.18	66.39	68.47	64.35			
1-Jan-57	8.90	8.31	7.21	8.22	6.80	7.79	3.93	75.51	67.03	65.95	55.72	74.48	73.57	72.37	68.48	70.39	67.40			
1-Feb-57	8.86	8.25	7.16	8.02	6.75	7.69	4.03	68.36	62.30	57.76	53.42	60.07	63.85	66.17	63.31	63.77	62.03			
1-Mar-57	8.20	7.59	6.55	7.32	6.14	6.99	4.02	66.14	55.55	50.49	42.88	46.93	56.42	53.53	53.09	53.06	52.99			
1-Apr-57	7.86	7.09	6.25	6.87	5.84	6.59	4.00	53.33	46.45	43.61	34.01	40.89	49.24	46.58	46.58	45.64	46.54			
1-May-57	7.90	7.02	6.37	6.85	5.95	6.53	4.01	50.11	47.05	50.43	36.85	41.81	51.17	47.50	47.46	48.25	48.59			
1-Jun-57	8.02	7.04	6.50	6.93	6.09	6.67	3.99	59.64	51.74	60.09	45.14	52.97	58.65	53.89	51.50	55.67	54.02			
1-Jul-57	8.15	7.14	6.68	7.07	6.26	6.92	4.00	73.53	64.08	76.30	55.22	70.59	73.91	73.46	66.99	73.52	67.75			
1-Aug-57	8.23	7.20	6.76	7.17	6.35	6.98	4.00	78.27	63.09	78.83	57.61	74.58	79.58	72.15	70.93	73.57	72.22			
1-Sep-57	8.20	7.26	6.70	7.26	6.29	6.92	4.01	68.63	55.86	62.43	50.40	65.51	70.72	66.45	61.59	68.63	63.79			
1-Oct-57	8.23	7.35	6.66	7.35	6.25	7.00	4.01	60.28	47.00	52.54	40.04	60.71	66.21	61.04	56.20	62.52	57.83			
1-Nov-57	8.44	7.74	6.83	7.71	6.42	7.27	4.01	62.18	56.28	53.37	44.40	63.13	70.13	65.77	62.13	64.50	60.67			
1-Dec-57	8.82	8.12	7.20	8.08	6.78	7.62	4.01	68.89	63.72	60.03	56.05	71.28	74.39	73.69	67.77	69.90	65.69			

Southwestern Public Service Company
Forced Outage Rate (percentage)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
HARRING 1	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
HARRING 2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
HARRING 3	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
TOLK 1	6	6	6	6	6	6	6	6	6	6	6
TOLK 2	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
CUNNING 1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
CUNNING 2	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
JONES 1	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
JONES 2	3	3	3	3	3	3	3	3	3	3	3
MADDOX 1	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
NICHOLS 1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
NICHOLS 2	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
NICHOLS 3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
PLANT X 1	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
PLANT X 2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
PLANT X 3	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
PLANT X 4	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
31	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08
32	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
33	1	1	1	1	1	1	1	1	1	1	1
34	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73
35	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99
36	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97
COOKSTM 1	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85
COOKSTM 2	6	6	6	6	6	6	6	6	6	6	6
HOBBS 1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
BLKHAWK 1	3	3	3	3	3	3	3	3	3	3	3
BLKHAWK 2	3	3	3	3	3	3	3	3	3	3	3
CALP 200	7	7	7	7	7	7	7	7	7	7	7
CALP 400	7	7	7	7	7	7	7	7	7	7	7

Southwestern Public Service Company
Forced Outage Rate (percentage)

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
HARRING 1	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
HARRING 2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
HARRING 3	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
TOLK 1	6	6	6	6	6	6	6	6	6	6	6
TOLK 2	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
CUNNING 1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
CUNNING 2	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
JONES 1	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
JONES 2	3	3	3	3	3	3	3	3	3	3	3
MADDOX 1	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
NICHOLS 1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
NICHOLS 2	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
NICHOLS 3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
PLANT X 1	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
PLANT X 2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
PLANT X 3	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
PLANT X 4	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
31	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08
32	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
33	1	1	1	1	1	1	1	1	1	1	1
34	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73
35	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99
36	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97
COOKSTM 1	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85
COOKSTM 2	6	6	6	6	6	6	6	6	6	6	6
HOBBS 1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
BLKHAWK 1	3	3	3	3	3	3	3	3	3	3	3
BLKHAWK 2	3	3	3	3	3	3	3	3	3	3	3
CALP 200	7	7	7	7	7	7	7	7	7	7	7
CALP 400	7	7	7	7	7	7	7	7	7	7	7

Southwestern Public Service Company
Forced Outage Rate (percentage)

	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
HARRING 1	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
HARRING 2	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
HARRING 3	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
TOLK 1	6	6	6	6	6	6	6	6	6	6	6
TOLK 2	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
CUNNING 1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
CUNNING 2	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
JONES 1	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
JONES 2	3	3	3	3	3	3	3	3	3	3	3
MADDOX 1	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
NICHOLS 1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
NICHOLS 2	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
NICHOLS 3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
PLANT X 1	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
PLANT X 2	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.1
PLANT X 3	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
PLANT X 4	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
31	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08
32	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
33	1	1	1	1	1	1	1	1	1	1	1
34	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73	23.73
35	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99
36	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97
COOKSTM 1	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85
COOKSTM 2	6	6	6	6	6	6	6	6	6	6	6
HOBBS 1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
BLKHAWK 1	3	3	3	3	3	3	3	3	3	3	3
BLKHAWK 2	3	3	3	3	3	3	3	3	3	3	3
CALP 200	7	7	7	7	7	7	7	7	7	7	7
CALP 400	7	7	7	7	7	7	7	7	7	7	7

Southwestern Public Service Company
Forced Outage Rate (percentage)

	2052	2053	2054
HARRING 1	4.4	4.4	4.4
HARRING 2	4.4	4.4	4.4
HARRING 3	5.7	5.7	5.7
TOLK 1	6	6	6
TOLK 2	11.1	11.1	11.1
CUNNING 1	13.1	13.1	13.1
CUNNING 2	8.5	8.5	8.5
JONES 1	2.9	2.9	2.9
JONES 2	3	3	3
MADDOX 1	6.6	6.6	6.6
NICHOLS 1	1.6	1.6	1.6
NICHOLS 2	12.3	12.3	12.3
NICHOLS 3	2.3	2.3	2.3
PLANT X 1	13.5	13.5	13.5
PLANT X 2	13.1	13.1	13.1
PLANT X 3	11.1	11.1	11.1
PLANT X 4	4.6	4.6	4.6
31	10.08	10.08	10.08
32	2.6	2.6	2.6
33	1	1	1
34	23.73	23.73	23.73
35	7.99	7.99	7.99
36	5.97	5.97	5.97
COOKSTM 1	6.85	6.85	6.85
COOKSTM 2	6	6	6
HOBBS 1	3.3	3.3	3.3
BLKHAWK 1	3	3	3
BLKHAWK 2	3	3	3
CALP 200	7	7	7
CALP 400	7	7	7

Southwestern Public Service Company
Forced Outage Rate (percentage)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
CUNNING 3	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
CUNNING 4	6	6	6	6	6	6	6	6	6	6	6
JONES 3	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
JONES 4	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
CRLSBD 1	5	5	5	5	5	5	5	5	5	5	5
MADDOX 2	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
MADDOX 3	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
COOK_GT 2	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85
COOK_GT 3	6	6	6	6	6	6	6	6	6	6	6
SD_RCH 1	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54
ORION 1	3	3	3	3	3	3	3	3	3	3	3
QUAYCTY 1	3	3	3	3	3	3	3	3	3	3	3
BIOMASS 1	20	20	20	20	20	20	20	20	20	20	20
GAINCT 1	3	3	3	3	3	3	3	3	3	3	3
GAINCT 2	3	3	3	3	3	3	3	3	3	3	3
GAINCC 1	3	3	3	3	3	3	3	3	3	3	3
GEN_CT 1	3	3	3	3	3	3	3	3	3	3	3
GEN_CC 1	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 1	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 1	3	3	3	3	3	3	3	3	3	3	3
SMCC_TK 1	0	0	0	0	0	0	0	0	0	0	0
SMCC_GN 1	0	0	0	0	0	0	0	0	0	0	0
PPA_CT 593	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 594	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 595	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 596	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 597	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 598	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 599	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 600	3	3	3	3	3	3	3	3	3	3	3

Southwestern Public Service Company
Forced Outage Rate (percentage)

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
CUNNING 3	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
CUNNING 4	6	6	6	6	6	6	6	6	6	6	6
JONES 3	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
JONES 4	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
CRLSBD 1	5	5	5	5	5	5	5	5	5	5	5
MADDOX 2	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
MADDOX 3	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
COOK_GT 2	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85
COOK_GT 3	6	6	6	6	6	6	6	6	6	6	6
SD_RCH 1	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54
ORION 1	3	3	3	3	3	3	3	3	3	3	3
QUAYCTY 1	3	3	3	3	3	3	3	3	3	3	3
BIOMASS 1	20	20	20	20	20	20	20	20	20	20	20
GAINCT 1	3	3	3	3	3	3	3	3	3	3	3
GAINCT 2	3	3	3	3	3	3	3	3	3	3	3
GAINCC 1	3	3	3	3	3	3	3	3	3	3	3
GEN_CT 1	3	3	3	3	3	3	3	3	3	3	3
GEN_CC 1	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 1	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 1	3	3	3	3	3	3	3	3	3	3	3
SMCC_TK 1	0	0	0	0	0	0	0	0	0	0	0
SMCC_GN 1	0	0	0	0	0	0	0	0	0	0	0
PPA_CT 593	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 594	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 595	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 596	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 597	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 598	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 599	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 600	3	3	3	3	3	3	3	3	3	3	3

Southwestern Public Service Company
Forced Outage Rate (percentage)

	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
CUNNING 3	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
CUNNING 4	6	6	6	6	6	6	6	6	6	6	6
JONES 3	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
JONES 4	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
CRLSBD 1	5	5	5	5	5	5	5	5	5	5	5
MADDOX 2	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
MADDOX 3	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1	12.1
COOK_GT 2	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85	6.85
COOK_GT 3	6	6	6	6	6	6	6	6	6	6	6
SD_RCH 1	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54	73.54
ORION 1	3	3	3	3	3	3	3	3	3	3	3
QUAYCTY 1	3	3	3	3	3	3	3	3	3	3	3
BIOMASS 1	20	20	20	20	20	20	20	20	20	20	20
GAINCT 1	3	3	3	3	3	3	3	3	3	3	3
GAINCT 2	3	3	3	3	3	3	3	3	3	3	3
GAINCC 1	3	3	3	3	3	3	3	3	3	3	3
GEN_CT 1	3	3	3	3	3	3	3	3	3	3	3
GEN_CC 1	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 1	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 1	3	3	3	3	3	3	3	3	3	3	3
SMCC_TK 1	0	0	0	0	0	0	0	0	0	0	0
SMCC_GN 1	0	0	0	0	0	0	0	0	0	0	0
PPA_CT 593	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 594	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 595	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 596	3	3	3	3	3	3	3	3	3	3	3
PPA_CT 597	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 598	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 599	3	3	3	3	3	3	3	3	3	3	3
PPA_CC 600	3	3	3	3	3	3	3	3	3	3	3

Southwestern Public Service Company
Forced Outage Rate (percentage)

	2052	2053	2054
CUNNING 3	18.2	18.2	18.2
CUNNING 4	6	6	6
JONES 3	5.7	5.7	5.7
JONES 4	8.8	8.8	8.8
CRLSBD 1	5	5	5
MADDOX 2	25.9	25.9	25.9
MADDOX 3	12.1	12.1	12.1
COOK_GT 2	6.85	6.85	6.85
COOK_GT 3	6	6	6
SD_RCH 1	73.54	73.54	73.54
ORION 1	3	3	3
QUAYCTY 1	3	3	3
BIOMASS 1	20	20	20
GAINCT 1	3	3	3
GAINCT 2	3	3	3
GAINCC 1	3	3	3
GEN_CT 1	3	3	3
GEN_CC 1	3	3	3
PPA_CT 1	3	3	3
PPA_CC 1	3	3	3
SMCC_TK 1	0	0	0
SMCC_GN 1	0	0	0
PPA_CT 593	3	3	3
PPA_CC 594	3	3	3
PPA_CT 595	3	3	3
PPA_CT 596	3	3	3
PPA_CT 597	3	3	3
PPA_CC 598	3	3	3
PPA_CC 599	3	3	3
PPA_CC 600	3	3	3

Southwestern Public Service Company
Outage Weeks per Year

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
HARRING 1	0	0	0	0	0	0	0	0	0	0	0
HARRING 2	0	0	0	0	0	0	0	0	0	0	0
HARRING 3	0	0	0	0	0	0	0	0	0	0	0
TOLK 1	0	0	0	0	0	0	0	0	0	0	0
TOLK 2	0	0	0	0	0	0	0	0	0	0	0
CUNNING 1	0	0	0	2	2	2	2	2	2	2	2
CUNNING 2	0	0	0	0	0	0	4	8	4	8	4
JONES 1	0	0	0	0	0	0	0	0	0	0	0
JONES 2	0	0	0	0	0	0	0	0	0	0	0
MADDOX 1	0	0	0	0	0	7	2	7	2	7	2
NICHOLS 1	0	0	0	0	0	0	0	0	0	0	0
NICHOLS 2	0	0	0	0	0	8	0	0	0	8	0
NICHOLS 3	0	0	0	0	0	0	0	0	0	0	0
PLANT X 1	0	0	0	7	0	0	2	2	2	2	2
PLANT X 2	0	0	1	1	0	0	2	2	2	2	2
PLANT X 3	0	0	0	0	0	0	0	0	0	0	2
PLANT X 4	0	0	0	0	0	0	0	0	0	0	4
31	0	0	0	2	0	2	0	6	0	2	0
32	0	0	0	0	0	0	0	9	0	0	0
33	0	0	0	0	0	8	0	0	0	8	0
34	0	0	0	7	0	7	0	7	0	7	0
35	0	0	1	1	12	1	1	12	1	1	12
36	0	0	0	0	1	1	10	1	1	10	1
COOKSTM 1	2	2	2	2	2	2	2	2	2	2	2
COOKSTM 2	2	2	2	2	2	2	2	2	2	2	2
HOBBS 1	0	0	0	0	0	0	0	0	0	3	4
BLKHAWK 1	0	0	0	0	0	4	0	1	0	4	0
BLKHAWK 2	0	0	0	0	0	0	4	0	1	0	4
CALP 200	0	0	0	0	2	2	2	2	2	2	2
CALP 400	0	0	0	0	0	2	2	2	2	2	2

Southwestern Public Service Company
Outage Weeks per Year

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
HARRING 1	9	1	1	9	1	1	9	1	1	9	1
HARRING 2	10	1	1	10	1	1	10	1	1	10	1
HARRING 3	1	10	1	1	10	1	1	10	1	1	10
TOLK 1	11	1	1	11	1	1	11	1	1	11	1
TOLK 2	1	1	6	1	1	1	6	1	1	1	6
CUNNING 1	2	2	2	2	2	2	2	2	2	2	2
CUNNING 2	8	4	8	4	8	4	8	4	8	4	8
JONES 1	1	0	0	0	10	0	0	0	1	0	0
JONES 2	0	0	0	0	1	0	0	0	10	0	0
MADDOX 1	7	2	7	2	7	2	7	2	7	2	7
NICHOLS 1	0	0	0	0	1	0	0	0	10	0	0
NICHOLS 2	0	0	8	0	0	0	8	0	0	0	8
NICHOLS 3	0	0	1	1	1	1	1	1	1	1	1
PLANT X 1	2	2	2	2	2	2	2	2	2	2	2
PLANT X 2	2	2	2	2	2	2	2	2	2	2	2
PLANT X 3	2	4	2	2	4	2	2	4	2	2	4
PLANT X 4	2	2	4	2	2	4	2	2	4	2	2
31	2	0	6	0	2	0	2	0	6	0	2
32	9	0	0	0	9	0	0	0	9	0	0
33	0	0	8	0	0	0	8	0	0	0	8
34	7	0	7	0	7	0	7	0	7	0	7
35	1	1	12	1	1	12	1	1	12	1	1
36	1	10	1	1	10	1	1	10	1	1	10
COOKSTM 1	2	2	2	2	2	2	2	2	2	2	2
COOKSTM 2	2	2	2	2	2	2	2	2	2	2	2
HOBBS 1	3	3	4	3	3	4	3	3	4	3	3
BLKHAWK 1	1	0	4	0	1	0	4	0	1	0	4
BLKHAWK 2	0	1	0	4	0	1	0	4	0	1	0
CALP 200	2	2	2	2	2	2	2	2	2	2	2
CALP 400	2	2	2	2	2	2	2	2	2	2	2

Southwestern Public Service Company
Outage Weeks per Year

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
HARRING 1	1	9	1	1	9	1	1	9	1	1	9
HARRING 2	1	10	1	1	10	1	1	10	1	1	10
HARRING 3	1	1	10	1	1	10	1	1	10	1	1
TOLK 1	1	11	1	1	11	1	1	11	1	1	11
TOLK 2	1	1	1	6	1	1	1	6	1	1	1
CUNNING 1	2	2	2	2	2	2	2	2	2	2	2
CUNNING 2	4	8	4	8	4	8	4	8	4	8	4
JONES 1	0	10	0	0	0	1	0	0	0	10	0
JONES 2	0	1	0	0	0	10	0	0	0	1	0
MADDOX 1	2	7	2	7	2	7	2	7	2	7	2
NICHOLS 1	0	1	0	0	0	10	0	0	0	1	0
NICHOLS 2	0	0	0	8	0	0	0	8	0	0	0
NICHOLS 3	1	1	1	1	1	1	1	1	1	1	1
PLANT X 1	2	2	2	2	2	2	2	2	2	2	2
PLANT X 2	2	2	2	2	2	2	2	2	2	2	2
PLANT X 3	2	2	4	2	2	4	2	2	4	2	2
PLANT X 4	4	2	2	4	2	2	4	2	2	4	2
31	0	2	0	6	0	2	0	2	0	6	0
32	0	9	0	0	0	9	0	0	0	9	0
33	0	0	0	8	0	0	0	8	0	0	0
34	0	7	0	7	0	7	0	7	0	7	0
35	12	1	1	12	1	1	12	1	1	12	1
36	1	1	10	1	1	10	1	1	10	1	1
COOKSTM 1	2	2	2	2	2	2	2	2	2	2	2
COOKSTM 2	2	2	2	2	2	2	2	2	2	2	2
HOBBS 1	4	3	3	4	3	3	4	3	3	4	3
BLKHAWK 1	0	1	0	4	0	1	0	4	0	1	0
BLKHAWK 2	4	0	1	0	4	0	1	0	4	0	1
CALP 200	2	2	2	2	2	2	2	2	2	2	2
CALP 400	2	2	2	2	2	2	2	2	2	2	2

Southwestern Public Service Company
Outage Weeks per Year

	2048	2049	2050	2051	2052	2053	2054
HARRING 1	1	1	9	1	1	9	1
HARRING 2	1	1	10	1	1	10	1
HARRING 3	10	1	1	10	1	1	10
TOLK 1	1	1	11	1	1	11	1
TOLK 2	6	1	1	1	6	1	1
CUNNING 1	2	2	2	2	2	2	2
CUNNING 2	8	4	8	4	8	4	8
JONES 1	0	0	1	0	0	0	0
JONES 2	0	0	10	0	0	0	0
MADDOX 1	7	2	7	2	7	2	0
NICHOLS 1	0	0	10	0	0	0	9
NICHOLS 2	8	0	0	0	8	0	0
NICHOLS 3	1	1	1	1	1	1	0
PLANT X 1	2	2	2	2	2	2	2
PLANT X 2	2	2	2	2	2	2	2
PLANT X 3	4	2	2	4	2	2	4
PLANT X 4	2	4	2	2	4	2	2
31	2	0	2	0	6	0	2
32	0	0	9	0	0	0	9
33	8	0	0	0	8	0	0
34	7	0	7	0	7	0	7
35	1	12	1	1	12	1	1
36	10	1	1	10	1	1	10
COOKSTM 1	2	2	2	2	2	2	2
COOKSTM 2	2	2	2	2	2	2	2
HOBBS 1	3	4	3	3	4	3	3
BLKHAWK 1	4	0	1	0	4	0	1
BLKHAWK 2	0	4	0	1	0	4	0
CALP 200	2	2	2	2	2	2	2
CALP 400	2	2	2	2	2	2	2

Southwestern Public Service Company
Outage Weeks per Year

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
CUNNING 3	0	0	0	0	0	0	0	0	0	0	0
CUNNING 4	0	0	0	0	0	0	0	0	0	0	0
JONES 3	0	0	0	0	0	0	0	0	0	7	2
JONES 4	0	0	0	0	0	0	0	0	0	2	7
CRLSBD 1	0	0	0	0	0	0	0	0	0	0	0
MADDOX 2	0	0	0	0	0	0	0	0	0	0	0
MADDOX 3	0	0	0	0	0	0	0	0	0	0	0
COOK_GT 2	3	3	3	3	3	3	3	3	3	3	3
COOK_GT 3	3	3	3	3	3	3	3	3	3	3	3
SD_RCH 1	0	0	0	0	0	0	0	0	0	0	0
ORION 1	0	0	0	0	0	0	0	0	0	0	0
QUAYCTY 1	0	0	0	0	0	0	0	0	0	0	0
BIOMASS 1	0	0	0	0	0	0	0	0	0	0	0
GAINCT 1	2	2	2	2	2	2	2	2	2	2	2
GAINCT 2	2	2	2	2	2	2	2	2	2	2	2
GAINCC 1	5	5	5	5	5	5	5	5	5	5	5
GEN_CT 1	2	2	2	2	2	2	2	2	2	2	2
GEN_CC 1	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 1	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 1	5	5	5	5	5	5	5	5	5	5	5
SMCC_TK 1	5	5	5	5	5	5	5	5	5	5	5
SMCC_GN 1	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 593	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 594	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 595	2	2	2	2	2	2	2	2	2	2	2
PPA_CT 596	2	2	2	2	2	2	2	2	2	2	2
PPA_CT 597	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 598	5	5	5	5	5	5	5	5	5	5	5
PPA_CC 599	5	5	5	5	5	5	5	5	5	5	5
PPA_CC 600	5	5	5	5	5	5	5	5	5	5	5

Southwestern Public Service Company
Outage Weeks per Year

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
CUNNING 3	0	0	0	0	0	18	0	0	0	0	7
CUNNING 4	0	0	14	0	0	0	14	0	0	0	14
JONES 3	2	7	2	2	7	2	2	7	2	2	7
JONES 4	2	2	7	2	2	7	2	2	7	2	2
CRLSBD 1	0	0	0	0	0	0	0	0	0	0	0
MADDOX 2	0	0	0	0	0	10	0	0	0	10	0
MADDOX 3	0	0	0	0	0	10	0	0	0	1	0
COOK_GT 2	3	3	3	3	3	3	3	3	3	3	3
COOK_GT 3	3	3	3	3	3	3	3	3	3	3	3
SD_RCH 1	0	0	0	0	0	0	0	0	0	0	0
ORION 1	0	0	0	0	0	0	0	0	0	0	0
QUAYCTY 1	0	0	2	0	0	0	0	0	2	0	0
BIOMASS 1	0	0	0	0	0	0	0	0	0	0	0
GAINCT 1	2	2	2	2	2	2	2	2	2	2	2
GAINCT 2	2	2	2	2	2	2	2	2	2	2	2
GAINCC 1	5	5	5	5	5	5	5	5	5	5	5
GEN_CT 1	2	2	2	2	2	2	2	2	2	2	2
GEN_CC 1	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 1	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 1	5	5	5	5	5	5	5	5	5	5	5
SMCC_TK 1	5	5	5	5	5	5	5	5	5	5	5
SMCC_GN 1	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 593	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 594	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 595	2	2	2	2	2	2	2	2	2	2	2
PPA_CT 596	2	2	2	2	2	2	2	2	2	2	2
PPA_CT 597	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 598	5	5	5	5	5	5	5	5	5	5	5
PPA_CC 599	5	5	5	5	5	5	5	5	5	5	5
PPA_CC 600	5	5	5	5	5	5	5	5	5	5	5

Southwestern Public Service Company
Outage Weeks per Year

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
CUNNING 3	0	0	0	0	0	18	0	0	0	0	0
CUNNING 4	0	0	0	14	0	0	0	14	0	0	0
JONES 3	2	2	7	2	2	7	2	2	7	2	2
JONES 4	7	2	2	7	2	2	7	2	2	7	2
CRLSBD 1	0	0	0	16	0	0	0	0	0	0	0
MADDOX 2	0	0	10	0	0	0	10	0	0	0	10
MADDOX 3	0	0	10	0	0	0	1	0	0	0	10
COOK_GT 2	3	3	3	3	3	3	3	3	3	3	3
COOK_GT 3	3	3	3	3	3	3	3	3	3	3	3
SD_RCH 1	0	0	0	0	0	0	0	0	0	0	0
ORION 1	0	0	0	0	0	0	0	0	0	0	0
QUAYCTY 1	0	0	2	0	0	0	0	2	0	0	0
BIOMASS 1	0	0	0	0	0	0	0	0	0	0	0
GAINCT 1	2	2	2	2	2	2	2	2	2	2	2
GAINCT 2	2	2	2	2	2	2	2	2	2	2	2
GAINCC 1	5	5	5	5	5	5	5	5	5	5	5
GEN_CT 1	2	2	2	2	2	2	2	2	2	2	2
GEN_CC 1	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 1	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 1	5	5	5	5	5	5	5	5	5	5	5
SMCC_TK 1	5	5	5	5	5	5	5	5	5	5	5
SMCC_GN 1	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 593	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 594	5	5	5	5	5	5	5	5	5	5	5
PPA_CT 595	2	2	2	2	2	2	2	2	2	2	2
PPA_CT 596	2	2	2	2	2	2	2	2	2	2	2
PPA_CT 597	2	2	2	2	2	2	2	2	2	2	2
PPA_CC 598	5	5	5	5	5	5	5	5	5	5	5
PPA_CC 599	5	5	5	5	5	5	5	5	5	5	5
PPA_CC 600	5	5	5	5	5	5	5	5	5	5	5

Southwestern Public Service Company
Outage Weeks per Year

	2048	2049	2050	2051	2052	2053	2054
CUNNING 3	7	0	0	0	0	0	18
CUNNING 4	0	0	0	0	0	0	0
JONES 3	7	2	2	7	2	2	7
JONES 4	2	7	2	2	7	2	2
CRLSBD 1	0	0	0	0	0	0	0
MADDOX 2	0	0	0	10	0	0	0
MADDOX 3	0	0	0	1	0	0	0
COOK_GT 2	3	3	3	3	3	3	3
COOK_GT 3	3	3	3	3	3	3	3
SD_RCH 1	0	0	0	0	0	0	0
ORION 1	0	0	0	0	0	0	0
QUAYCTY 1	0	2	0	0	0	0	2
BIOMASS 1	0	0	0	0	0	0	0
GAINCT 1	2	2	2	2	2	2	2
GAINCT 2	2	2	2	2	2	2	2
GAINCC 1	5	5	5	5	5	5	5
GEN_CT 1	2	2	2	2	2	2	2
GEN_CC 1	5	5	5	5	5	5	5
PPA_CT 1	2	2	2	2	2	2	2
PPA_CC 1	5	5	5	5	5	5	5
SMCC_TK 1	5	5	5	5	5	5	5
SMCC_GN 1	5	5	5	5	5	5	5
PPA_CT 593	2	2	2	2	2	2	2
PPA_CC 594	5	5	5	5	5	5	5
PPA_CT 595	2	2	2	2	2	2	2
PPA_CT 596	2	2	2	2	2	2	2
PPA_CT 597	2	2	2	2	2	2	2
PPA_CC 598	5	5	5	5	5	5	5
PPA_CC 599	5	5	5	5	5	5	5
PPA_CC 600	5	5	5	5	5	5	5

Harrington 1 Outage Information

	2	3	4	5	6	7	8
Maintenance Deration (MW)	0	0	0	0	0	0	0
Maintenance End Day (DAY)	26	16	17	22	6	20	5
Maintenance End Month (MONTH)	5	5	4	11	5	4	4
Maintenance End Year (YEAR)	2019	2020	2021	2022	2023	2024	2025
Maintenance Length (DAYS)	0	0	0	0	0	0	0
Maintenance Outage Type	M	M	M	M	M	M	M
Maintenance Repeat Flag	C	C	C	C	C	C	C
Maintenance Start Day (DAY)	23	9	10	17	29	13	29
Maintenance Start Month (MONTH)	2	5	4	9	4	4	3
Maintenance Start Year (YEAR)	2019	2020	2021	2022	2023	2024	2025

Harrington 2 Outage Information

		1	2	3	4	5	6	7	8
Maintenance Deration (MW)		0	0	0	0	0	0	0	0
Maintenance End Day (DAY)		25	16	3	1	30	0	11	3
Maintenance End Month (MONTH)		5	2	4	5	4	0	5	5
Maintenance End Year (YEAR)		2018	2019	2020	2021	2022	0	2024	2025
Maintenance Length (DAYS)		0	0	0	0	0	0	0	0
Maintenance Outage Type	M	M	M	M	M	M	M	M	
Maintenance Repeat Flag	C	C	C	C	C	C	C	C	
Maintenance Start Day (DAY)		18	9	25	24	23	0	16	26
Maintenance Start Month (MONTH)		5	2	1	4	4	0	2	4
Maintenance Start Year (YEAR)		2018	2019	2020	2021	2022	0	2024	2025

Harrington 3 Outage Information

		2	3	4	5	6	7	8
Maintenance Deration (MW)		0	0	0	0	0	0	0
Maintenance End Day (DAY)		10	2	24	14	22	3	17
Maintenance End Month (MONTH)		9	5	11	5	4	12	5
Maintenance End Year (YEAR)		2019	2020	2021	2022	2023	2024	2025
Maintenance Length (DAYS)		0	0	0	0	0	0	0
Maintenance Outage Type	M	M	M	M	M	M	M	
Maintenance Repeat Flag	C	C	C	C	C	C	C	
Maintenance Start Day (DAY)		3	25	18	7	15	14	10
Maintenance Start Month (MONTH)		9	4	9	5	4	9	5
Maintenance Start Year (YEAR)		2019	2020	2021	2022	2023	2024	2025

Resource	Commercial Operation Date	Retirement Date 2021 Analysis	Retirement Date 2019
Cunningham 1	1957	2022	2019
Cunningham 2	1965	2025	2025
Cunningham 3	1998	2040	2040
Cunningham 4	1998	2040	2040
Harrington 1	1976	2036	2036
Harrington 2	1978	2038	2038
Harrington 3	1980	2040	2040
Jones 1	1971	2031	2031
Jones 2	1974	2034	2034
Jones 3	2011	2056	2056
Jones 4	2013	2058	2058
Maddox 1	1967	2028	2028
Maddox 2	1976	2025	2025
Maddox 3	1963	2025	2025
Nichols 1	1960	2022	2022
Nichols 2	1962	2023	2023
Nichols 3	1968	2030	2030
Plant X1	1952	2022	2019
Plant X2	1953	2022	2019
Plant X3	1955	2022	2024
Plant X4	1964	2027	2027
Quay County	2013	2034	2034
Tolk 1	1982	2032	2032
Tolk 2	1985	2032	2032
Hale Wind	2019	2044	2049
Sagamore Wind	2020	2045	2050

($/MWH)	2020	2021	2022	2023	2024	2025	2026	2027
W23	0	0	0	25.06	25.56	26.07	26.59	27.13
W24	0	0	0	0	28.96	29.54	30.13	30.73
W25	0	0	0	0	0	36.24	36.96	37.7
W26	0	0	0	0	0	0	36.43	37.15
W27	0	0	0	0	0	0	0	36.63
W28	0	0	0	0	0	0	0	0
W29	0	0	0	0	0	0	0	0
W30	0	0	0	0	0	0	0	0
W31	0	0	0	0	0	0	0	0
W32	0	0	0	0	0	0	0	0
W33	0	0	0	0	0	0	0	0
W34	0	0	0	0	0	0	0	0
W35	0	0	0	0	0	0	0	0
W36	0	0	0	0	0	0	0	0
W37	0	0	0	0	0	0	0	0
W38	0	0	0	0	0	0	0	0
W39	0	0	0	0	0	0	0	0
W40	0	0	0	0	0	0	0	0
W41	0	0	0	0	0	0	0	0
W42	0	0	0	0	0	0	0	0
W43	0	0	0	0	0	0	0	0
W44	0	0	0	0	0	0	0	0
W45	0	0	0	0	0	0	0	0
W46	0	0	0	0	0	0	0	0
W47	0	0	0	0	0	0	0	0
W48	0	0	0	0	0	0	0	0
W49	0	0	0	0	0	0	0	0
W50	0	0	0	0	0	0	0	0

($/MWH)	2028	2029	2030	2031	2032	2033	2034	2035	2036
W23	27.67	28.22	28.79	29.36	29.95	30.55	31.16	31.78	32.42
W24	31.34	31.97	32.61	33.26	33.93	34.61	35.3	36	36.72
W25	38.46	39.23	40.01	40.81	41.63	42.46	43.31	44.17	45.06
W26	37.9	38.66	39.43	40.22	41.02	41.84	42.68	43.53	44.4
W27	37.36	38.11	38.87	39.65	40.44	41.25	42.08	42.92	43.78
W28	36.85	37.59	38.34	39.1	39.89	40.68	41.5	42.33	43.17
W29	0	37.08	37.83	38.58	39.35	40.14	40.94	41.76	42.6
W30	0	0	37.34	38.08	38.85	39.62	40.42	41.22	42.05
W31	0	0	0	37.65	38.4	39.17	39.95	40.75	41.56
W32	0	0	0	0	37.97	38.73	39.51	40.3	41.1
W33	0	0	0	0	0	38.32	39.08	39.86	40.66
W34	0	0	0	0	0	0	38.68	39.46	40.24
W35	0	0	0	0	0	0	0	39.07	39.85
W36	0	0	0	0	0	0	0	0	39.47
W37	0	0	0	0	0	0	0	0	0
W38	0	0	0	0	0	0	0	0	0
W39	0	0	0	0	0	0	0	0	0
W40	0	0	0	0	0	0	0	0	0
W41	0	0	0	0	0	0	0	0	0
W42	0	0	0	0	0	0	0	0	0
W43	0	0	0	0	0	0	0	0	0
W44	0	0	0	0	0	0	0	0	0
W45	0	0	0	0	0	0	0	0	0
W46	0	0	0	0	0	0	0	0	0
W47	0	0	0	0	0	0	0	0	0
W48	0	0	0	0	0	0	0	0	0
W49	0	0	0	0	0	0	0	0	0
W50	0	0	0	0	0	0	0	0	0

($/MWH)	2037	2038	2039	2040	2041	2042	2043	2044	2045
W23	33.07	33.73	34.4	35.09	35.79	36.51	37.24	37.98	38.74
W24	37.46	38.21	38.97	39.75	40.55	41.36	42.18	43.03	43.89
W25	45.96	46.88	47.82	48.77	49.75	50.74	51.76	52.79	53.85
W26	45.29	46.2	47.12	48.06	49.02	50	51.01	52.03	53.07
W27	44.65	45.54	46.45	47.38	48.33	49.3	50.28	51.29	52.32
W28	44.04	44.92	45.82	46.73	47.67	48.62	49.59	50.59	51.6
W29	43.45	44.32	45.21	46.11	47.03	47.97	48.93	49.91	50.91
W30	42.89	43.75	44.62	45.51	46.43	47.35	48.3	49.27	50.25
W31	42.39	43.24	44.11	44.99	45.89	46.81	47.74	48.7	49.67
W32	41.92	42.76	43.62	44.49	45.38	46.29	47.21	48.16	49.12
W33	41.48	42.3	43.15	44.01	44.89	45.79	46.71	47.64	48.6
W34	41.05	41.87	42.71	43.56	44.43	45.32	46.23	47.15	48.1
W35	40.65	41.46	42.29	43.13	44	44.88	45.77	46.69	47.62
W36	40.26	41.07	41.89	42.73	43.58	44.46	45.34	46.25	47.18
W37	39.9	40.7	41.52	42.35	43.19	44.06	44.94	45.84	46.75
W38	0	40.36	41.16	41.99	42.83	43.68	44.56	45.45	46.36
W39	0	0	40.83	41.65	42.48	43.33	44.2	45.08	45.98
W40	0	0	0	41.33	42.16	43	43.86	44.74	45.63
W41	0	0	0	0	41.86	42.69	43.55	44.42	45.31
W42	0	0	0	0	0	42.41	43.26	44.12	45.01
W43	0	0	0	0	0	0	42.99	43.85	44.73
W44	0	0	0	0	0	0	0	43.6	44.47
W45	0	0	0	0	0	0	0	0	44.23
W46	0	0	0	0	0	0	0	0	0
W47	0	0	0	0	0	0	0	0	0
W48	0	0	0	0	0	0	0	0	0
W49	0	0	0	0	0	0	0	0	0
W50	0	0	0	0	0	0	0	0	0

($/MWH)	2046	2047	2048	2049	2050	2051	2052	2053	2054
W23	39.52	40.31	42.95	43.81	44.69	45.58	46.5	47.42	48.37
W24	44.77	45.66	46.57	43.65	44.53	45.42	46.33	47.25	48.2
W25	54.93	56.02	57.14	58.29	44.39	45.28	46.18	47.1	48.05
W26	54.13	55.21	56.31	57.44	58.59	45.04	45.94	46.86	47.79
W27	53.36	54.43	55.52	56.63	57.76	58.92	45.72	46.64	47.57
W28	52.63	53.68	54.76	55.85	56.97	58.11	59.27	46.41	47.33
W29	51.93	52.97	54.03	55.11	56.21	57.33	58.48	59.65	47.09
W30	51.26	52.28	53.33	54.39	55.48	56.59	57.72	58.88	60.06
W31	50.67	51.68	52.71	53.77	54.84	55.94	57.06	58.2	59.36
W32	50.1	51.1	52.13	53.17	54.23	55.32	56.42	57.55	58.7
W33	49.57	50.56	51.57	52.6	53.65	54.73	55.82	56.94	58.08
W34	49.06	50.04	51.04	52.06	53.1	54.16	55.25	56.35	57.48
W35	48.58	49.55	50.54	51.55	52.58	53.63	54.7	55.8	56.91
W36	48.12	49.08	50.06	51.06	52.09	53.13	54.19	55.27	56.38
W37	47.69	48.64	49.62	50.61	51.62	52.65	53.71	54.78	55.88
W38	47.28	48.23	49.19	50.18	51.18	52.2	53.25	54.31	55.4
W39	46.9	47.84	48.8	49.77	50.77	51.78	52.82	53.88	54.95
W40	46.55	47.48	48.43	49.4	50.38	51.39	52.42	53.47	54.54
W41	46.21	47.14	48.08	49.04	50.02	51.02	52.04	53.09	54.15
W42	45.91	46.82	47.76	48.72	49.69	50.68	51.7	52.73	53.79
W43	45.62	46.53	47.46	48.41	49.38	50.37	51.38	52.4	53.45
W44	45.36	46.27	47.19	48.13	49.1	50.08	51.08	52.1	53.14
W45	45.12	46.02	46.94	47.88	48.84	49.82	50.81	51.83	52.86
W46	44.9	45.8	46.72	47.65	48.6	49.58	50.57	51.58	52.61
W47	0	45.6	46.51	47.44	48.39	49.36	50.35	51.36	52.38
W48	0	0	46.34	47.26	48.21	49.17	50.15	51.16	52.18
W49	0	0	0	47.1	48.04	49.01	49.99	50.99	52.01
W50	0	0	0	0	47.91	48.86	49.84	50.84	51.85

($/MWH)	2020	2021	2022	2023	2024	2025	2026	2027
S23	0	0	0	25.88	26.39	26.92	27.46	28.01
S24	0	0	0	0	26.07	26.6	27.13	27.67
S25	0	0	0	0	0	26.27	26.8	27.33
S26	0	0	0	0	0	0	26.47	27
S27	0	0	0	0	0	0	0	26.66
S28	0	0	0	0	0	0	0	0
S29	0	0	0	0	0	0	0	0
S30	0	0	0	0	0	0	0	0
S31	0	0	0	0	0	0	0	0
S32	0	0	0	0	0	0	0	0
S33	0	0	0	0	0	0	0	0
S34	0	0	0	0	0	0	0	0
S35	0	0	0	0	0	0	0	0
S36	0	0	0	0	0	0	0	0
S37	0	0	0	0	0	0	0	0
S38	0	0	0	0	0	0	0	0
S39	0	0	0	0	0	0	0	0
S40	0	0	0	0	0	0	0	0
S41	0	0	0	0	0	0	0	0
S42	0	0	0	0	0	0	0	0
S43	0	0	0	0	0	0	0	0
S44	0	0	0	0	0	0	0	0
S45	0	0	0	0	0	0	0	0
S46	0	0	0	0	0	0	0	0
S47	0	0	0	0	0	0	0	0
S48	0	0	0	0	0	0	0	0
S49	0	0	0	0	0	0	0	0
S50	0	0	0	0	0	0	0	0

($/MWH)	2028	2029	2030	2031	2032	2033	2034	2035	2036
S23	28.57	29.14	29.72	30.32	30.92	31.54	32.17	32.82	33.47
S24	28.22	28.79	29.36	29.95	30.55	31.16	31.78	32.42	33.07
S25	27.88	28.44	29.01	29.59	30.18	30.78	31.4	32.02	32.67
S26	27.54	28.09	28.65	29.22	29.81	30.4	31.01	31.63	32.26
S27	27.2	27.74	28.3	28.86	29.44	30.03	30.63	31.24	31.86
S28	26.86	27.39	27.94	28.5	29.07	29.65	30.25	30.85	31.47
S29	0	27.05	27.59	28.14	28.71	29.28	29.87	30.46	31.07
S30	0	0	27.24	27.79	28.34	28.91	29.49	30.08	30.68
S31	0	0	0	27.58	28.13	28.69	29.26	29.85	30.45
S32	0	0	0	0	27.91	28.47	29.04	29.62	30.21
S33	0	0	0	0	0	28.25	28.82	29.39	29.98
S34	0	0	0	0	0	0	28.59	29.16	29.75
S35	0	0	0	0	0	0	0	28.94	29.51
S36	0	0	0	0	0	0	0	0	29.28
S37	0	0	0	0	0	0	0	0	0
S38	0	0	0	0	0	0	0	0	0
S39	0	0	0	0	0	0	0	0	0
S40	0	0	0	0	0	0	0	0	0
S41	0	0	0	0	0	0	0	0	0
S42	0	0	0	0	0	0	0	0	0
S43	0	0	0	0	0	0	0	0	0
S44	0	0	0	0	0	0	0	0	0
S45	0	0	0	0	0	0	0	0	0
S46	0	0	0	0	0	0	0	0	0
S47	0	0	0	0	0	0	0	0	0
S48	0	0	0	0	0	0	0	0	0
S49	0	0	0	0	0	0	0	0	0
S50	0	0	0	0	0	0	0	0	0

($/MWH)	2037	2038	2039	2040	2041	2042	2043	2044	2045
S23	34.14	34.83	35.52	36.23	36.96	37.7	38.45	39.22	40
S24	33.73	34.4	35.09	35.79	36.51	37.24	37.99	38.75	39.52
S25	33.32	33.99	34.66	35.36	36.07	36.79	37.52	38.27	39.04
S26	32.91	33.57	34.24	34.92	35.62	36.33	37.06	37.8	38.56
S27	32.5	33.15	33.82	34.49	35.18	35.89	36.6	37.33	38.08
S28	32.1	32.74	33.39	34.06	34.74	35.44	36.15	36.87	37.61
S29	31.69	32.33	32.97	33.63	34.31	34.99	35.69	36.41	37.13
S30	31.29	31.92	32.56	33.21	33.87	34.55	35.24	35.95	36.67
S31	31.06	31.68	32.31	32.96	33.62	34.29	34.97	35.67	36.39
S32	30.82	31.43	32.06	32.7	33.36	34.02	34.71	35.4	36.11
S33	30.58	31.19	31.81	32.45	33.1	33.76	34.44	35.13	35.83
S34	30.34	30.95	31.57	32.2	32.84	33.5	34.17	34.85	35.55
S35	30.11	30.71	31.32	31.95	32.59	33.24	33.9	34.58	35.27
S36	29.87	30.47	31.07	31.7	32.33	32.98	33.64	34.31	35
S37	29.63	30.22	30.83	31.45	32.07	32.72	33.37	34.04	34.72
S38	0	29.98	30.58	31.19	31.82	32.45	33.1	33.77	34.44
S39	0	0	30.34	30.94	31.56	32.19	32.84	33.5	34.17
S40	0	0	0	30.69	31.31	31.93	32.57	33.22	33.89
S41	0	0	0	0	31.02	31.64	32.27	32.92	33.58
S42	0	0	0	0	0	31.35	31.97	32.61	33.26
S43	0	0	0	0	0	0	31.67	32.31	32.95
S44	0	0	0	0	0	0	0	32	32.64
S45	0	0	0	0	0	0	0	0	32.33
S46	0	0	0	0	0	0	0	0	0
S47	0	0	0	0	0	0	0	0	0
S48	0	0	0	0	0	0	0	0	0
S49	0	0	0	0	0	0	0	0	0
S50	0	0	0	0	0	0	0	0	0

($/MWH)	2046	2047	2048	2049	2050	2051	2052	2053	2054
S23	40.8	41.62	26.6	27.13	27.67	28.22	28.79	29.37	29.95
S24	40.31	41.12	41.94	26.79	27.33	27.88	28.43	29	29.58
S25	39.82	40.62	41.43	42.26	26.99	27.53	28.08	28.64	29.21
S26	39.33	40.12	40.92	41.74	42.57	27.19	27.73	28.29	28.85
S27	38.84	39.62	40.41	41.22	42.05	42.89	27.39	27.93	28.49
S28	38.36	39.13	39.91	40.71	41.52	42.35	43.2	27.58	28.14
S29	37.88	38.64	39.41	40.2	41	41.82	42.66	43.51	27.78
S30	37.4	38.15	38.91	39.69	40.48	41.29	42.12	42.96	43.82
S31	37.11	37.86	38.61	39.39	40.17	40.98	41.8	42.63	43.48
S32	36.83	37.57	38.32	39.08	39.87	40.66	41.48	42.31	43.15
S33	36.55	37.28	38.02	38.78	39.56	40.35	41.16	41.98	42.82
S34	36.26	36.99	37.73	38.48	39.25	40.04	40.84	41.65	42.49
S35	35.98	36.7	37.43	38.18	38.94	39.72	40.52	41.33	42.15
S36	35.7	36.41	37.14	37.88	38.64	39.41	40.2	41	41.82
S37	35.41	36.12	36.84	37.58	38.33	39.1	39.88	40.68	41.49
S38	35.13	35.83	36.55	37.28	38.03	38.79	39.56	40.35	41.16
S39	34.85	35.55	36.26	36.98	37.72	38.48	39.24	40.03	40.83
S40	34.57	35.26	35.96	36.68	37.42	38.16	38.93	39.71	40.5
S41	34.25	34.93	35.63	36.34	37.07	37.81	38.57	39.34	40.13
S42	33.93	34.61	35.3	36.01	36.73	37.46	38.21	38.97	39.75
S43	33.61	34.28	34.97	35.67	36.38	37.11	37.85	38.61	39.38
S44	33.29	33.96	34.64	35.33	36.04	36.76	37.49	38.24	39.01
S45	32.98	33.64	34.31	34.99	35.69	36.41	37.14	37.88	38.64
S46	32.66	33.31	33.98	34.66	35.35	36.06	36.78	37.51	38.26
S47	0	32.99	33.65	34.32	35.01	35.71	36.42	37.15	37.89
S48	0	0	33.32	33.99	34.67	35.36	36.07	36.79	37.52
S49	0	0	0	33.65	34.32	35.01	35.71	36.42	37.15
S50	0	0	0	0	33.98	34.66	35.36	36.06	36.78

Resource	2018 NDC Rating (MW)	2019 NDC Rating (MW)	2020 NDC Rating (MW)
Cunningham 1	71	68	68
Cunningham 2	183	183	171
Cunningham 3	106	106	106
Cunningham 4	106	103	103
Harrington 1	339	339	339
Harrington 2	339	339	339
Harrington 3	340	340	340
Jones 1	243	243	243
Jones 2	243	243	243
Jones 3	168	166	166
Jones 4	168	168	168
Maddox 1	112	112	112
Maddox 2	61	61	61
Maddox 3	-	-	-
Nichols 1	107	107	107
Nichols 2	106	106	106
Nichols 3	244	244	244
Plant X1	38	38	38
Plant X2	90	90	90
Plant X3	93	93	93
Plant X4	190	190	190
Quay County	17	17	17
Tolk 1	532	532	532
Tolk 2	535	535	535
Hale Wind	N/A	478	478
Blackhawk 1	112	112	112
Blackhawk 2	112	112	112
Hobbs	557	557	563
CapRock Wind	80	80	80
San Juan Wind	120	120	120
Wildorado Wind	161	161	161
Spinning Spur Wind	161	161	161
Mammoth Wind	200	200	200
PaloDuro Wind	250	250	250
Roosevelt Wind	250	250	250
Lorenzo Wind (Bonita I)	80	80	80
Wildcat Wind (Bonita II)	150	150	150
Longroad 1 (formerly SunEd Solar 1-5)	10	10	10
Longroad 2 (formerly SunEd Solar 1-5)	10	10	10
Longroad 3 (formerly SunEd Solar 1-5)	10	10	10
Longroad 4 (formerly SunEd Solar 1-5)	10	10	10
Longroad 5 (formerly SunEd Solar 1-5)	10	10	10
Chaves County Solar	70	70	70
Roswell Solar	70	70	70

SPS AXM 1-14(b) Non-Fuel O&M Expense by Plant

Plant	2018 O&M Expense ($)	2019 O&M Expense ($)	2020 O&M Expense ($)
Cunningham Steam	$ 7,028,153	$ 5,259,089	$ 5,729,832
Cunningham Gas	$ 1,459,865	$ 1,493,936	$ 560,365
Harrington	$ 26,641,445	$ 25,850,485	$ 22,510,792
Jones Steam	$ 9,201,172	$ 11,009,108	$ 9,227,661
Jones Gas	$ 774,445	$ 1,110,086	$ 595,989
Maddox Steam	$ 3,414,385	$ 2,958,182	$ 3,587,786
Maddox Gas	$ 867,436	$ 541,149	$ 328,033
Nichols	$ 8,538,604	$ 9,904,677	$ 8,867,930
Plant X	$ 8,229,566	$ 10,013,100	$ 7,976,455
Quay	$ 197,536	$ 148,884	$ 166,191
Tolk	$ 24,955,941	$ 18,187,037	$ 17,354,621
Hale	N/A	$ 5,783,596	$ 12,212,525
Sagamore	N/A	N/A	$ 106,864

SPS AXM 1-14(c) Fuel Expense by Plant

Plant	2018 Fuel Expense ($)	2019 Fuel Expense ($)	2020 Fuel Expense ($)
Cunningham Steam	$ 18,470,000	$ 10,162,041	$ 11,639,647
Cunningham Gas	$ 14,489,297	$ 10,426,691	$ 10,260,651
Harrington	$ 92,722,544	$ 82,562,995	$ 76,275,293
Jones Steam	$ 35,577,908	$ 24,451,305	$ 31,393,221
Jones Gas	$ 20,949,354	$ 8,194,692	$ 11,185,828
Maddox Steam	$ 8,965,263	$ 7,049,082	$ 7,459,575
Maddox Gas	$ 5,114,189	$ 3,855,553	$ 3,721,987
Nichols	$ 26,586,498	$ 15,876,524	$ 22,958,291
Plant X	$ 29,990,559	$ 12,492,434	$ 14,879,608
Quay	$ 56,653	$ 83,309	$ 76,648
Tolk	$ 90,968,996	$ 66,461,577	$ 48,219,548

SPS Forced Outage Hours - SPS-AXM 1-14(d)

SPS Resource	2018	2019	2020
Cunningham 1	635	1,669	82
Cunningham 2	809	3,775	1,181
Cunningham 3	3,921	3,842	855
Cunningham 4	1,214	377	3,307
Hale WF*	N/A	125,689	150,350
Harrington 1	418	449	671
Harrington 2	132	639	25
Harrington 3	620	280	331
Jones 1	30	116	170
Jones 2	244	1,815	836
Jones 3	12	523	333
Jones 4	550	120	160
Maddox 1	2,226	695	317
Maddox 2	1,134	1,444	752
Maddox 3	3	45	53
Nichols 1	166	173	211
Nichols 2	33	11	245
Nichols 3	52	139	569
Plant X1	565	1,400	3,381
Plant X2	1,132	4,186	577
Plant X3	250	2,850	1,488
Plant X4	558	80	1,569
Quay Cnty	93	455	-
Sagamore WF	N/A	N/A	N/A
Tolk 1	134	258	1,032
Tolk 2	2,853	34	870

** Note - forced outage hours for Hale and Sagamore get reported in turbine hours*

SPS Planned Outage Hours - SPS-AXM 1-14(e)

SPS Resource	2018	2019	2020
Cunningham 1	281.38	-	1,016.45
Cunningham 2	2,710.83	51.85	2,106.85
Cunningham 3	-	-	268.72
Cunningham 4	-	-	594.00
Hale WF*	N/A	-	-
Harrington 1	466.98	2,172.40	184.50
Harrington 2	136.42	156.58	1,849.75
Harrington 3	1,439.20	193.50	274.47
Jones 1	-	87.98	-
Jones 2	-	2,040.80	-
Jones 3	370.55	440.22	1,423.67
Jones 4	458.32	355.02	1,101.42
Maddox 1	134.50	760.33	1,061.08
Maddox 2	-	-	-
Maddox 3	5,213.72	-	-
Nichols 1	-	2,592.00	2,141.32
Nichols 2	-	-	-
Nichols 3	-	1,674.87	-
Plant X1	335.98	-	-
Plant X2	335.98	-	447.98
Plant X3	335.98	-	-
Plant X4	312.00	3,615.00	234.17
Quay Cnty	-	-	-
Sagamore WF	N/A	N/A	N/A
Tolk 1	1,464.98	-	2,247.17
Tolk 2	21.47	137.23	1,102.05

** Note - planned outage hours for Hale and Sagamore get reported in turbine hours*

SPS Annual Capital Additions - SPS-AXM 1-14(f)

SPS Resource	2018 ($)	2019 ($)	2020 ($)
Cunningham 1	$ 20,073	$ (6,409)	$ -
Cunningham 2	$ 2,025,427	$ 389,112	$ 4,914,588
Cunningham 3 & 4	$ 212,487	$ 11,081,189	$ 12,687,443
Cunningham Common	$ 494,942	$ 300,367	$ 947,206
Hale WF	$ 55,028	$ 675,719,856	$ 5,322,825
Harrington 1	$ 885,467	$ 5,895,462	$ 735,978
Harrington 2	$ 998,374	$ 829,170	$ 9,812,653
Harrington 3	$ 9,968,668	$ 3,942,534	$ 1,199,403
Harrington Common	$ 1,325,579	$ 1,041,105	$ 148,489
Jones 1	$ 1,155,370	$ 336,587	$ 194,009
Jones 2	$ 412,278	$ 6,407,987	$ 124,920
Jones 3	$ 230,300	$ 9,973	$ 12,203,889
Jones 4	$ 355,472	$ (3,544)	$ 705,761
Jones Common	$ 723,397	$ 975,374	$ 5,789,246
Maddox 1	$ 2,226,299	$ 1,191,281	$ 3,174,891
Maddox 2	$ 313,171	$ 316,501	$ 38,695
Maddox Common	$ 748	$ -	$ -
Nichols 1	$ 57,649	$ 444,622	$ 656,723
Nichols 2	$ 36,977	$ 898,888	$ 202,797
Nichols 3	$ 609,181	$ 5,238,812	$ 996,940
Nichols Common	$ 1,084,994	$ 369,069	$ 510,268
Plant X Common	$ 917,793	$ 673,389	$ 561,846
Plant X1	$ 25,198	$ (2,651)	$ 506,443
Plant X2	$ 43,651	$ (1,217)	$ -
Plant X3	$ 99,975	$ 51,568	$ -
Plant X4	$ 150,374	$ 6,870,340	$ 72,438
Quay Cnty	$ 42,592	$ 65,974	$ 17,234
Sagamore WF	$ -	$ -	$ 800,994,428
Tolk 1	$ 8,336,340	$ 2,588,696	$ 2,674,239
Tolk 2	$ 6,068,819	$ 1,014,075	$ 3,650,964
Tolk Common	$ 3,180,928	$ 7,202,109	$ 1,276,712
Total Annual Capital Additions	**$ 42,057,551**	**$ 733,840,217**	**$ 870,121,029**

Net Generation (MWh) - Exhibit SPS-AXM 1-14(g)

Resource	2018 Net Generation (MWh)	2019 Net Generation (MWh)	2020 Net Generation (MWh)
Cunningham 1	261,386	330,445	256,802
Cunningham 2	517,496	548,422	457,869
Cunningham 3	194,339	385,434	310,977
Cunningham 4	381,079	443,344	265,650
Harrington 1	1,371,151	898,348	1,008,624
Harrington 2	1,995,351	1,340,012	1,074,435
Harrington 3	1,417,187	1,494,693	1,262,129
Jones 1	780,158	1,220,201	1,078,320
Jones 2	902,728	619,985	940,969
Jones 3	349,167	357,364	335,646
Jones 4	368,932	371,007	338,870
Maddox 1	362,332	580,795	500,171
Maddox 2	197,102	307,811	193,499
Nichols 1	198,956	223,632	247,080
Nichols 2	248,401	361,607	369,212
Nichols 3	422,448	579,034	635,751
Plant X1	61,764	92,440	58,616
Plant X2	220,184	98,415	194,392
Plant X3	269,089	240,371	-
Plant X4	670,140	434,283	666,367
Quay County	169	231	246
Tolk 1	2,089,156	1,112,769	932,813
Tolk 2	1,720,904	1,628,984	924,535
Hale Wind	N/A	1,274,597	2,084,966

Annual Net Capacity Factor - Exhibit SPS-AXM 1-14(i)

Resource	2018 Annual Net CF (%)	2019 Annual Net CF (%)	2020 Annual Net CF (%)
Cunningham 1 Steam	42.03%	55.47%	42.99%
Cunningham 2 Steam	32.28%	34.21%	30.48%
Cunningham 3 Gas	20.93%	41.51%	33.40%
Cunningham 4 Gas	41.04%	49.14%	29.36%
Harrington 1	46.17%	30.25%	33.87%
Harrington 2	67.19%	45.12%	36.08%
Harrington 3	47.58%	50.18%	42.26%
Jones 1 Steam	36.65%	57.32%	50.52%
Jones 2 Steam	42.41%	29.13%	44.08%
Jones 3 Gas	23.73%	24.58%	23.02%
Jones 4 Gas	25.07%	25.21%	22.96%
Maddox 1 Steam	36.93%	59.20%	50.84%
Maddox 2 Gas	36.89%	57.60%	36.11%
Nichols 1	21.23%	23.86%	26.29%
Nichols 2	26.75%	38.94%	39.65%
Nichols 3	19.76%	27.09%	29.66%
Plant X1	18.55%	27.77%	17.56%
Plant X2	27.93%	12.48%	24.59%
Plant X3	33.03%	29.50%	0.00%
Plant X4	40.26%	26.09%	39.93%
Quay County	0.11%	0.16%	0.17%
Tolk 1	44.83%	23.88%	19.96%
Tolk 2	36.72%	34.76%	19.67%
Hale Wind	N/A	30.44%	49.66%
Blackhawk 1 & 2	75.36%	73.28%	75.18%
Hobbs	84.11%	69.16%	76.74%
CapRock Wind	47.14%	45.78%	39.35%
San Juan Wind	38.72%	38.72%	39.08%
Wildorado Wind	47.20%	31.27%	49.15%
Spinning Spur Wind	50.87%	51.05%	44.72%
Mammoth Wind	49.47%	46.63%	46.01%
PaloDuro Wind	53.95%	49.21%	51.86%
Roosevelt Wind	48.63%	51.58%	49.10%
Lorenzo Wind LLC	11.38%	51.44%	53.26%
Wildcat Ranch Wind Project LLC	3.54%	51.78%	53.86%
Sun Edison Solar 1	21.01%	21.83%	24.44%
Sun Edison Solar 2	22.11%	22.74%	25.19%
Sun Edison Solar 3	21.75%	20.90%	24.64%
Sun Edison Solar 4	23.42%	23.84%	25.95%
Sun Edison Solar 5	22.88%	21.30%	25.12%
Chaves County Solar	31.21%	27.03%	28.88%
Roswell Solar	31.43%	26.81%	28.50%

Average Annual Net Heat Rate - Exhibit SPS-AXM 1-14(h)

Resource	2018 Net Heat Rate (Btu/kWh)	2019 Net Heat Rate (Btu/kWh)	2020 Net Heat Rate (Btu/kWh)
Cunningham 1 Steam	11,766.10	11,319.91	11,640.03
Cunningham 2 Steam	10,365.74	10,443.90	10,538.79
Cunningham 3 Gas	11,775.16	11,855.04	11,816.05
Cunningham 4 Gas	11,856.35	11,642.17	12,353.98
Harrington 1	10,828.92	11,304.09	11,442.36
Harrington 2	10,476.19	10,868.70	11,063.14
Harrington 3	10,546.37	10,630.98	10,746.47
Jones 1 Steam	11,214.09	10,767.05	10,859.77
Jones 2 Steam	11,180.56	10,700.20	10,889.21
Jones 3 Gas	10,463.47	10,517.19	10,606.24
Jones 4 Gas	9,181.00	10,222.06	10,499.73
Maddox 1 Steam	10,979.49	10,529.87	11,200.66
Maddox 2 Gas	12,655.13	12,889.32	13,647.28
Maddox 3	18,622.05	29,401.79	23,828.36
Nichols 1	12,029.25	11,838.15	11,709.09
Nichols 2	11,757.89	11,540.35	11,433.51
Nichols 3	11,340.59	11,072.47	11,208.14
Plant X1	17,217.18	14,900.89	13,576.99
Plant X2	12,766.10	11,090.21	11,830.73
Plant X3	10,361.82	11,094.04	-
Plant X4	11,067.67	12,184.13	10,901.91
Quay County	17,815.99	19,078.32	17,187.50
Tolk 1	10,630.27	11,423.47	11,399.10
Tolk 2	10,277.00	10,725.13	11,094.30

SPS Carbon Emissions - Exhibit SPS-AXM 1-14(j)

Resource	Carbon Emissions (CO_2 Short Tons)
Cunningham 1 Steam	176,377
Cunningham 2 Steam	288,054
Cunningham 3 Gas	201,826
Cunningham 4 Gas	184,710
Harrington 1	1,099,385
Harrington 2	1,147,188
Harrington 3	1,438,663
Jones 1 Steam	684,519
Jones 2 Steam	608,426
Jones 3 Gas	208,254
Jones 4 Gas	208,146
Maddox 1 Steam	323,310
Maddox 2 Gas	154,344
Maddox 3	187
Nichols 1	161,181
Nichols 2	253,246
Nichols 3	433,318
Plant X1	48,373
Plant X2	135,500
Plant X3	0
Plant X4	436,308
Quay County	341
Tolk 1	1,044,254
Tolk 2	1,177,965
Blackhawk 1 & 2	372,897
Hobbs	2,021,725

SPS AXM 1-14(l) Purchased Capacity Cost

Year	PPA Counterparty	Purchased Capacity (MW)	Purchased Capacity Cost ($)
2018	Borger Energy Associates	224	$ 22,657,538
2018	Lea Power Partners	604	$ 50,857,085
2019	Borger Energy Associates	227	$ 16,722,681
2019	Lea Power Partners	604	$ 48,215,999
2020	Borger Energy Associates	225	$ 11,752,067
2020	Lea Power Partners	604	$ 48,195,887

SPS AXM 1-14(m) Purchased Energy Cost

Year	PPA Counterparty	Purchased Energy (MWh)	Purchased Energy Cost ($)
2018	Borger Energy Associates	1,478,679	$ 30,048,886
2018	Caprock Wind LP	330,327	$ 10,746,479
2018	Chaves County Solar, LLC	191,403	$ 6,747,383
2018	Lea Power Partners	4,103,932	$ 73,290,023
2018	Lorenzo Wind LLC	79,774	$ 1,089,930
2018	Mammoth Plains Wind Project Holdings, LLC	866,679	$ 16,848,191
2018	Palo Duro Wind LLC	1,181,425	$ 25,155,252
2018	Roosevelt Wind Ranch LLC	1,065,097	$ 22,316,540
2018	Roswell Solar, LLC	192,725	$ 6,706,362
2018	San Juan Mesa Wind Project, LLC	407,056	$ 13,467,134
2018	Spinning Spur Wind LLC	717,468	$ 27,574,888
2018	Sun Edison Solar SPS LLC	97,381	$ 12,106,415
2018	Wildorado Wind LP	665,715	$ 22,874,151
2018	Wildcat Ranch Wind Project LLC	46,546	$ 761,690
2019	Borger Energy Associates	1,437,912	$ 23,941,062
2019	Caprock Wind LP	320,798	$ 10,698,610
2019	Chaves County Solar, LLC	165,769	$ 6,088,220
2019	Lea Power Partners	3,374,517	$ 44,534,616
2019	Lorenzo Wind LLC	360,486	$ 6,524,802
2019	Mammoth Plains Wind Project Holdings, LLC	816,919	$ 16,983,176
2019	Palo Duro Wind LLC	1,077,653	$ 24,449,226
2019	Roosevelt Wind Ranch LLC	1,129,493	$ 24,174,785
2019	Roswell Solar, LLC	164,422	$ 5,972,192
2019	San Juan Mesa Wind Project, LLC	407,046	$ 13,802,916
2019	Spinning Spur Wind LLC	720,002	$ 27,792,088
2019	Sun Edison Solar SPS LLC	96,899	$ 12,480,986
2019	Wildorado Wind LP	441,032	$ 15,586,089
2019	Wildcat Ranch Wind Project LLC	680,333	$ 12,207,240
2020	Borger Energy Associates	1,479,282	$ 21,497,945
2020	Caprock Wind LP	276,519	$ 9,451,433
2020	Chaves County Solar, LLC	177,608	$ 6,657,083
2020	Lea Power Partners	3,795,312	$ 51,229,725
2020	Lorenzo Wind LLC	374,249	$ 6,908,642
2020	Mammoth Plains Wind Project Holdings, LLC	808,315	$ 17,120,112
2020	Palo Duro Wind LLC	1,138,946	$ 26,275,484
2020	Roosevelt Wind Ranch LLC	1,078,214	$ 23,520,330
2020	Roswell Solar, LLC	175,241	$ 6,493,737
2020	San Juan Mesa Wind Project, LLC	411,898	$ 14,317,574
2020	Spinning Spur Wind LLC	632,396	$ 24,410,479
2020	Sun Edison Solar SPS LLC	110,105	$ 14,824,340
2020	Wildorado Wind LP	695,149	$ 25,268,673
2020	Wildcat Ranch Wind Project LLC	709,604	$ 13,099,288

2020 Request for Information for Generating Resources

Southwestern Public Service Company

Released September 9, 2020

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Introduction:

This announcement constitutes a Request for Information ("RFI") notice soliciting current pricing, technical characteristics, and other relevant information for potential generating resources. This is not a Request for Proposals ("RFP") or solicitation for formal proposals. This RFI does not constitute a commitment, implied or otherwise, that SPS will take action in this matter. SPS will not be responsible for any costs incurred in furnishing SPS responsive information.

SPS is interested in understanding the current availabilities, flexibilities, and preferences of market participants interested in providing capacity and associated energy to SPS from all generating resource types, including energy storage, whether existing or yet-to-be constructed. SPS is considering the availability of capacity resources for possible future owned generation, build-own-transfers ("BOTs"), and purchased power agreements ("PPAs").

General Background:

- SPS is a New Mexico corporation and wholly-owned electric utility subsidiary of Xcel Energy.
- SPS's total company service territory encompasses a 52,000-square-mile area in eastern and southeastern New Mexico, the Texas Panhandle, and the Texas South Plains and its primary business is generating, transmitting, distributing, and selling electric energy.
- SPS has a long history of providing safe, reliable, value-added service to our customers
- SPS serves 394,220 electric retail customers in Texas and New Mexico.
- As prescribed in the Uncontested Comprehensive Stipulation ("Stipulation") filed at the New Mexico Public Regulation Commission on January 13, 2020 and approved by the New Mexico Public Regulation Commission ("NMPRC") in Case No. 19-00170-UT, the Stipulation requires SPS to submit a robust analysis of the possible abandonment of its Tolk Generating Station Units 1 and 2 (Tolk) and potential means of replacement of those resources (the "Tolk Analysis"). The Tolk Analysis shall include replacement resources priced based on an RFI solicitation. The Tolk Analysis will also consider a scenario in which all SPS's coal-burning units are retired or replaced before 2030.
- SPS will be evaluating multiple scenarios with various capacity replacement dates. The minimum net capacity need is approximately 500 MW beginning summer 2023. The maximum net capacity need is approximately 2,200 MW beginning summer 2025.

Qualifications and Assumptions:

- Expressions of interest should be from existing or proposed generating facilities within the SPS zone or delivered to the SPS zone from existing or proposed sites within the Southwest Power Pool.
- Expressions of interest should include a proposed Commercial Operation Date ("COD") if the submission is a future resource.
- Expressions of interest should include all capacity, energy, environmental attributes such as Renewable Energy Credits (RECs), and other generation-related services.
- For purposes of this RFI, "renewable energy" refers to electrical power generated by solar, wind, biomass, or other commercially viable renewable energy technologies including energy storage.
- SPS is interested in the availability of capacity and associated energy resources for possible future owned generation, BOTs, and PPAs.
- PPA durations are recommended to be 25 and/or 30 years.
- Interested parties should respond to this RFI within 60 days of issuance.

Specific Information of Interest:

- Project type, including technical characteristics.
- Project site location for delivery within (or to) the SPS system.
- Proposed COD for resource facilities responsive to this RFI, including details on whether a delay in the proposed COD could impact the pricing and if so an estimate of the price of those impact(s).
- Pricing and quantity in megawatts. All pricing in respondent proposals should reflect costs (to the extent applicable) at the time of submittal and should include costs of interconnection to the transmission system if applicable.
- Statement on current interconnection status (if any), and anticipated extent of need for transmission system upgrades for the proposal.
- Proposals must demonstrate an anticipated ability to obtain all required state/local pre-construction approvals and any associated risks to meet the COD.

Content of Submissions:

- Appendix A includes a set of forms applicable to the resource type being submitted.
  - For dispatchable resources the submitter should complete Appendix A-PPA_DIS forms
  - For renewable generation resources the submitter should complete Appendix A-PPA_RENEW forms
  - For Build-Own-Transfer or sale of an existing asset the submitter should complete Appendix A-BOT.
- Some information may be requested on more than one form. Although such requests may be redundant, submitters must provide the information requested on each applicable form.
- SPS will convene a Bidders Meeting for all interested parties to allow for clarifications and any questions that potential bidders may have. See meeting details below.

Bidders Meeting:

Date: September 21, 2020

Time: 1:00PM – 3:00 PM Mountain Daylight Time

Join Zoom Meeting:
https://xcelenergy.zoom.us/j/93175193060?pwd=cVpNeTZvTEkycURIMUhqMlZWL2l4dz09

Meeting ID: 931 7519 3060
Passcode: 270511
One tap mobile
+17209289299,,93175193060#,,,,,,0#,,270511# US (Denver)
+12133388477,,93175193060#,,,,,,0#,,270511# US (Los Angeles)

Dial by your location
+1 720 928 9299 US (Denver)
+1 213 338 8477 US (Los Angeles)
+1 346 248 7799 US (Houston)
+1 206 337 9723 US (Seattle)
+1 312 626 6799 US (Chicago)
+1 646 518 9805 US (New York)
+1 651 372 8299 US (St. Paul)
+1 786 635 1003 US (Miami)
Meeting ID: 931 7519 3060
Passcode: 270511
Find your local number: https://xcelenergy.zoom.us/u/aLUXvN6pb

Proposal Submission Deadline:

Proposals will be accepted until 5:00 P.M. Central Time on **Friday, November 6, 2020**. All Proposals must be transmitted by to the following email address:

SPSTolkAnalysis@xcelenergy.com

Proposals received later than the due date and time indicated will be rejected.

Follow-up Requests

To the extent SPS has questions or seeks clarification regarding a Proposal, SPS may pose follow-up questions. Submitters are not obligated to respond to such follow-up questions, but, are advised that a failure to provide adequate information may lead to a Proposal or a portion of a Proposal being disregarded.

Confidentiality

SPS recognizes that certain information contained in a Proposal submitted may be deemed by the submitter to be confidential. To the extent a submitter believes portions of its Proposal (or any subsequent responses to follow-up questions) constitute confidential material, the submitter should clearly label such material as confidential ("Confidential Material"). SPS will not be responsible for identifying any Confidential Material that has not been designated as such by the submitter. If SPS receives a request from a regulatory or judicial authority to which Confidential Material is responsive, or if SPS receives a request (that SPS reasonably deems to be a valid request) from a party in a regulatory or judicial proceeding to which request SPS determines Confidential Material in the Proposal is responsive, or to the extent otherwise required by law, SPS may provide the Confidential Material pursuant to a confidentiality or protective agreement or order in such proceeding. To the extent Confidential Material is proposed to be disclosed publicly (i.e., not subject to a confidentiality or protective agreement), SPS will notify the submitter as soon as reasonably possible; it is the sole responsibility of the submitter to seek to protect the material subsequent to such notification. SPS may disclose non-Confidential Material at its discretion without prior notice.

The following files are not convertible:

Exhibit SPS-AXM 1-14(h).xlsx
Exhibit SPS-AXM 1-14(j).xlsx
Exhibit SPS-AXM 1-14(l, m).xlsx
Exhibit SPS-AXM 1-4.XLS
Exhibit SPS-AXM 1-9(g).xlsx
Exhibit SPS-AXM 1-11.xlsx
Exhibit SPS-AXM 1-13.xlsx
Exhibit SPS-AXM 1-14(a).xlsx
Exhibit SPS-AXM 1-14(b, c).xlsx
Exhibit SPS-AXM 1-14(d, e).xlsx
Exhibit SPS-AXM 1-14(f).xlsx
Exhibit SPS-AXM 1-14(g, i).xlsx

Please see the ZIP file for this Filing on the PUC Interchange in order to access these files.

Contact centralrecords@puc.texas.gov if you have any questions.