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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'S SECOND REQUEST FOR INFORMATION QUESTION NOS. 2-1 THROUGH 2-26

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SOUTHWESTERN PUBLIC SERVICE COMPANY'S RESPONSE TO ALLIANCE OF XCEL MUNICIPALITIES'S SECOND REQUEST FOR INFORMATION QUESTION NOS. 2-1 THROUGH 2-26

Southwestern Public Service Company ("SPS") files this response to the Alliance of Xcel Municipalities' ("AXM") Second Request for Information, Question Nos. 2-1 through 2-26. SPS has provided notice, by email, to all parties that SPS's Responses to AXM's Second 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 Second 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 § 22.144(c)(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.

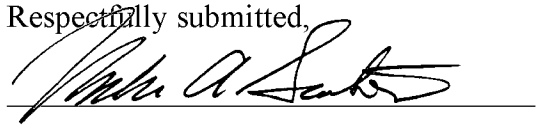
II. INSPECTIONS

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, 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 2-1:

Please Reference page 6, lines 11-13 of Company witness Elsey' s direct testimony, please provide the referenced Agreed Order with TCEQ.

RESPONSE:

Please refer to attachment JLW-1 of the Direct Testimony Jeffrey L. West.

Preparer: Michael Knapp
Sponsor: Jeffrey L. West

QUESTION NO. AXM 2-2:

Please explain whether SPS evaluated extension of existing purchased power agreements as an alternative to conversion one or more of the planned Harrington unit gas conversion projects. If so, identify the case evaluated and provide the results of the analysis in a format comparable to the tables provided in Attachment BRE-1 to Company witness Elsey' s direct testimony. If not, please explain why not.

RESPONSE:

SPS has not evaluated extension of existing purchased power agreements ("PPAs"). Instead, as described in response to Question 2-4, as part of the 2021 updated Harrington analysis, SPS evaluated new PPAs as an alternative to conversion of one or more of the planned Harrington units to operate on natural gas. This ensured SPS relied upon current market pricing for new PPAs, as opposed to a speculative cost of extending existing PPAs.

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

QUESTION NO. AXM 2-3:

Please explain whether SPS has contacted existing purchased power suppliers to determine feasibility of extension of such contracts as an alternative to the planned conversion of the Harrington units to operate on natural gas.

RESPONSE:

No. SPS has not contacted existing purchased power suppliers to determine the feasibility of extending the purchased power agreements as a direct alternative to converting the Harrington units to operate on natural gas.

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

QUESTION NO. AXM 2-4

Please explain whether SPS evaluated bilateral purchased power agreements as an alternative to conversion one or more of the planned Harrington unit gas conversion projects. If so, identify the case evaluated and provide the results of the analysis in a format comparable to the tables provided in Attachment BRE-1 to Company witness Elsey' s direct testimony. If not, please explain why not.

RESPONSE:

Yes. As described on page 26, lines 18-19, of Mr. Elsey's Direct Testimony, when evaluating the cost of replacement resources, SPS incorporated pricing received from a recently issued Request for Information ("RFI"). SPS received several purchased power proposals in response to the RFI, which are incorporated in the results of the Harrington analysis.

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

QUESTION NO. AXM 2-5:

Please provide SPS's forecasted peak demand, capacity position and reserve margin for each year of the period 2025-2035 assuming retirement of all three Harrington coal units in December 2024 and with no replacement capacity additions during the period.

RESPONSE:

Please refer to Exhibit SPS-AXM 2-5. The worksheet '2021 Spring LF' contains the requested information at the time SPS conducted its 2021 updated Harrington analysis. The worksheet '2021 Summer LF' contains the most current information.

Preparer: Ashley Gibbons
Sponsors: John M. Goodenough, Ben R. Elsey

QUESTION NO. AXM 2-6:

Please provide the forecasted SPP regional peak demand, capacity position, and reserve margin for each year of the study period from SPS's current IRP base case analysis.

RESPONSE:

SPS is not required to file an integrated resource plan in Texas.

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

QUESTION NO. AXM 2-7:

Please provide the forecasted SPP regional peak demand, capacity position, and reserve margin for each year of the study period in each of the 2019 and 2021 updated economic analyses described in Company witness Elsey' s direct testimony.

RESPONSE:

Neither analysis includes a forecasted peak demand, capacity position or planning reserve margin for the entire Southwest Power Pool.

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

QUESTION NO. AXM 2-8:

Reference page 11, lines 6-8 of Company witness Elsey' s direct testimony, please provide the magnitude and type of resources (i.e., peaking, intermediate, or baseload) needed for each year of the study period in each of the 2019 and 2021 updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

Both analyses require sufficient supply-side resources, and/or market purchases, to meet the company's planning reserve margin requirements and to serve system wide load. The modeling software then optimally selects the least cost portfolio of generating resources to meet these requirements. Neither model requires a certain type or quantity of resources (i.e., peaking, intermediate, or baseload).

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

QUESTION NO. AXM 2-9:

Reference page 11, lines 6-8 of Company witness Elsey' s direct testimony, please provide the definition of resource types (i.e., peaking, intermediate, or baseload) and indicate the resource type of the Harrington units before and after conversion to operate natural gas.

RESPONSE:

Baseload units operate for long periods at or near full load due to their low operating costs and therefore have high-capacity factors. Peaking units, on the other hand, operate for short periods during times of high energy demand. Peaking units are typically inexpensive to construct but have relatively high operating costs, therefore Peaking Units have low-capacity factors. Intermediate units operate somewhere between baseload and peaking units. Traditionally, on the SPS system, the coal units would be considered baseload units, the Hobbs combined cycle would be an example of an intermediate unit, and the combustion turbine generators, such as Jones 3 and Jones 4 would be considered peaking units. However, as the penetration of renewable generation continues to increase, the traditional role of each resource type is less defined.

As described above, coal units, such as the Harrington units, are generally considered baseload units. After the conversion, SPS anticipates the Harrington units will operate more like peaking units. In other words, SPS anticipates the Harrington units will operate at a low-capacity factor, predominately during times of high demand or low renewable generation output.

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

QUESTION NO. AXM 2-10:

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

RESPONSE:

Please refer to Question No. SPS-AXM 1-2.

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

QUESTION NO. AXM 2-11:

Reference page 14, line 11 of Company witness Elsey's direct testimony, please explain how and why the remaining book value of SPS-owned generating units was considered in the EnCompass modeling analyses described in Company witness Elsey's direct testimony.

RESPONSE:

SPS maintains a single EnCompass database that is used for all resource planning analyses. As such, the EnCompass database includes the remaining book value for all SPS-owned generating units. However, the costs associated with the remaining book value (e.g., depreciation expense) for the units not being evaluated do not change from one scenario to the next and therefore have no impact on the analysis. In other words, in the Harrington analysis, the costs associated with remaining book value of all other SPS-owned units do not change in each scenario and therefore do not impact the economic evaluation of converting the Harrington units to operate on natural gas.

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

QUESTION NO. AXM 2-12:

Reference page 15, lines 19-15 of Company witness Elsey's direct testimony, please explain how the consolidated dispatch of all available generating resources within the SPP was evaluated in the EnCompass modeling analyses described in Company witness Elsey' s direct testimony.

RESPONSE:

It is not feasible to include all existing and new Southwest Power Pool generating resources, over a 20-year planning horizon, in the EnCompass model. Instead, SPS relies on a market price curve to represent the cost of purchasing or selling energy from the market. In any given hour, the EnCompass model can purchase or sell energy up to a predefined transmission import limitation.

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

QUESTION NO. AXM 2-13:

Please provide vendor documentation of the capabilities of the EnCompass model.

RESPONSE:

Please refer to the vendor's website for the requested information.
https://anchor-power.com/encompass-power-planning-software/

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

QUESTION NO. AXM 2-14:

Please provide any analysis conducted by SPS to benchmark or otherwise determine the reasonableness and accuracy of the EnCompass model results and input assumptions as reflected in the 2019 and 2021 updated economic analyses described in Company witness Elsey' s direct testimony.

RESPONSE:

SPS does not have any analysis benchmarking the reasonableness and accuracy of the EnCompass model results and input assumptions. However, SPS does conduct regular reviews of its modeling inputs and outputs as part of each Resource Planning analysis and for quality assurance purposes. For example, SPS's Resource Planning team conducts a quarterly meeting to review the actual output of each generating unit against the modeled output of each generating unit.

As described on pages 12-13 of the Direct Testimony of Ben R. Elsey, the 2019 economic analysis was conducted in Strategist prior to SPS's conversion to the new modeling software (EnCompass).

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

QUESTION NO. AXM 2-15:

Reference page 15, lines 33-37 of Company witness Elsey's direct testimony, please explain and provide documentation to support the testimony that SPP is currently assigning extremely high transmission network upgrade costs to new generating resources.

RESPONSE:

Please refer to SPS's response to Question No. SPS-Staff 3-8.

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

QUESTION NO. AXM 2-16:

Please provide the transmission interconnection and network upgrade costs for the converted Harrington units and for other new generating resource alternatives as reflected in the 2019 and 2021updated economic analyses described in Company witness Elsey's direct testimony.

RESPONSE:

There are no transmission interconnection and network upgrade costs for the converted Harrington units.

Please refer to page 41, lines 10-19, of Mr. Elsey's Direct Testimony for more information on the different transmission interconnection and network upgrade costs evaluated in the updated Harrington Analysis. Please refer to SPS's response to Question No. SPS-TIEC 2-2 for more information on the costs of new generating resources considered in the 2021 updated economic analysis.

SPS's 2019 economic analysis did not contain the high level of transmission network upgrade costs that are currently being assigned. For new wind generation, SPS included $200/kW for interconnection and transmission network upgrade costs. For new solar generation, SPS included $100/kW for interconnection and transmission network upgrade costs. For new generic combustion turbine generators ("CTG"), SPS included $18,732,500 per CTG. For new generic combined cycle generation ("CC"), SPS included $32,045,000 per CC.

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

QUESTION NO. AXM 2-17:

Please provide SPS's most recent assessment of the forecasted availability of capacity for purchase from existing or new generating resources located within the SPP region over the next ten years along with supporting workpapers.

RESPONSE:

Other than the Request for Information and responses received by SPS, SPS has not conducted such an assessment.

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

QUESTION NO. AXM 2-18:

Reference page 20, lines 10-15 of Company witness Elsey's direct testimony, please provide the time required for obtaining generation interconnection approvals from SPP for the Hale and Sagamore wind generation facilities and for the Bonita purchased power agreement.

RESPONSE:

It took approximately 17 months to obtain the initial generator interconnection agreement ("GIA") for Hale and 41 months to obtain the initial GIA for Sagamore. This does not include the additional time necessary to study generator modification. For additional context, Sagamore was included in the 2016-02 definitive interconnection system impact study ("DISIS") and was placed in-service in December 2020. Currently, Southwest Power Pool is still evaluating the 2017-01 DISIS.

Bonita Lorenzo and Wildcat are owned and operated by NextEra Energy Resources. It took approximately 3 years to obtain the GIA for Wildcat. SPS does not know how long it took to obtain the GIA for Lorenzo.

Preparers: Ben R. Elsey, Kevin Pera
Sponsor: Ben R. Elsey

QUESTION NO. AXM 2-19:

Please provide SPS's most recent analyses supporting the planned retirement dates of generating resources that are scheduled for retirement before 2030 and indicate the primary reasons for each of these retirements by the planned dates.

RESPONSE:

Typically, the planned retirement date of a generating asset is determined by several factors including the rate of physical deterioration, obsolescence, maintenance, or (in some cases) the economic usefulness of an entire operating unit. SPS plans to retire each generating unit at the end of its useful life in keeping with these factors. SPS also evaluates retirement timing in the normal course of business, as needed. SPS does not conduct specific analyses to support the planned retirement dates of each generating resource.

Please refer to Exhibit SPS-AXM 2-19 for SPS's most recent analysis supporting the planned retirement date of Plant X Unit 3.

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

QUESTION NO. AXM 2-20:

Please provide SPS's analysis of the transmission reliability benefits of converting the Harrington units to operate on natural gas along with any analysis of transmission reliability benefits that could be provided by alternatives to the Harrington conversion project.

RESPONSE:

Please refer to SPS's response to Question No's. SPS-SC 1-5(b) and SPS-SC 1-5(f).

Preparer: Ben R. Elsey
Sponsor: William A. Grant

QUESTION NO. AXM 2-21:

Please provide SPS's analysis of carbon dioxide and other environmental benefits of converting the Harrington units to operate on natural gas along with any analysis of environmental benefits that could be provided by alternatives to the Harrington conversion project.

RESPONSE:

No formal analysis for emission reductions was conducted. SPS used the emission profiles from similar units as an estimation of approximate emission reductions for the various regulated pollutants.

Please refer to the response to Question No. SPS-AXM 1-7 for carbon dioxide emissions for the 2019 economic analysis and the 2021 updated economic analysis.

Preparers: Jeffrey L. West, Ben R. Elsey
Sponsors: Jeffrey L. West, Ben R. Elsey

QUESTION NO. AXM 2-22:

Reference page 26, lines 18-19 of Company witness Elsey's direct testimony, please provide a comparison of the cost of replacement resources used for the 2019 economic analysis to the costs of replacement resources derived from the referenced RFI which were used for the 2021 updated economic analyses and explain how these changed cost assumptions impacted the results of the Harrington conversion analysis.

RESPONSE:

SPS has not conducted this comparison. Furthermore, it is not possible to isolate and quantify how the updated cost of replacement resource assumptions impact the results of the Harrington analysis due to the additional updates included in the 2021 analysis. These updates are also described on page 26, lines 18-19 of Mr. Elsey's testimony.

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

QUESTION NO. AXM 2-23:

Reference Attachment BRE-1 of Company witness Elsey' s direct testimony, please provide NPV results of the 2019 analysis of Harrington retirement and conversion scenarios in a format similar to the tables presented in Attachment BRE-1.

RESPONSE:

Please refer to Exhibit SPS-AXM 2-23.

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

QUESTION NO. AXM 2-24:

Reference Attachment BRE-1 of Company witness Elsey' s direct testimony, please provide the NPV results for each of the presented Harrington conversion and retirement scenarios over a ten-year period (2022-2031) in a format similar to the tables presented in Attachment BRE-1.

RESPONSE:

Please refer to the EnCompass output files provided in Exhibit SPS-SC 1-3(i)(CONF).

Each EnCompass output file includes the NPV results over a ten-year period (2022 – 2031) on the worksheet "PVSC-PVRR Total".

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

QUESTION NO. AXM 2-25:

Reference Attachment Table BRE-2 of Company witness Elsey' s direct testimony, please provide the NPV results for each of the presented Harrington conversion and retirement scenarios over a ten-year period (2022-2031) in a format similar to Table BRE-2.

RESPONSE:

Please refer to Question No. SPS-AXM 2-25.

Note: The file that corresponds to Table BRE-2 is titled "EO_SPS_2021 CCN_PL_400TRX_2021-06-21.xlsb".

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

QUESTION NO. AXM 2-26:

Reference Attachment Table BRE-3 of Company witness Elsey' s direct testimony, please provide the NPV results for each of the presented Harrington conversion and retirement scenarios over a ten-year period (2022-2031) in a format similar to Table BRE-3.

RESPONSE:

Please refer to Question No. SPS-AXM 2-25.

Note: The file that corresponds to Table BRE-3 is titled "EO_SPS_2021 CCN_FL_400TRX_2021-06-21.xlsb".

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

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 27, 2022, in accordance with the Order Suspending Rules, issued in Project No. 50664.

Mark A. Santos

SPS Planning Table Forecast (Spring 2021 Load Forecast)

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total Accredited Capacity	5,105	4,852	4,832	4,598	4,486	4,486	4,240	3,997	2,928	2,354	1,880
Planning Load Forecast	4,269	4,240	4,333	4,403	4,464	4,522	4,565	4,652	4,706	4,767	4,799
Total Planning Reserve Margin at 12%	512	509	520	528	536	543	548	558	565	572	576
Resource Position - Assuming all Harrington Units are Converted (MW)	**323**	**103**	**(21)**	**(334)**	**(514)**	**(578)**	**(873)**	**(1,213)**	**(2,342)**	**(2,985)**	**(3,495)**
Less Harrington 1, 2, 3 (MW)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)
Resource Position - Assuming all Harrington Units are retired (MW)	**(727)**	**(947)**	**(1,071)**	**(1,384)**	**(1,564)**	**(1,628)**	**(1,923)**	**(2,263)**	**(3,392)**	**(4,035)**	**(4,545)**

SPS Financial Table Forecast (Spring 2021 Load Forecast)

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total Accredited Capacity	5,105	4,852	4,832	4,598	4,486	4,486	4,240	3,997	2,928	2,354	1,880
Financial Load Forecast	3,937	3,867	3,905	3,934	3,961	3,982	4,007	4,033	4,061	4,085	4,122
Total Planning Reserve Margin at 12%	472	464	469	472	475	478	481	484	487	490	495
Resource Position - Assuming all Harrington Units are Converted (MW)	**696**	**521**	**458**	**191**	**50**	**26**	**(248)**	**(520)**	**(1,621)**	**(2,221)**	**(2,736)**
Less Harrington 1, 2, 3 (MW)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)
Resource Position - Assuming all Harrington Units are retired (MW)	**(354)**	**(529)**	**(592)**	**(859)**	**(1,000)**	**(1,024)**	**(1,298)**	**(1,570)**	**(2,671)**	**(3,271)**	**(3,786)**

SPS Planning Table Forecast (Summer 2021 Load Forecast)

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total Accredited Capacity	4,924	4,608	4,582	4,364	4,249	4,246	3,997	3,751	2,679	2,118	1,796
Planning Load Forecast	4,264	4,236	4,326	4,400	4,471	4,533	4,582	4,670	4,731	4,801	4,842
Total Planning Reserve Margin at 12%	512	508	519	528	536	544	550	560	568	576	581
Resource Position - Assuming all Harrington Units are Converted (MW)	**148**	**(136)**	**(264)**	**(564)**	**(758)**	**(830)**	**(1,135)**	**(1,479)**	**(2,620)**	**(3,258)**	**(3,627)**
Less Harrington 1, 2, 3 (MW)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)
Resource Position - Assuming all Harrington Units are retired (MW)	**(902)**	**(1,186)**	**(1,314)**	**(1,614)**	**(1,808)**	**(1,880)**	**(2,185)**	**(2,529)**	**(3,670)**	**(4,308)**	**(4,677)**

SPS Financial Table Forecast (Summer 2021 Load Forecast)

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total Accredited Capacity	4,924	4,608	4,582	4,364	4,249	4,246	3,997	3,751	2,679	2,118	1,796
Financial Load Forecast	3,932	3,864	3,899	3,932	3,966	3,991	4,022	4,049	4,083	4,114	4,158
Total Planning Reserve Margin at 12%	472	464	468	472	476	479	483	486	490	494	499
Resource Position - Assuming all Harrington Units are Converted (MW)	**520**	**280**	**215**	**(39)**	**(193)**	**(224)**	**(507)**	**(783)**	**(1,894)**	**(2,489)**	**(2,861)**
Less Harrington 1, 2, 3 (MW)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)	(1,050)
Resource Position - Assuming all Harrington Units are retired (MW)	**(530)**	**(770)**	**(835)**	**(1,089)**	**(1,243)**	**(1,274)**	**(1,557)**	**(1,833)**	**(2,944)**	**(3,539)**	**(3,911)**

WACC	6.47%

PVRR Production Cost	Delta ($M)	NPV ($M) 2021-2024	2021	2022	2023	2024
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	$0	$ 5,579	$ 1,488,274	$ 1,515,810	$ 1,544,397	$ 1,574,515
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	($12)	$ 5,567	$ 1,483,737	$ 1,513,338	$ 1,541,189	$ 1,571,679

Scenario	Run ID	Company	Year	Peak (MW)	Capacity (MW)	Net Capacity Imports (MW)	Reserve Margin (%)	Load Factor (%)	Firm Capacity (MW)	Energy (GWh)	Net Generation (GWh)
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	4,045.92	8,035.75	0.00	46.41	72.53	5,923.67	25,705.35	28,676.93
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	4,012.51	8,027.26	0.00	47.51	74.32	5,918.67	26,121.77	26,583.86
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	4,066.83	7,764.26	0.00	38.91	74.05	5,649.41	26,379.57	28,630.44
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	4,103.53	7,653.26	0.00	34.84	74.57	5,533.18	26,880.74	28,435.00
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	4,045.92	8,035.75	0.00	44.11	72.53	5,830.67	25,705.35	28,655.83
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	4,012.51	8,027.26	0.00	45.19	74.32	5,825.67	26,121.77	26,572.91
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	4,066.83	7,671.26	0.00	36.63	74.05	5,556.41	26,379.57	28,592.80
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	4,103.53	7,560.26	0.00	32.57	74.57	5,440.17	26,880.74	28,370.81

Scenario	Run ID	Company	Year	Curtailed (MWh)	Fuel Costs ($000)	Program Costs ($000)	Commitment Costs ($000)	Non-Fuel Variable Cost ($000)	Fixed Cost ($000)	Other Costs ($000)
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	0.00	345,404.13	0.00	1,689.98	238,754.68	180,057.87	0.00
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	0.00	279,458.91	0.00	1,080.68	237,373.05	177,141.16	0.00
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	0.00	339,055.36	0.00	1,445.88	251,407.48	173,604.60	0.00
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	0.00	336,734.46	0.00	1,126.10	255,743.37	171,284.56	0.00
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	0.00	344,795.53	0.00	1,703.62	238,686.21	179,117.56	0.00
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	0.00	279,153.19	0.00	1,133.55	237,351.45	177,141.16	0.00
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	0.00	338,010.21	0.00	1,473.77	251,344.44	173,604.60	0.00
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	0.00	335,014.95	0.00	1,209.45	255,567.27	171,284.56	0.00

Scenario	Run ID	Company	Year	Contract Revenue ($000)	Contract Cost ($000)	Sales (GWh)	Purchases (GWh)	Losses (GWh)	Sales Revenue ($000)	Purchase Cost ($000)	Ancillary Sales ($000)
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	2,037.52	0.00	5,374.22	2,402.65		170,976.24	26,086.73	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	2,078.27	0.00	3,675.71	3,213.63		97,913.51	40,042.26	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	2,119.83	0.00	4,801.02	2,550.15		141,194.17	32,935.00	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	2,162.23	0.00	4,293.87	2,739.61		124,461.15	42,626.90	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	2,037.52	0.00	5,352.11	2,401.63		170,191.13	26,007.66	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	2,078.27	0.00	3,666.45	3,215.31		97,594.35	40,066.06	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	2,119.83	0.00	4,770.04	2,556.81		140,183.09	33,061.46	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	2,162.23	0.00	4,239.14	2,749.07		122,720.97	42,812.37	

Scenario	Run ID	Company	Year	Ancillary Purchases ($000)	Retail Sales (GWh)	Retail Revenue ($000)	Total Operating Cost ($000)	Externality Costs ($000)	Capacity Cost ($000)
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021		25,705.35	0.00	618,979.63	0.00	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022		26,121.77	0.00	635,104.29	0.00	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023		26,379.57	0.00	655,134.30	0.00	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024		26,880.74	0.00	680,892.00	0.00	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021		25,705.35	0.00	618,081.91	0.00	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022		26,121.77	0.00	635,172.80	0.00	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023		26,379.57	0.00	655,191.56	0.00	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024		26,880.74	0.00	681,005.40	0.00	

Scenario	Run ID	Company	Year	Capacity Revenue ($000)
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	2,037.52
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	2,078.27
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	2,119.83
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	2,162.23
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	2,037.52
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	2,078.27
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	2,119.83
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	2,162.23

Scenario	Run ID	Company	Year	Operating Cost	Carrying Costs	Capital Expense	Installed Cost	Book Value	Book Depreciation
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	0	2,507,359.38					438,608.79
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	618,979.63				930,964.55	95,217.74
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	635,104.29				896,174.83	102,918.32
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	655,134.30				851,469.40	125,207.36
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	680,892.00				767,234.41	129,905.52
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	0	2,506,689.39					428,884.44
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	618,081.91				923,152.06	93,277.15
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	635,172.80				890,280.26	100,944.40
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	655,191.56				848,472.12	122,144.06
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	681,005.40				767,234.41	126,842.22

Scenario	Run ID	Company	Year	Tax Depreciation	Deferred Taxes	ADIT	Tax Credits	Property Taxes	Decommissioning
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	0		-63,140.96			28,533.74	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	95,217.74	-16,822.68	218,732.66		6,990.77	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	102,918.32	-16,822.68	201,909.98		7,258.66	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	125,207.36	-16,057.83	185,852.16		7,561.75	
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	129,905.52	-15,468.26	170,383.90		7,660.70	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	0		-63,098.33			28,261.48	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	93,277.15	-16,866.68	218,644.64		6,929.41	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	100,944.40	-16,866.68	201,777.96		7,196.78	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	122,144.07	-15,991.82	185,786.15		7,482.81	
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	126,842.23	-15,402.25	170,383.90		7,581.76	

Scenario	Run ID	Company	Year	Other Costs	Debt	Debt Service	Interest	AFUDC	Capitalized Interest	Rate Base
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	0	238,481.50		57,130.80	65,892.86			
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	89,062.73	422,481.68	2,600.33	18,359.59			930,964.57
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	79,400.84	406,693.73	10,178.28	17,673.50			896,174.86
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	48,226.92	386,405.94	7,834.23	16,791.86			851,469.45
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	28,580.99	348,179.21	39,651.29	15,130.66			767,234.48
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	0	238,461.98		53,338.38	65,570.74			
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	89,058.33	418,936.29	2,293.18	18,205.52			923,152.09
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	79,396.40	404,018.71	9,237.04	17,557.25			890,280.30
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	48,221.26	385,045.74	6,505.68	16,732.75			848,472.17
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	28,575.33	348,179.21	38,291.09	15,130.66			767,234.48

Scenario	Run ID	Company	Year	Allowed Return	Revenue Requirement
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	0	208,331.19	3,421,314.60
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2021	59,043.56	869,294.43
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2022	56,023.57	880,705.68
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2023	53,132.64	889,262.97
Hourly_ReferenceCaseNoRFI_PlantX3 Fixed	0	SPS	2024	46,583.43	893,622.63
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	0	206,968.47	3,409,265.77
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2021	58,308.43	865,655.24
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2022	55,454.93	878,165.32
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2023	52,957.88	885,997.58
Hourly_ReferenceCaseNoRFI_PlantX3 Abandoned	0	SPS	2024	46,668.85	890,673.56

Table 1: Financial Forecast – Base Gas

	2040		2054	
Scenario	**PVRR**	**Rank**	**PVRR**	**Rank**
Fully Maintain Coal Operations				
DSI on all units	$135	7	$239	7
SDA on all units	$346	8	$449	8
Partially Maintain Coal Operations				
Convert two units to gas + DSI on remaining unit	$13	3	$117	3
Convert one unit to gas + DSI on remaining units	$79	6	$183	6
Retire two units + DSI on remaining unit	$70	4	$126	4
Retire one unit + DSI on remaining units	$74	5	$160	5
Cease Coal Operations				
Convert all units to gas	($80)	1	$24	2
Retire all units	$0	2	$0	1

SPP Generator Replacement / Surplus Interconnection Options				
Convert 2 units to gas + convert 1 unit to SC + solar	($108)		($83)	
Convert all units to gas + Solar	($126)		($55)	

Table 2: Planning Forecast – Base Gas

	2040		2054	
Scenario	**PVRR**	**Rank**	**PVRR**	**Rank**
Fully Maintain Coal Operations				
DSI on all units	$188	7	$283	7
SDA on all units	$397	8	$492	8
Partially Maintain Coal Operations				
Convert two units to gas + DSI on remaining unit	$70	3	$165	4
Convert one unit to gas + DSI on remaining units	$136	5	$231	6
Retire two units + DSI on remaining unit	$80	4	$121	3
Retire one unit + DSI on remaining units	$146	6	$224	5
Cease Coal Operations				
Convert all units to gas	($26)	1	$69	2
Retire all units	$0	2	$0	1
SPP Generator Replacement / Surplus Interconnection Options				
Convert 2 units to gas + convert 1 unit to SC + solar	($47)		($28)	
Convert all units to gas + Solar	($71)		($4)	

Table 3: Financial Forecast – High Gas

	2040		2054	
Scenario	**PVRR**	**Rank**	**PVRR**	**Rank**
Fully Maintain Coal Operations				
DSI on all units	($62)	5	$42	7
SDA on all units	$144	8	$248	8
Partially Maintain Coal Operations				
Convert two units to gas + DSI on remaining unit	($98)	2	$6	3
Convert one unit to gas + DSI on remaining units	($78)	3	$25	6
Retire two units + DSI on remaining unit	($2)	6	$14	4
Retire one unit + DSI on remaining units	($69)	4	$17	5
Cease Coal Operations				
Convert all units to gas	($133)	1	($29)	1
Retire all units	$0	7	$0	2
SPP Generator Replacement / Surplus Interconnection Options				
Convert 2 units to gas + convert 1 unit to SC + solar	($180)		($199)	
Convert all units to gas + Solar	($220)		($191)	

Table 4: Planning Forecast – High Gas

	2040		2054	
Scenario	**PVRR**	**Rank**	**PVRR**	**Rank**
Fully Maintain Coal Operations				
DSI on all units	($14)	4	$81	7
SDA on all units	$190	8	$285	8
Partially Maintain Coal Operations				
Convert two units to gas + DSI on remaining unit	($43)	2	$52	4
Convert one unit to gas + DSI on remaining units	($27)	3	$68	5
Retire two units + DSI on remaining unit	($3)	5	$37	3
Retire one unit + DSI on remaining units	$0	6	$77	6
Cease Coal Operations				
Convert all units to gas	($78)	1	$17	2
Retire all units	$0	6	$0	1
SPP Generator Replacement / Surplus Interconnection Options				
Convert 2 units to gas + convert 1 unit to SC + solar	($114)		($136)	
Convert all units to gas + Solar	($163)		($137)	

Table 5: Financial Forecast – Low Gas

	2040		2054	
Scenario	**PVRR**	**Rank**	**PVRR**	**Rank**
Fully Maintain Coal Operations				
DSI on all units	$250	7	$354	7
SDA on all units	$469	8	$573	8
Partially Maintain Coal Operations				
Convert two units to gas + DSI on remaining unit	$54	3	$158	3
Convert one unit to gas + DSI on remaining units	$161	6	$265	6
Retire two units + DSI on remaining unit	$106	4	$187	4
Retire one unit + DSI on remaining units	$153	5	$239	5
Cease Coal Operations				
Convert all units to gas	($83)	1	$21	2
Retire all units	$0	2	$0	1
SPP Generator Replacement / Surplus Interconnection Options				
Convert 2 units to gas + convert 1 unit to SC + solar	($79)		($27)	
Convert all units to gas + Solar	($96)		$3	

Table 6: Planning Forecast – Low Gas

	2040		2054	
Scenario	**PVRR**	**Rank**	**PVRR**	**Rank**
Fully Maintain Coal Operations				
DSI on all units	$305	7	$400	7
SDA on all units	$523	8	$618	8
Partially Maintain Coal Operations				
Convert two units to gas + DSI on remaining unit	$112	3	$207	4
Convert one unit to gas + DSI on remaining units	$219	5	$315	6
Retire two units + DSI on remaining unit	$127	4	$168	3
Retire one unit + DSI on remaining units	$227	6	$305	5
Cease Coal Operations				
Convert all units to gas	($29)	1	$66	2
Retire all units	$0	2	$0	1
SPP Generator Replacement / Surplus Interconnection Options				
Convert 2 units to gas + convert 1 unit to SC + solar	($19)		$26	
Convert all units to gas + Solar	($41)		$53	

The following files are not convertible:

Exhibit SPS-AXM 2-19.xlsx
Exhibit SPS-AXM 2-23.xlsx
Exhibit SPS-AXM 2-5.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.