

EXHIBIT NO. _____ (TMP-5)
DOCKET NOS. UE-170033/UG-170034
2017 PSE GENERAL RATE CASE
WITNESS: THOMAS MICHAEL POWER

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

DOCKETS UE-170033 and UG-170034
(Consolidated)

EXHIBIT TMP-5 TO PREFILED RESPONSE TESTIMONY
(NON-CONFIDENTIAL) OF THOMAS MICHAEL POWER
ON BEHALF OF NW ENERGY COALITION, RENEWABLE NORTHWEST, AND
NATURAL RESOURCES DEFENSE COUNCIL

REDACTED VERSION

JUNE 30, 2017

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Dockets UE-170033 and UG-170034
Puget Sound Energy
2017 General Rate Case**

WUTC STAFF DATA REQUEST NO. 185

“CONFIDENTIAL” “HIGHLY CONFIDENTIAL” Table of Contents

DR NO.	“CONFIDENTIAL” Material
185	Designated Information in PSE’s Response to WUTC STAFF Data Request No. 185 is CONFIDENTIAL per Protective Order in WUTC Dockets UE-170033 and UG-170034.

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Dockets UE-170033 and UG-170034
Puget Sound Energy
2017 General Rate Case**

WUTC STAFF DATA REQUEST NO. 185

WUTC STAFF DATA REQUEST NO. 185:

Please provide any studies, reports, or other documents demonstrating that Colstrip Units 1 and 2 would be uneconomical to operate in the absence of a co-owner.

[REDACTED VERSION]

Response:

Puget Sound Energy (“PSE”) prepared an analysis comparing the portfolio costs of three potential ownership scenarios: (1) Scenario 1: Colstrip Units 1 and 2 continue to operate business as usual with two co-owners until shutdown in 2022; (2) Scenario 2: PSE becomes the sole operator of Colstrip Units 1 and 2 (up to PSE’s maximum capacity of 307 MW) until shutdown in 2022, thereby absorbing 100% of the fixed costs; and (3) Scenario 3: Colstrip Units 1 and 2 shut down early in 2017. In addition, PSE ran the cases under two different scenarios, with and without a CO2 tax.

As shown below, PSE estimates the added present value cost of Scenario 2 is \$ [REDACTED].

PSE estimates the present value impact of Scenario 3 ranges from a cost of \$ [REDACTED] to a benefit of \$ [REDACTED].

The estimated present value cost of Scenario 2 as compared to Scenario 3, ranges from \$ [REDACTED] to \$ [REDACTED].

Portfolio Costs (\$ in Millions)	Change from Business as Usual		Change from Business as Usual	
	w/CO2	Cost/(Benefit)	No CO2	Cost/(Benefit)
Colstrip Shutdown 2022 Business as Usual	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
Colstrip Shutdown 2022 PSE Sole Operator	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]
Colstrip Shutdown 2017	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]	\$ [REDACTED]

PSE has detailed files with confidential modeling supporting this analysis and will supplement this Response.

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Dockets UE-170033 and UG-170034
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WUTC STAFF DATA REQUEST NO. 185

“CONFIDENTIAL” “HIGHLY CONFIDENTIAL” Table of Contents

DR NO.	“CONFIDENTIAL” Material
185	Designated Information is CONFIDENTIAL per Protective Order in WUTC Dockets UE-170033 & UG-170034 as marked in the Response to PSE’s Response to WUTC Staff Data Request No. 185.
185	Designated Information is HIGHLY CONFIDENTIAL per Protective Order in WUTC Dockets UE-170033 & UG-170034 as marked in Attachments A-F to PSE’s Response to WUTC Staff Data Request No. 185.
185	Designated Information is CONFIDENTIAL per Protective Order in WUTC Dockets UE-170033 & UG-170034 as marked in Attachments G-I to PSE’s Response to WUTC Staff Data Request No. 185.

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

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WUTC STAFF DATA REQUEST NO. 185

WUTC STAFF DATA REQUEST NO. 185:

Please provide any studies, reports, or other documents demonstrating that Colstrip Units 1 and 2 would be uneconomical to operate in the absence of a co-owner.

First Supplemental Response:

The analysis performed by Puget Sound Energy (“PSE”) and provided in PSE’s Response to WUTC Staff Data Request No. 185 reflects a scenario analysis performed by PSE to understand whether it would be economic for PSE to run Colstrip Units 1 and 2 even if Talen Montana LLC (“Talen Montana”) elected not to continue operation of its share of Colstrip Units 1 and 2.

On June 3, 2016, Talen Energy entered into an agreement with Riverstone Holdings LLC (“Riverstone”), pursuant to which Riverstone would acquire the outstanding stock of Talen Energy. This transaction closed on December 6, 2016, and Riverstone is now the parent company of Talen Montana.

As mentioned in the Prefiled Direct Testimony of Ronald J. Roberts, Exhibit No. ___(RJR-1CT), at page 39, the pendency of the transaction allowed only limited communication between Talen Montana and PSE regarding Colstrip Units 1 and 2. During this period, PSE was not privy to Talen Montana’s strategy regarding Colstrip Units 1 and 2 and was unsure of the intentions of Talen Montana. Given that uncertainty, PSE wanted to understand if it would be economic to run Colstrip Units 1 and 2 without Talen Montana as sole operator of the facility.

Now that the transaction has closed and Riverstone has had an opportunity to assess its options and opportunities, Talen Montana and PSE have recently reengaged in more regular communications. In the course of these communications, [REDACTED]

[REDACTED]

For the purposes of the scenario analysis provided in PSE's Response to WUTC Staff Data Request No. 185, PSE assumed that operations of Colstrip Units 1 and 2 without Talen Montana would be restricted to the capacity associated with PSE's 50 percent ownership share of those units (i.e., 307 MW). Therefore, PSE assumed, for purposes of the scenario analysis, that PSE would run one of the two units of Colstrip Units 1 and 2 and pay all of the fixed costs during such operations.

PSE ran the three retirement scenarios under two different environmental cases: (1) the with CO2 tax scenario and (2) the without CO2 tax scenario. The CO2 tax case assumes that the Washington State Clean Air Rule is in effect until 2022. The Clean Air Rule is applicable to output from plants located in Washington but does not affect out-of-state plants (e.g., Colstrip Units 1 and 2). The without CO2 tax case assumes that the Clean Air Rule does not become effective.

In both the with CO2 tax scenario and the without CO2 tax scenario, PSE's analyses suggest that it would not be economic for PSE to operate one of the two units of Colstrip Units 1 and 2 on its own and without Talen Montana. For the with CO2 tax scenario, PSE analyses suggest that PSE would incur approximately \$[REDACTED] million of additional cost to operate one of the two units of Colstrip Units 1 and 2 on its own when compared to shutting down Colstrip Units 1 and 2 in 2017. For the without CO2 tax scenario, PSE analyses suggest that PSE would incur approximately \$[REDACTED] million of additional cost to operate one of the two units of Colstrip Units 1 and 2 on its own when compared to shutting down Colstrip Units 1 and 2 in 2017.

There are many assumptions that continue to evolve as more information becomes known about retirement of Colstrip Units 1 and 2. For example, the analysis described above uses costs of coal combustion residuals from the 2017 budget, and those costs have since been updated. Additionally, the above-described analysis addresses quantitative issues only and does not address qualitative issues that PSE must consider in deciding how to proceed with respect to Colstrip Units 1 and 2. For example, the quantitative analysis described above does not address the risks and opportunities associated with relying on market purchases to replace a baseload resource, such as Colstrip Units 1 and 2.

REDACTED
VERSION

Attachments A-I to PSE's First Supplemental Response to WUTC Staff Data Request No. 185 are described below. The Attachments are the detailed files with confidential modeling supporting the analysis from the original response.

Attachment A - Portfolio Screening Model MS Excel spreadsheet calculating the portfolio cost for Colstrip shutdown in 2022 Business as Usual with CO2 tax.

Attachment B - Portfolio Screening Model MS Excel spreadsheet calculating the portfolio cost for Colstrip shutdown in 2022 with PSE as the sole operator and with CO2 tax.

Attachment C - Portfolio Screening Model MS Excel spreadsheet calculating the portfolio cost for Colstrip shutdown in 2017 with CO2 tax.

Attachment D - Portfolio Screening Model MS Excel spreadsheet calculating the portfolio cost for Colstrip shutdown in 2022 Business as Usual with No CO2 tax.

Attachment E - Portfolio Screening Model MS Excel spreadsheet calculating the portfolio cost for Colstrip shutdown in 2022 with PSE as the sole operator and with No CO2 tax.

Attachment F - Portfolio Screening Model MS Excel spreadsheet calculating the portfolio cost for Colstrip shutdown in 2017 with No CO2 tax.

Attachment G - input files for Colstrip Units 1 and 2 in 2017 shutdown.

Attachment H - input files for Colstrip Units 1 and 2 in 2022 shutdown.

Attachment I - input files for Colstrip Units 1 and 2 in 2022 shutdown with PSE as the sole operator.

Due to size, Attachments A-I to PSE's First Supplemental Response to WUTC Staff Data Request No. 185 are provided in electronic format only.

Designated Information is HIGHLY CONFIDENTIAL per Protective Order in WUTC Dockets UE-170033 and UG-170034 as marked in Attachments A-F to PSE's First Supplemental Response to WUTC Staff Data Request No. 185.

Designated Information is CONFIDENTIAL per Protective Order in WUTC Dockets UE-170033 and UG-170034 as marked in the Response and Attachments G-I to PSE's First Supplemental Response to WUTC Staff Data Request No. 185.

**ATTACHMENTS A-I to PSE's First
Supplemental Response to WUTC Staff
Data Request No. 185
are provided in electronic format only**