

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND)
TRANSPORTATION COMMISSION,) DOCKET UE-161123
)
Complainant,)
)
v.)
)
PUGET SOUND ENERGY)
)
Respondent.)
)
_____)

**EXHIBIT NO. BGM-3
COMPANY DATA RESPONSES**

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Docket UE-161123
Puget Sound Energy's
Schedule No. 451 Large Customer Retail Wheeling**

ICNU DATA REQUEST NO. 015

ICNU DATA REQUEST NO. 015:

Reference the Company's February 3rd, 2017 presentation to the 2017 Integrated Resource Plan ("IRP") Advisory Group: Please provide all presentation materials provided to the 2017 IRP Advisory Group in the referenced workshop.

Response:

Attached as Attachment A to Puget Sound Energy's ("PSE") Response to ICNU Data Request No. 015 is a copy of presentation materials provided to the 2017 Integrated Resource Planning Advisory Group ("IRPAG") meeting of February 3, 2017.

Attached as Attachment B to PSE's Response to ICNU Data Request No. 015 is a copy of a handout related to energy storage provided at the IRPAG meeting of February 3, 2017.

Attached as Attachment C to PSE's Response to ICNU Data Request No. 015 is a copy of a handout related to renewable resources provided at the IRPAG meeting of February 3, 2017.

Attached as Attachment D to PSE's Response to ICNU Data Request No. 015 is a copy of a handout related to thermal resources provided at the IRPAG meeting of February 3, 2017.

Attached as Attachment E to PSE's Response to ICNU Data Request No. 015 is a copy of a handout related to Montana wind resources provided at the IRPAG meeting of February 3, 2017.

2017 IRP Advisory Group



February 3, 2017 IRPAG

Resource Need & Resource Adequacy



February 3, 2017 IRPAG

Overview

- Resource Need
- Resource Adequacy Results
- Effective Load Carrying Capability (ELCC)
- Demand Response Planning



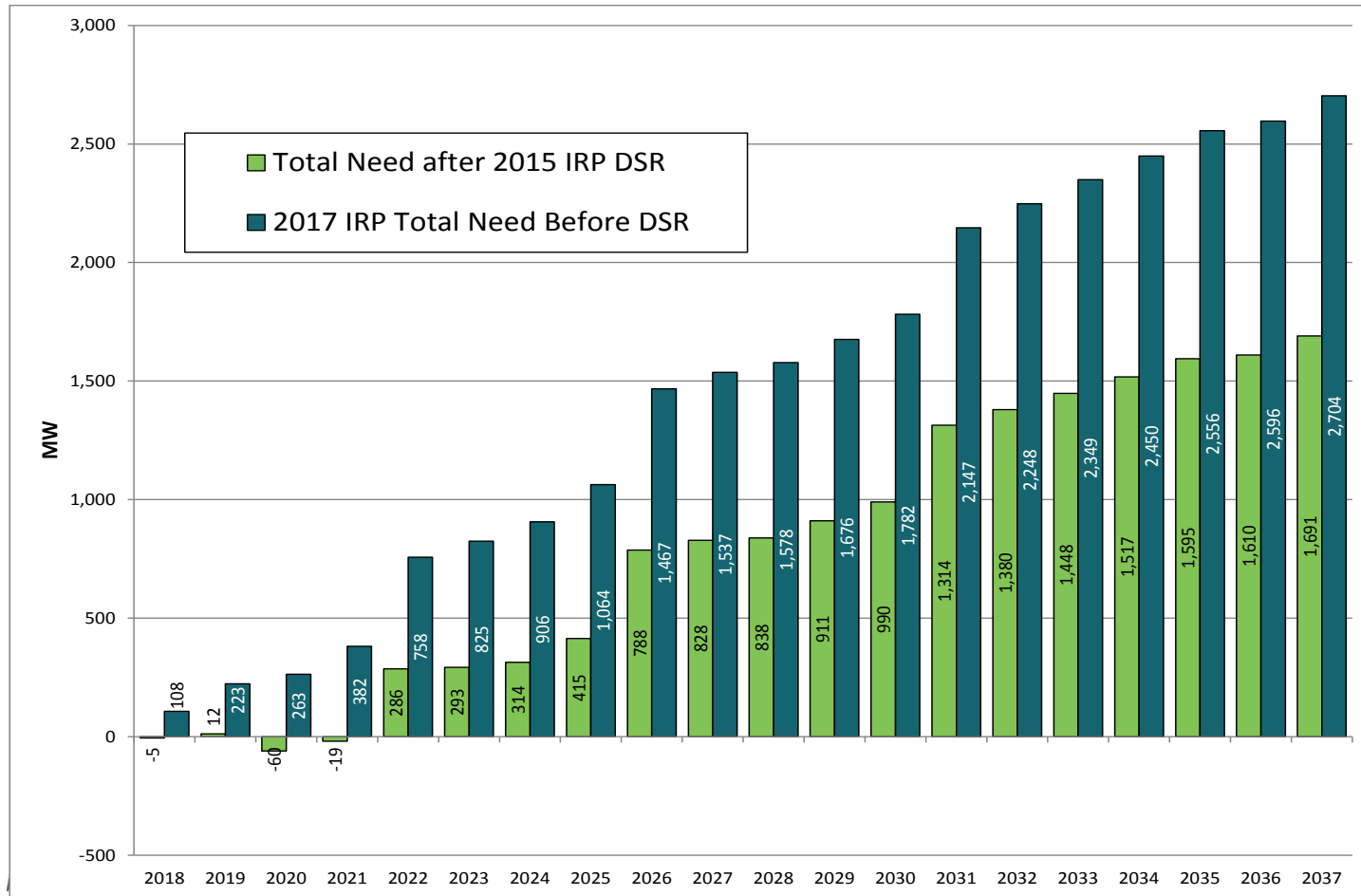
Calculating the Resource Need

	December 2020 w/ Colstrip 1&2
Peak Demand	5,227 MW
Planning Margin	13.6%
Normal Peak Load + PM	5,927 MW
Operating Reserves	408 MW
Total Capacity Need	6,334 MW
Total Resources (No DSR)	(4,357) MW
Available Mid-C Transmission	(1,722) MW
Total	256 MW
Operating reserves on new resources	8 MW
Total Resource Deficit/(surplus)*	263 MW

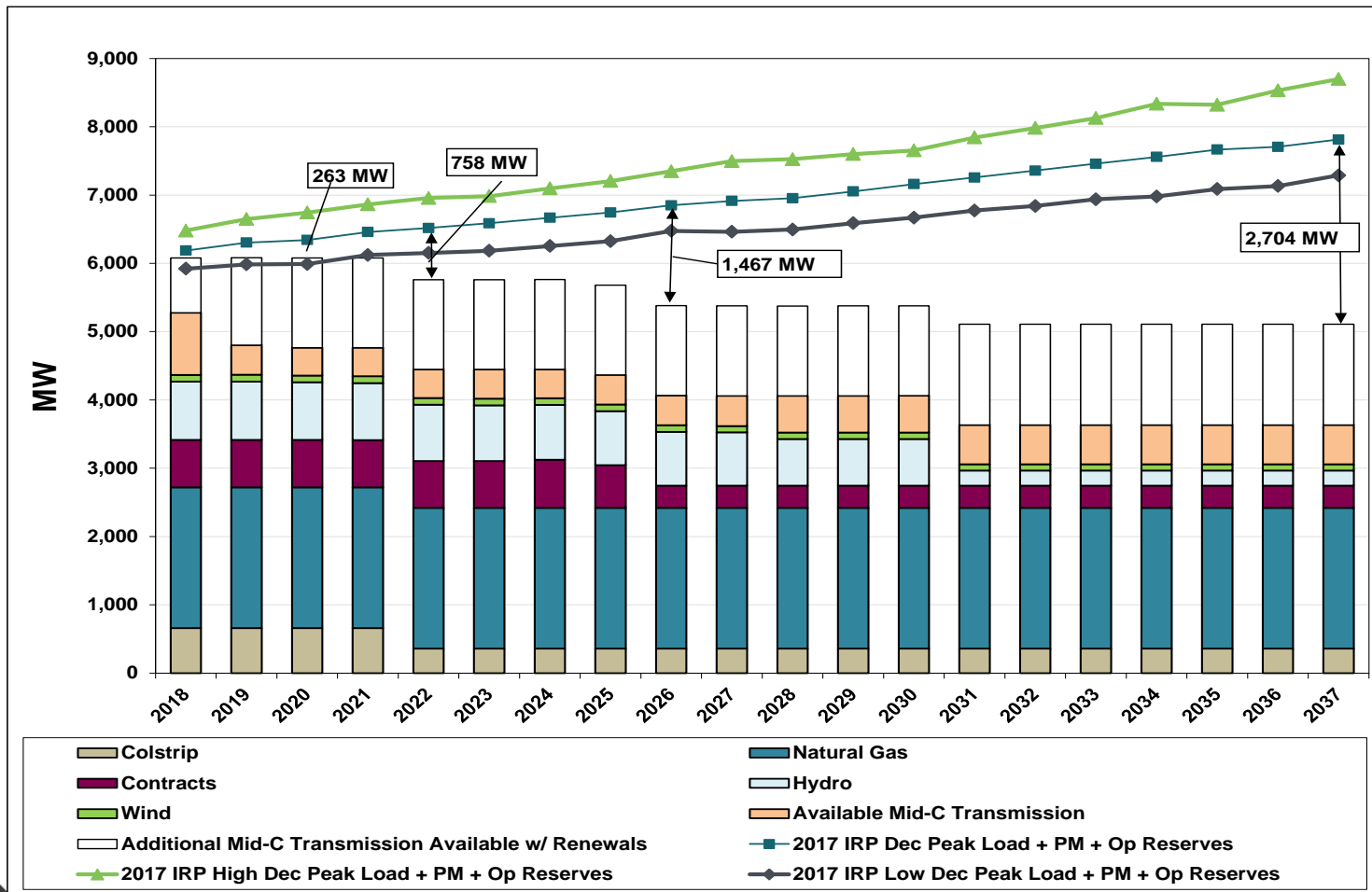
*Resource need before demand side resources (DSR)



December Peak Capacity Deficit/(Surplus)



2017 IRP Peak Hour Capacity Resource Need

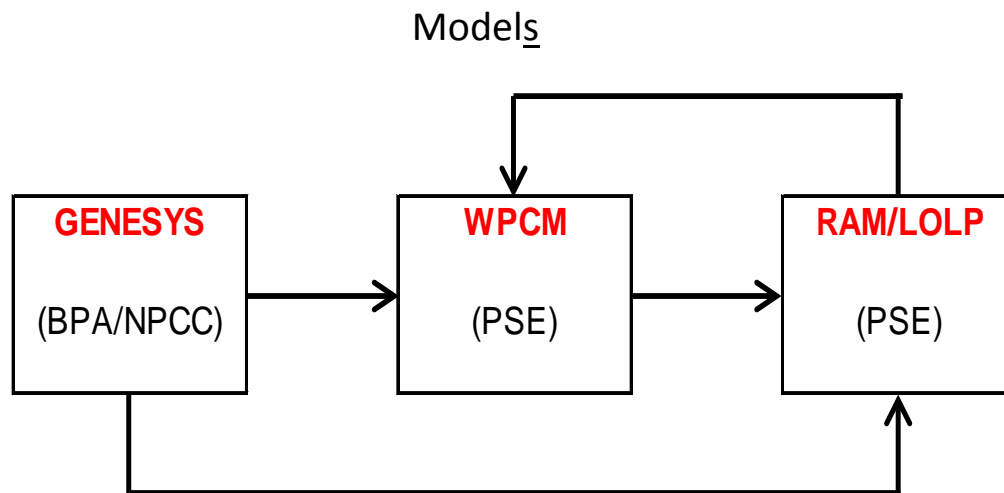
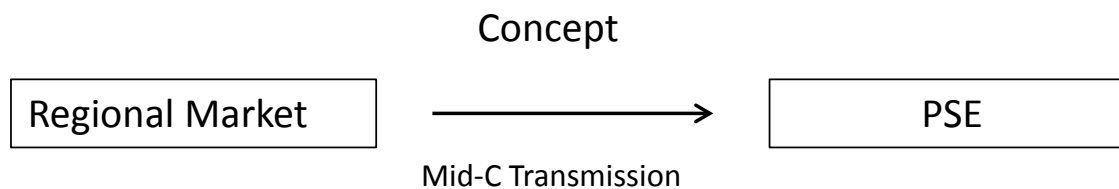


Overview

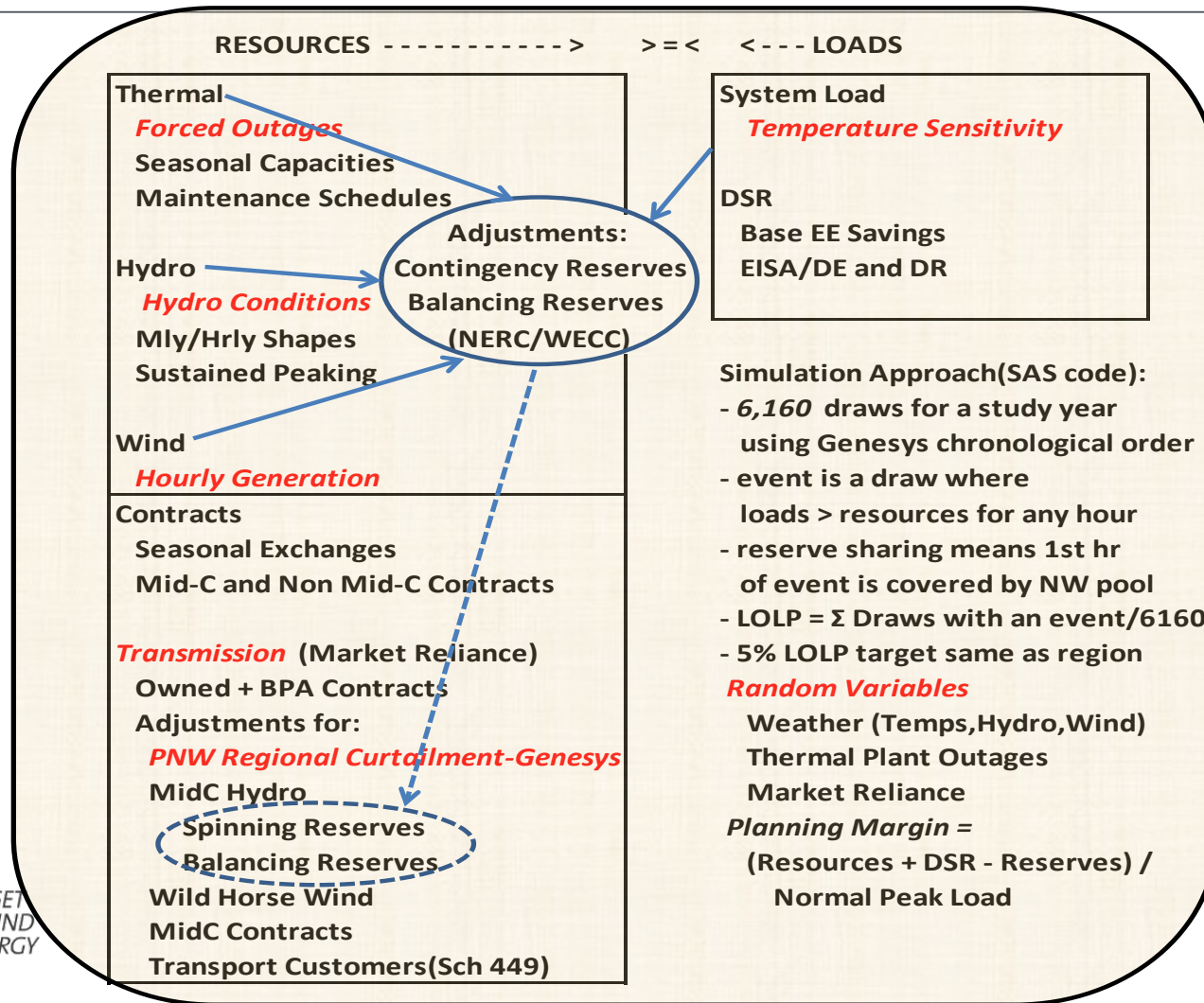
- Resource Need
- Resource Adequacy Results
- Effective Load Carrying Capability (ELCC)
- Demand Response Planning



Overview of Resource Adequacy Framework



PSE's Resource Adequacy Model



Input Updates to PSE's RAM

Input	Revisions
Loads	<p>F16 Load Forecasts</p> <p>Weather Variation – consistent with Genesys weather draws</p> <p>Economic Growth Variation; Modeling uncertainties/errors</p> <p>Includes EES Target through 2017 only, excludes incremental DSR</p>
PSE Thermals	Some additions to PSE existing gas plants capacities; Colstrip 1&2 out
Forced Outage Rate	Draws consistent with 5-year historical average (2011-2016)
Market Reliance	2016 Genesys version; SW Imports=3400; Grays Harbor In; Colstrip 1&2 out
Washington Wind	Draws based on actuals from 2012 forwards to ensure correlations for existing PSE fleet and generic LSR wind
Montana Wind	Draws include Martinsdale MET data(2006), and Judith Gap actuals(2006-2008) adjusted for Martinsdale capacity factors
Solar	Based on Wild Horse solar project actual data from 2007 to present, scaled to 50MWs
Hydro	No change as no published updates are available
Study Year	October 2020 to September 2021, consistent w/ Genesys

Consistent Treatment of Colstrip 1&2 in the Models

- In order to model resource adequacy consistently with the Northwest Power Planning Council, PSE needed to align the timing of Colstrip 1&2 retirement with Genesys modeling from the 2016 Resource Adequacy Study.
- Market reliance outputs based on Genesys model assumes that Colstrip 1&2 are retired for the study year 2020.
- PSE's Resource Adequacy Model also removes Colstrip 1&2 in 2020 in the PSE portfolio to align with the Genesys model.
- The actual planned retirement date for Colstrip 1&2 is no later than July 1, 2022.

Resource Adequacy Model Results for Oct-2020 to Sep-2021

	Revisions	Capacity Needed for 5% LOLP	Change
2015 IRP Base	Regional Markets: Genesys 2014 version, SW Imports=3500(+450); Carty 2=+440, Grays Harbor out = -650 2015 IRP Base Load Forecast w/ DSR	-116MW	
	Remove 2013 IRP DSR	525MW	+641
2017 IRP Updates	F16 Load Forecasts, No Incremental DSR	335MW	-190
	Update PSE Resource Capacities	300MW	-35
	Update existing PSE Wind Fleet Draws	300MW	0
	Remove Colstrip 1&2 from PSE portfolio, consistent with Genesys model	560MW	+230
	Regional Markets: Genesys 2016 version, SW Imports=3400, No Carty 2, Grays Harbor in, Colstrip 1&2 out in Genesys model	542MW	-18
	New Forced Outage Rate Draws for PSE Thermals	550MW	+8

Calculating the Resource Need

	December 2020 w/ Colstrip 1&2	December 2020 w/o Colstrip 1&2
Peak Demand	5,227 MW	5,227 MW
Planning Margin	13.6%	13.6%
Normal Peak Load + PM	5,927 MW	5,927 MW
Operating Reserves	408 MW	399 MW
Total Capacity Need	6,334 MW	6,325 MW
Total Resources (No DSR)	(4,357) MW	(4,058) MW
Available Mid-C Transmission	(1,722) MW	(1,717) MW
Total	256 MW	550 MW
Operating reserves on new resources	8 MW	17 MW
Total Resource Deficit/(surplus)*	263 MW	567 MW

*Resource need before demand side resources (DSR)



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ICNU DATA REQUEST NO. 017

ICNU DATA REQUEST NO. 017:

Reference the Company's February 3rd, 2017 presentation to the 2017 IRP Advisory Group: Please state whether the materials provided in the referenced workshop assumed Microsoft would continue to be served as a cost of service customer by the Company in the study period.

Response:

The materials provided by Puget Sound Energy ("PSE") to stakeholders at the 2017 Integrated Resource Planning Advisory Group ("IRPAG") meeting of February 3, 2017, assumed Microsoft would continue to be served as a cost of service customer in the study period.

Please see PSE's Response to ICNU Data Request No. 015 for copies of the materials provided by PSE to stakeholders at the 2017 IRPAG meeting of February 3, 2017.

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ICNU DATA REQUEST NO. 018

ICNU DATA REQUEST NO. 018:

Reference the Company's February 3rd, 2017 presentation to the 2017 IRP Advisory Group: Please recalculate the exit-fee presented in Exh. No. JAP-3C based on the resource need identified in the referenced workshop.

Response:

Puget Sound Energy ("PSE") will not recalculate the Power Supply Stranded Cost presented in the Second Exhibit to the Prefiled Direct Testimony of Jon A. Piliaris, Exhibit No. ____ (JAP-3C), based on the resource need identified in materials provided by PSE to stakeholders at the 2017 Integrated Resource Planning Advisory Group ("IRPAG") meeting of February 3, 2017, for the following reasons: (i) the 2017 Integrated Resource Plan (the "2017 IRP") analysis is still in progress, the final resource need has not been determined, and the final PSE 2017 IRP has not been filed with the Commission; and (ii) PSE has not performed this requested analysis and does not have it available.

PSE remains committed to working with the Industrial Customers of Northwest Utilities and other parties to produce data that will help them facilitate their review of this filing.