

**EXHIBIT NO. \_\_ (TAD-5HC)  
DOCKET NO. UE-13 \_\_\_\_  
2013 PSE PCORC  
WITNESS: TOM A. DEBOER**

**BEFORE THE  
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**PUGET SOUND ENERGY, INC.,**

**Respondent.**

**Docket No. UE-13 \_\_\_\_**

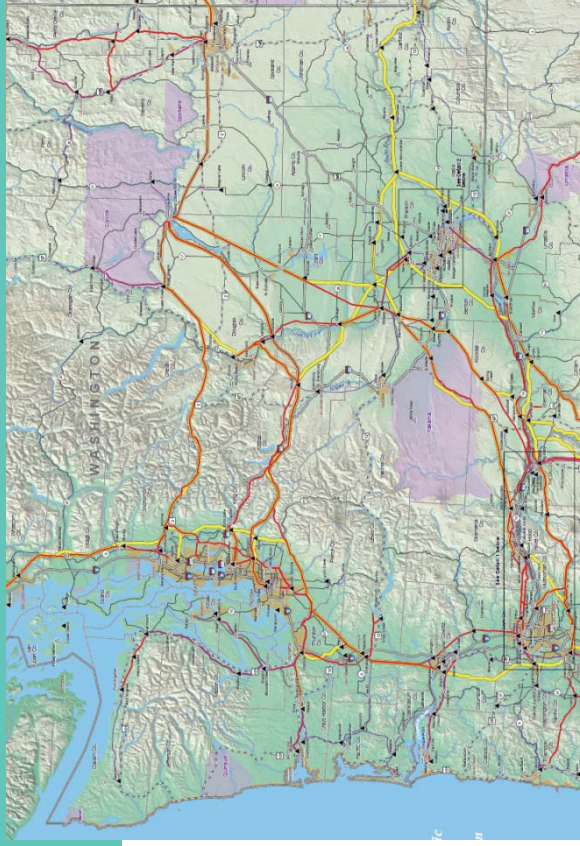
**FOURTH EXHIBIT (HIGHLY CONFIDENTIAL) TO THE  
PREFILED DIRECT TESTIMONY OF  
TOM A. DEBOER  
ON BEHALF OF PUGET SOUND ENERGY, INC.**

**REDACTED  
VERSION**

**APRIL 25, 2013**

# 2013 BPA Transmission Contract Renewals

EMC Decision Presentation



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February 21, 2013



# Overview

- Background
- Recommendation
- Support for Recommendation
  - Existing Resource/Load Transmission
  - PG&E Exchange Transmission
  - Mid-C Transmission
- Decision Items

## Background

- 2011 WUTC GRC Final Order: PSE is expected to provide for any renewal or acquisition of firm transmission “a full and detailed justification showing the prudence of this expense if the Company expects to continue to recover it in rates.”
- Transmission contract prudence is justified with qualitative and quantitative analysis consistent with IRP and RFP processes
- All BPA transmission contracts are renewed for the minimum term of 5 years to retain renewal rights and allow flexibility to reevaluate transmission need
- Mid-C transmission in excess of PSE’s Mid-C resource capacity is considered from a portfolio approach as it is not tied to specific projects
- Resource specific transmission will be renewed to allow for continued delivery of the resource not to exceed the estimated resource life or term of power purchase agreement

# Recommendation

- Renew Existing Resource/Load Transmission
  - Goldendale 27 MW
  - Colstrip 663 MW
  - Clymer Load 4 MW
- Renew PG&E Exchange Transmission
  - 300 MW renewal
  - 300 MW new contract
- Renew 35 of 150 MW Mid-C Transmission
  - Defer decision on 115 MW Mid-C Transmission

# Existing Resource/Load Transmission

## **RECOMMENDATION:** *Renew all existing resource/load transmission*

- Goldendale 27 MW is for an existing thermal resource and should be renewed through 3/1/2019 (5 yrs) to allow for continued delivery of 277 MW Goldendale Generating Station
- Colstrip 663 MW is for an existing thermal resource and should be renewed through 8/1/2019 (5 yrs) to allow for continued delivery of 663 MW Colstrip
- Clymer 4 MW is necessary for transmission service to a remote PSE load and should be renewed for 5 years. There are currently no near term (5 years or less) alternatives to BPA transmission service

*Note: Based on the draft 2013 IRP, Goldendale and Colstrip 1& 2 are expected to have resource lives beyond 2019.*

# PG&E Exchange Transmission

**RECOMMENDATION:** Renew PG&E Exchange transmission

Need: PSE relies on PG&E Exchange for meeting its current and future capacity need

	2014	2015	2016	2017	2018	2019
Total Surplus/(Need) Base						
2013 IRP Draft	123	136	95	(22)	(71)	(114)
2013 IRP w/out PG&E Exchange Transmission	(177)	(164)	(205)	(322)	(371)	(414)

Note: Assumes BPA transmission renewals in future years

# PG&E Exchange Transmission

## Key Considerations:

- 300 MW bidirectional Integration-of-Resources (IR) transmission contract expiring August 2014, renewal must be replaced with FERC Open Access Transmission Tariff (OATT) based unidirectional Point-to-Point (PTP) equivalent
- Renewal results in an additional 300 MW transmission contract, doubling the cost
- 5 year rolling termination for contract
- PG&E exchange contract requires firm transmission
- Opportunity cost of PSE Southern Intertie transmission sales
- Capacity and shaping characteristics of the exchange agreement



# PG&E Exchange Transmission

## Analysis Results:

- Even with higher transmission costs, PG&E exchange is a least cost resource as compared to 2011 RFP resources
- Low cost, flexible and reliable resource to meet long-term capacity need
- California resource provides portfolio diversity

# Mid-C Transmission Renewals – 150 MW

**RECOMMENDATION:** Renew 35 MW and defer decision on 115 MW

Need: With 35 MW renewal, PSE will have a remaining capacity need of 20MW in 2016

Total Surplus/(Need) Base	2014	2015	2016	2017	2018	2019	2020	2021	2022
2013 IRP Draft	123	136	95	(22)	(71)	(114)	(115)	(163)	(229)
2013 IRP w/out 35 MW	88	101	60	(57)	(106)	(149)	(150)	(198)	(264)
2013 IRP w/out 115 MW	8	21	(20)	(137)	(186)	(229)	(230)	(278)	(344)
2013 IRP w/out 150 MW	(27)	(14)	(55)	(172)	(221)	(264)	(265)	(313)	(379)

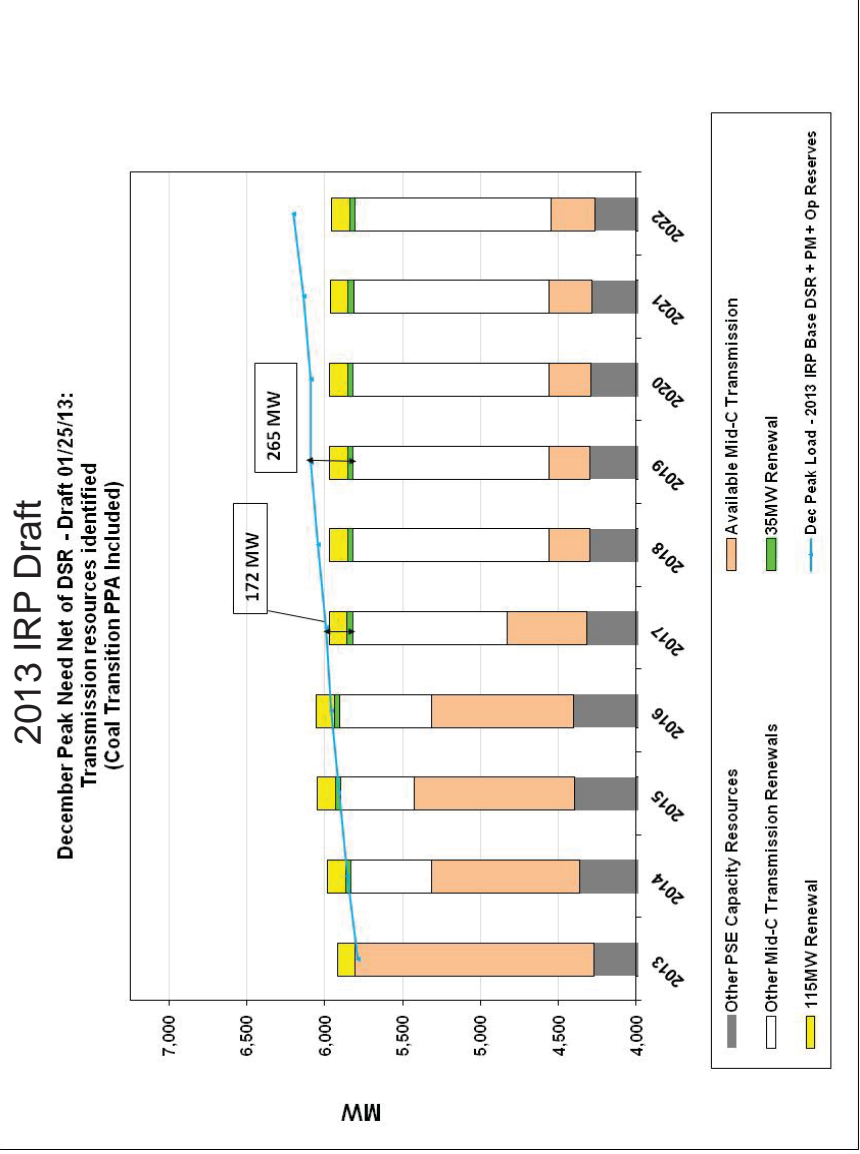
Note: Assumes BPA transmission renewals in future years



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# Mid-C Transmission Renewals – 150 MW

- Transmission renewals create surplus until 2017
- Today BPA does not have transmission available for 2017
- How much should PSE rely on the Mid-C market?



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# Mid-C Transmission Renewals – 150 MW

## Key Considerations:

- PSE has a near-term capacity surplus with transmission renewals
- Mid-C contracts are renewed for 5 years to maintain rollover rights
- Transmission can be renewed for an equal or lesser capacity
- There may be an opportunity to acquire new Mid-C transmission in future, but availability, timing and volumes are uncertain with current BPA queue
- PSE relies on more than 1,600 MW of Mid-C market purchases
- Northwest Planning and Conservation Council forecast says the region may not have adequate winter capacity starting 2017
- Mid-C transmission renewals are periodic
- Next Mid-C transmission renewal option in Fall 2013 for 514 MW starting Fall 2014

# Mid-C Transmission Renewals – 150 MW

## Analysis Results:

- At a minimum PSE has an immediate capacity need for the 35 MW Mid-C contract
- PSE needs the full 150 MW by 2017
- Renewing now avoids risk of not being able to secure BPA transmission when needed
- Low capacity cost and minimizes risk in meeting capacity need in 2017
- Renewing 35 MW now and continuing analysis allows PSE time to consider changes to:
  - BPA transmission queue
  - 2013 IRP
  - Regional resource adequacy

# Decision Items

- Renew Existing Resource/Load Transmission
  - Goldendale 27 MW
  - Colstrip 663 MW
  - Clymer Load 4 MW
- Renew and Acquire PG&E Exchange Transmission
  - 300 MW renewal
  - 300 MW new contract
- Renew 35 MW Mid-C Transmission
- Defer decision on 115 MW Mid-C Transmission

# Appendix



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# 2013 BPA Transmission Renewals for PCORC

- This decision presentation covers only 2013 transmission renewals impacting the 2013 PCORC rate period (September 2013 – August 2014)
- Renewals outside of rate period will be analyzed summer/fall 2013

Resource	Renewal Deadline	Start Date	Capacity	5 yr Renewal (\$M) ***
Mid-C	2/28/2013	3/1/2014	35	\$4
Mid-C*	7/31/2013	10/1/2013	115	\$13
PG&E Exchange**	7/31/2013	8/1/2014	300	\$35
PG&E Exchange**	7/31/2013	8/1/2014	300	\$35
Clymer	7/31/2013	8/1/2014	4	\$1
Goldendale	2/28/2013	3/1/2014	27	\$3
Colstrip	7/31/2013	8/1/2014	663	\$77
<b>Total:</b>			<b>1658</b>	<b>\$166</b>

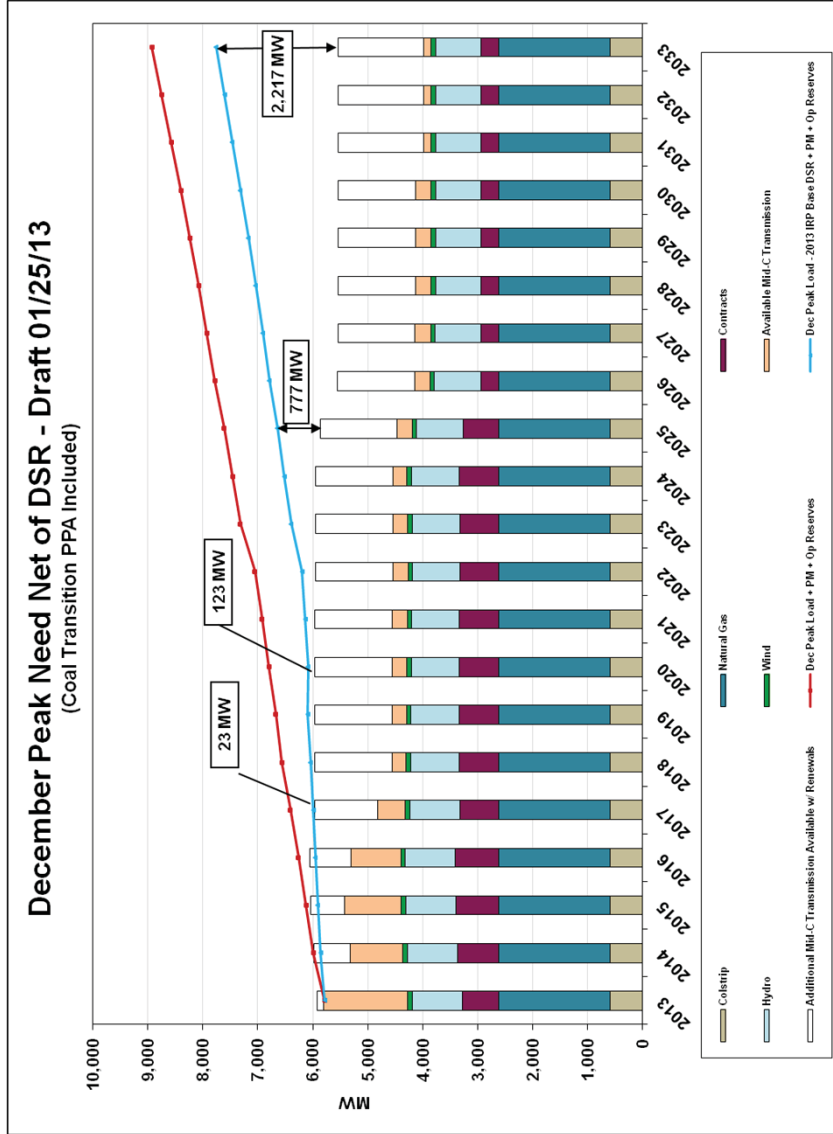
\*60 day renewal provision

\*\* Renewal of IR transmission into two PTP contracts

\*\*\* Nominal BPA fixed cost estimate based on FY 14-15 rate case initial proposal and 6.28% historical average rate increase for subsequent rate periods



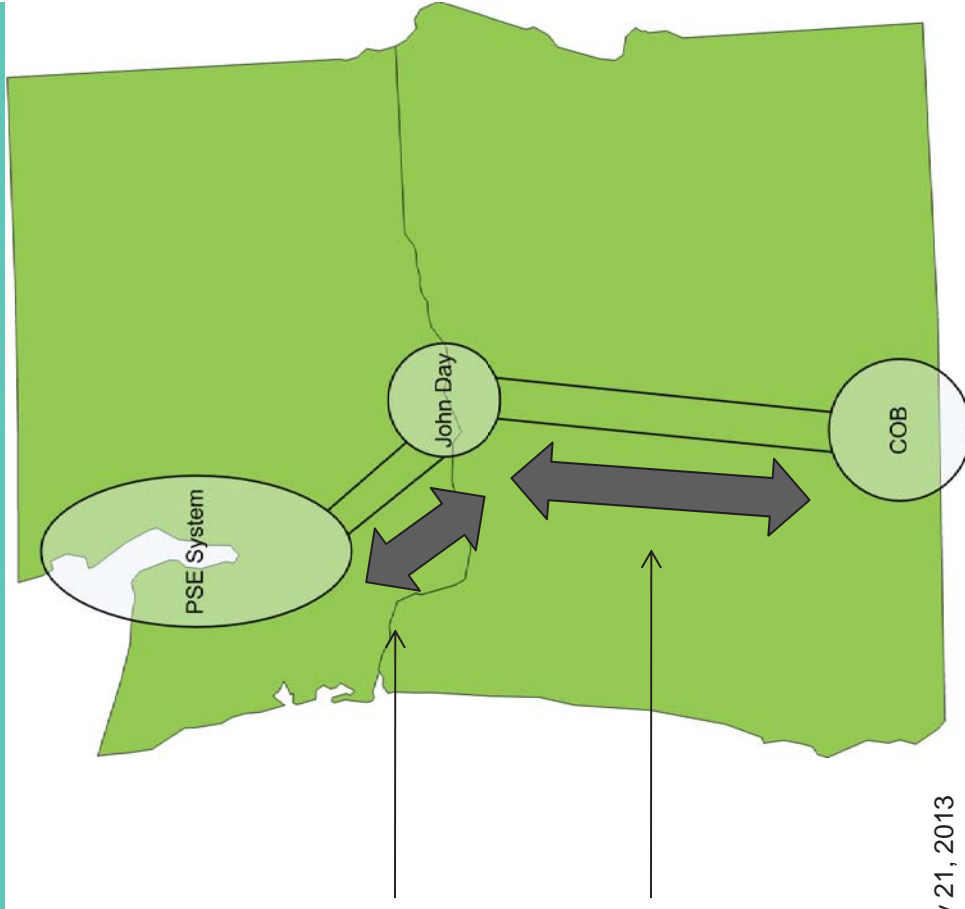
# 2013 IRP Draft Need Chart



Note: 2013 is included to show current transmission contract renewals  
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## PG&E Exchange Background

- 300 MW BPA IR Network yearly transmission grandfathered as bidirectional through July 31, 2014
- 300 MW PSE Southern Intertie monthly transmission grandfathered as bidirectional until the Exchange terminated or modified to OATT based service



# PG&E contract review analysis results

- \$264 million portfolio benefit in 2013 IRP Base scenario
- Selected in 4 of 4 2013 IRP scenarios
- Estimated opportunity cost of PSE Southern Intertie transmission based on 2010 sales is \$3.4 million per year (not included in quantitative results but only \$11 \$/kW-year capacity cost)

	2013 IRP Base	
	PG&E Exchange Expires in 2019	20 Year PG&E Exchange
Peaker Capacity ( years built to meet need before 2020)	206 MW (2017) & 206 MW (2019)	206 MW (2017)
Portfolio Cost (\$000)	\$ 12,582,908	\$ 12,319,090
Cost / (Benefit) compared to PG&E Exchange Expiring in 2019	\$ -	\$ (263,818)

# Transmission and 2011 RFP cost comparison

- Transmission contracts are relatively cost-effective compared to RFP resources and have potential long-term benefits if PSE can rely on 1,600 MW of Mid-C market

Annual Capacity Cost (\$/kW-yr) <sup>1</sup>	2014	2015	2016	2017	2018	2019	2020	2021
35 and 115 MW	■	■	■	■	■	■	■	■
PG&E Exchange (1 wheel tx, not an option)	■	■	■	■	■	■	■	■
PG&E Exchange (2 wheels tx) <sup>2</sup>	■	■	■	■	■	■	■	■
Coal Transition PPA <sup>3</sup>	■	■	■	■	■	■	■	■
Ferndale Ownership	■	■	■	■	■	■	■	■
Generic Peaker- 2017	■	■	■	■	■	■	■	■
Notes:	NA	NA	NA	■	■	■	■	■

1) Capacity cost is the same as the net cost metric; results presented are based on 2013 IRP Base scenario only for full year's cost

2) Excludes ~ \$11/kW-yr PSE Southern Intertie opportunity cost; includes 2 transmission wheels

3) Equity return based on PSE's as filed request in UE-121373

4)



# Mid-C Transmission renewals analysis

- Will PSE build a peaker in 2017 or should PSE rely on short-term contracts to meet need?
- 2011 RFP Shortlist contract extension may provide opportunity to defer 35MW of 150MW Mid-C transmission to 2019

Resource Options	2013 IRP Base				Case 4: With 2011 RFP alternative (Manual)
	Optimized*	Case 2*: 2014 35 MW Renewal Forced in (Optimized)	Case 3*: Allow Minimal Short (Manual)	Case 4: With 2011 RFP alternative (Manual)	
2014 115 MW Tx Renewal	X	X	-	X	
2018 115 MW New Tx Available	-	-	-	-	
2019 115 MW New Tx Available	-	-	-	-	
2020 115 MW New Tx Available	-	-	-	-	
2021 115 MW New Tx Available	-	-	X	-	
2014 35 MW New Tx Available	-	X	X	-	
2018 35 MW New Tx Available	-	-	-	-	
2019 35 MW New Tx Available	-	-	-	X	
2020 35 MW New Tx Available	-	-	-	-	
2021 35 MW New Tx Available	X	-	-	-	
<b>2011 RFP 100 MW 2016-2020 Short-list resource</b>				X	
Peaker Capacity (1st year built to meet need)	206 MW (2017)	206 MW (2017)	206 MW (2017)	206 MW (2021)	
Portfolio Cost (\$000)	\$ 11,904,046	\$ 11,908,740	\$ 11,864,482	\$ 11,812,635	
Cost / (Benefit) compared to All Optimized	\$ -	\$ 4,694	\$ (39,514)	\$ (91,411)	
			<b>Years &amp; MW</b>	<b>Portfolio is short</b>	
			20 MW - 2016	13 MW - 2018	
			23 MW - 2019	21 MW - 2019	
			24 MW - 2020	22 MW - 2020	
			11 MW - 2022	11 MW - 2022	
				25 MW - 2027	

\* Does not include potential acquisition opportunities

Least cost and risk?



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# BPA Transmission Risks

## BPA Transmission Projects on West of Cascades North

- There are two transmission projects planned between 2014 and 2018 that could increase capacity on the West of Cascades North flowgate:
  - Shunt capacitors planned for a 2014 energization at BPA's Monroe 500kV substation are expected to provide approximately 300 – 400MW of additional capacity to WOCN.
  - Series capacitors on BPA's Schultz – Raver 500kV #3 & #4 lines are expected to bring between 200 – 300MW additional AFC to WOCN by a stated 2017/2018 timeframe.
- The dates listed above are based on planned BPA transmission projects in-service dates; however, there is a possibility that these projects could be delayed, reducing the amount of capacity available to grant new transmission requests