

**EXH. PKW-36C  
DOCKET UE-200980  
2020 PSE PCORC  
WITNESS: PAUL K. WETHERBEE**

**BEFORE THE  
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**PUGET SOUND ENERGY,**

**Respondent**

**Docket UE-200980**

**ELEVENTH EXHIBIT TO THE PREFILED SUPPLEMENTAL DIRECT  
TESTIMONY (CONFIDENTIAL) OF**

**PAUL K. WETHERBEE**

**ON BEHALF OF PUGET SOUND ENERGY**

**REDACTED  
VERSION**

**FEBRUARY 2, 2021**

Puget Sound Energy  
 Distillate Fuel Incremental Costs  
 2020 PCORC Supplemental

Shaded information is designated as confidential per Protective Order in Docket UE-200980

	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	2020 PCORC Supplemental	2020 PCORC Initial Filing	Increase/ (Decrease)
Frederickson 1 & 2	\$0	\$0	\$0	\$0	\$0	\$31,685	\$31,685	\$31,685	\$31,685	\$31,685	\$0	\$0	\$158,424	\$159,136	(\$712)
Fredonia 1 & 2	\$0	\$0	\$0	\$0	\$0	\$47,929	\$47,929	\$47,929	\$47,929	\$47,929	\$0	\$0	\$239,647	\$249,504	(\$9,857)
Fredonia 3 & 4	\$0	\$0	\$0	\$0	\$0	\$21,728	\$21,728	\$21,728	\$21,728	\$21,728	\$0	\$0	\$108,640	\$113,108	(\$4,469)
Ferndale	\$0	\$0	\$0	\$0	\$0	\$48,175	\$48,175	\$48,175	\$48,175	\$48,175	\$0	\$0	\$240,873	\$240,760	\$113
Whitehorn 2 & 3	\$0	\$0	\$0	\$0	\$0	\$31,463	\$31,463	\$31,463	\$31,463	\$31,463	\$0	\$0	\$157,313	\$155,450	\$1,863
Encogen	\$0	\$0	\$0	\$0	\$0	\$10,036	\$10,036	\$10,036	\$10,036	\$10,036	\$0	\$0	\$50,179	\$50,014	\$165
Crystal mountain	\$3,599	\$3,599	\$3,599	\$3,599	\$3,599	\$3,599	\$3,599	\$3,599	\$3,599	\$3,599	\$3,599	\$3,599	\$43,184	\$39,671	\$3,513
<b>Total</b>	<b>\$3,599</b>	<b>\$3,599</b>	<b>\$3,599</b>	<b>\$3,599</b>	<b>\$3,599</b>	<b>\$194,614</b>	<b>\$194,614</b>	<b>\$194,614</b>	<b>\$194,614</b>	<b>\$194,614</b>	<b>\$3,599</b>	<b>\$3,599</b>	<b>\$998,258</b>	<b>\$1,007,643</b>	<b>(\$9,385)</b>
MWHS															
Aurora Mid C price															
Value of energy	\$252	\$411	\$485	\$490	\$463	\$28,066	\$33,931	\$35,313	\$34,594	\$26,037	\$325	\$210	\$160,577	\$154,619	\$5,959
Net cost total	\$3,347	\$3,188	\$3,113	\$3,109	\$3,136	\$166,547	\$160,682	\$159,300	\$160,020	\$168,576	\$3,274	\$3,388	\$837,681	\$853,024	-\$15,343

Oil for Crystal mountain generator - reliability operations over a 3 yr. period (not modeled in AURORA)

Capacity (MW)	Heat rate on Oil (Btu/KWh)	Oil inventory (\$/gal)	Gallons burnt per hour (gal)	BTU content of #2 Fuel oil (Btu/gal)	Historical run profile (MWh)	Gallons per year (gal)	Oil need (gal)	Oil Cost @ market (\$)	New cost of oil inventory (\$/gal)	Cost of Oil (\$)
2					211					\$43,184

Oil for testing - Calculated oil cost for 5hr compliance and reliability testing

Capacity (MW)	Heat rate on Oil (Btu/KWh)	Oil inventory (\$/gal)	Gallons burnt per hour (gal)	BTU content of #2 Fuel oil (Btu/gal)	Testing hours (hrs)	Gallons per year (gal)	Cost of Oil (\$)
148				140,000	5		\$158,424
208				140,000	5		\$239,647
108				140,000	5		\$108,640
271				140,000	5		\$240,873
148				140,000	5		\$157,313
166				140,000	5		\$50,179
<b>Total</b>							<b>\$955,074</b>

\*Heat rate on oil is derived from gallon per minute diesel burn rates from simple cycle plant data. The combined cycles use their natural gas heat rates.

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Adequate oil supply to cover winter reliability - 48 hr supply (Incremental oil purchases are rolled into inventory cost)

Capacity (MW)	Heat rate on Oil (Btu/KWh)	Oil inventory (\$/gal)	Gallons burnt per hour (gal)	BTU content of #2 Fuel oil (Btu/gallons)	Reliability run (hrs)	48hr reliability run (gal)	*Minimum fill level 1'6" from tank base (gal)	Sufficiency test 5hrs + 48hr exceed	Oil need (gal)	Oil Cost @ market (\$)	New cost of oil inventory (\$/gal)
148				140,000	48		83,202	Yes	(27,986)	\$62,493	
208				140,000	48		147,588	No	11,228	(\$25,072)	
108				140,000	48		147,588	No	11,228	(\$25,072)	
245				140,000	48		60,000	No	-	\$0	
148				140,000	48		23,184	No	3,408	(\$7,610)	
165				140,000	48		18,774	Yes	(140,206)	\$313,081	
<b>Total</b>											

\*Minimum fill level 1'6" is the minimum measure that diesel can be extracted to from each tank until mandatory refill must take place

**SUMMARY OF OIL INVENTORY  
12/31/2020**

Gallons	Price	Amount	SAP Account
Crystal Mountain			15100061
Encogen			15111001
Ferdale			15100271
Frederickson			15100091
Fredonia			15100101
Whitehorn			15100081
Books			

Fair Market value (base price) #2 Fuel oil 15- PPM Sulfur Dyed  
With taxes & fees: average 10%

Rate year: June 2021 through May 2022  
Gas price date: 1/12/2021

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