M E M O R A N D U M **Date 2/24/2023**

TO: Rich Wallen, General Manager/Chief Executive Officer

VIA: Dave Churchman, Chief Customer Officer

FROM: Louis Szablya, Senior Manager, Large Power Solutions
Kim Becht, LPS Specialist Kim Becht
Baxter Gillette, Solutions Manager BAG

SUBJECT: Demand Response Arrangement for January 2023

Purpose: To provide the Commission an overview of a customer arrangement and benefits

Discussion:
In January, electric wholesale power prices at Mid-Columbia were very high as were natural gas prices at Sumas (British-Columbia-Washington state border near Blaine, WA).

A Rate Schedule 16 food processor near Moses Lake uses 2 dryers in their process that can operate on either electricity or natural gas (gas). The price they pay for gas changes penny for penny with changes in the daily spot gas Sumas Index. The customer was restarting their operations at the beginning of January 2023 after their holiday shutdown and noted the Sumas Index had increased to the point where the customer's gas costs would exceed their cost to operate on electricity.

On January 5th, 2023, the customer contacted Grant PUD's Large Power Solutions (LPS) team providing notice they were going to switch their dryers from gas to electric as they had done in the Winter of 2018-2019. LPS asked the customer if they would be willing to continue using gas if Grant PUD kept them whole compared to using electricity under Rate Schedule 16. LPS also asked the customer if they would be willing to hold off switching to electricity while LPS performed a preliminary economic analysis to determine if the arrangement provided sufficient mutual benefits.

Justification:
LPS quickly determined it was beneficial to both parties for Grant PUD to keep the customer financially whole if they remained on gas and proposed providing a billing credit equal to the difference between the customer's gas costs and the amount the customer would have paid to Grant PUD had they switched to electricity.

Financial Considerations:
The customer was willing to participate in this arrangement if they are kept indifferent as described below:

Daily Electric Cost + Daily Reimbursement Value = Burner Tip Gas Cost

The daily difference between the incremental cost of operating on gas and electricity was calculated using a detailed model. The resulting settlement equations is:

[(Daily Sumas Gas Index - $0.88/MMBtu) x Daily Gas Volume] + (Daily Electric Cost) = Daily Gas Cost

Which reduces to:

Billing Credit = (Daily Sumas Gas Index - $0.88/MMBtu) x Daily Gas Volume

Electric volumes for settlement were determined using historical actual consumption information from the last time they operated on electricity. The detailed analysis determined the dryer load to be 2.8 MW demand and 63 MWh/day per dryer (95% LF). The electric costs were based on the day the customer would have switched, January 6th. The gas volumes were based on actual historical performance of the dryers at 170 MMBtu/day and is directly proportional to the number of hours they operate each day.

The amount of the reimbursement is calculated daily and summed for the period, January 6th – January 31st, 2023, and will appear as a billing credit on the customer's regular monthly bill. If the billing credits exceed the current month's electricity charges, the remaining billing credits shall be applied to the following month until the entire billing credit is consumed.

The overall value of the arrangement for the period 1/6 – 1/31/2023 is summarized below:

Item	Volume	Amount
Wholesale Value	3,276 MWh	$464,228
Lost Retail Revenue	3,276 MWh	$(91,184)
Billing Credit	8,840 MMBtu	$(108,596)
Net GCPUD Benefit		$264,447

Benefit to the District is the avoided power supply expense in excess of the reimbursement or $264,447

Contract Specifics:

We could not identify any documentation that clearly articulates the process to execute deals such as this. To facilitate development of an efficient and effective process with clear controls and designated authority, staff is working on three related efforts:

1) modify the customer service policy to reflect that the PUD may engage with customers on demand response arrangements (currently in front of Commission for review),
2) clarify demand response roles and authority in the Risk Management Policy, and
3) identify and evaluate appropriate mechanism(s) and/or instrument(s), for future Demand Response Arrangements including form agreements, rate schedules, riders, or other commission action(s) support Demand Response transactions.

Staff anticipates all of these to be implemented prior to June 1st to facilitate demand response transactions potentially occurring in June of 2023.

Recommendation:

This memorandum is provided to provide the background for your conversation with the Commission.

Legal Review: None required.