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VIA ELECTRONIC FILING

David W. Danner, Executive Director & Secretary
Washington Utilities and Transportation Commission
1300 S Evergreen Park Drive SW
Post Office Box 47250
Olympia, Washington 98504-7250

Re: UG-121207 - NW Natural's Responses to the Request for Information

Dear Mr. Danner:

Northwest Natural Gas Company, dba NW Natural (NW Natural or the Company), hereby submits responses to the Washington Utilities and Transportation Commission (WUTC or Commission) request for avoided cost methodology, total resource cost test methodology, and the utility cost test methodology.

WUTC's requests are stated below followed by the Company's responses:

WUTC Request
Please send spreadsheets, definitions of input, sources of data and all supporting documents Northwest Natural uses or relies on to calculate its natural gas conservation avoided cost.

NW Natural Response:
NW Natural's avoided cost is determined as described in Chapter 6 of its 2011 Modified IRP filed in Docket UG-100245. The Company does not calculate its avoided cost using spreadsheets. Rather, avoided costs are developed using SENDOUT, which is the Company's Integrated Resource Planning (IRP) modeling software. SENDOUT models and generates a forecast of annual marginal costs over twenty years for the Company's Preferred Portfolio of supply side resources that are sufficient to meet the Company's forecasted load requirements based on the growth and usage assumptions forecast in the IRP process. The inputs and sources of data for the marginal cost are discussed with the Company's IRP Technical Working Group and are then presented in the text of the IRP. Costs for Demand Side Management are

not included in the marginal cost calculation. The Company takes the output from SENDOUT and adds 10% for non-quantifiable environmental benefits as well as known costs, if any. In the Company's 2011 Modified IRP, the Company included a cost for carbon in its forecast. A carbon adder will not be included in the Company's 2013 IRP since it appears that no viable carbon legislation is currently under consideration.

As stated in the Company's comments filed on August 31, 2012, the Company's avoided cost includes the following components:

- The long term gas price forecast compiled from Intercontinental Exchange (ICE) futures and a consultant's gas price forecast;
- Gas storage carrying costs for inventory;
- Upstream variable transmission costs;
- Peak related on-system transmission costs; and
- A 10% adder for unidentified environmental benefits, as recommended by the Northwest Power and Conservation Council ("NWPCC")

WUTC Request
Please send spreadsheets, definitions of input, sources of data and all supporting documents Northwest Natural uses or relies on to calculate its Utility and Total Resource Cost tests.

NW Natural Response:
The Company annually applies the Utility Resource Cost Test and the Total Resource Test to its portfolio in accordance with Schedule G which defines these tests as follows:

> **COST-EFFECTIVE STANDARD**
>
> The portfolio of programs offered through the Energy Trust will be deemed cost-effective if the program meets the following Benefit Cost Ratio (BCR) tests: 1) Total Resource Cost (TRC) test; and 2) the Utility Cost (UC) test. The program is cost-effective when the end value for each of the following test is greater than one (1):

1) Total Resource Cost (TRC) looks at the total benefits attributable to the program divided by the total program costs. A TRC value equal to or greater than one means the benefits are equal to or exceed the costs, and the program is cost-effective.

   TRC is expressed formulaically as follows:
   TRC = Present Value of Benefits / Present Value of Costs

   The Present Value of Benefits includes
   1. The value of gas energy saved based on the Company's avoided costs as established in its most current Integrated Resource Plan (IRP).

2. Non-energy benefits as quantified by a reasonable and practical method and described in situations where they cannot practically be quantified.
3. The 10% credit for energy efficiency as required under the Northwest Power Act.[1] This credit recognizes the benefits of conservation in addressing risk and uncertainty.
4. A credit for carbon as defined in the most current version of the Northwest Power and Conservation Planning Council's (NWPPC) Conservation Plan.[2]

The Present Value of Costs includes:
1. Incentives paid to the participant
2. Administrative costs
3. Monitoring, evaluation and non-incentive costs of Program Management Contractors (PMCs) and Energy Trust staff
4. The participant's remaining out-of-pocket costs for the installed cost of the measures after incentives and Federal tax credits.

2. Utility Cost (UC) measures the present value of the energy savings divided by the net costs incurred by the program, including incentive costs and excluding any net costs incurred by the participant. The UC is expressed with the same formula as the TRC but Present Value of Benefits and Present Value of Costs are defined as follows:

   The Present Value of Benefits includes
   1. The value of gas energy saved based on the Company's avoided costs as established in its most current IRP.
   2. The 10% credit for energy efficiency as required under the Northwest Power Act. This credit recognizes the benefits of conservation in addressing risk and uncertainty.[1]
   3. A credit for carbon as defined in the most current version of the Northwest Power and Conservation Planning Council's (NWPPC) Conservation Plan.[2]

   The Present Value of Costs includes:
   1. Incentives paid to the participant
   2. Administrative costs
   3. Monitoring, evaluation and non-incentive costs of PMCs and Energy Trust staff

Natural gas capacity benefits as well as lost and unaccounted for gas will not be included in the calculation except to the extent that they are included in NW Natural price forecasts.

[1] The Company includes the 10% adder as *recommended* for electric utilities by the NWPPC because gas utilities are required to do so in Oregon per OAR 860-030-0007. NW Natural has applied the methodology used in Oregon to its Washington service territory.
[2] No carbon credit is used included in the Company's current avoided cost because it does not seem that carbon legislation will be adopted in the near future.

When the Company makes an Advice filing to add new measures to its portfolio, it includes a Benefit Cost Ratio calculator that details the associated costs and benefits.

WUTC Request
Among the requested information above please include the Company's definition of the WACOG used and specific the source of the data used to determine the WACOG.

NW Natural's Response
Sheet P.3 of the Company's Schedule P defines WACOG as follows:

> As a component of each PGA filing, the Company shall calculate a Weighted Average Cost of Gas (WACOG), or Total WACOG. The Total WACOG shall be calculated using forecast normal volumes and the following charges for the following sources of natural gas:
>
> 1. Commodity charges and commodity-related fixed charges under the Company's contracts for gas purchases from gas suppliers; and
> 2. Pipeline transportation- and storage-related volumetric charges; and
> 3. Commodity charges based upon average inventory cost for volumes withdrawn from the Company's natural gas storage facilities.
>
> The commodity adjustment for Transportation service rates is the Total WACOG, adjusted for the revenue-sensitive factor established in the PGA filing. The Total WACOG shall be set forth in Schedule 203 of this Tariff.

The Company does not use WACOG for the gas price in its avoided cost.

WUTC Request:
Include the discount rate used, if one is used, and what its source is.

NW Natural's Response
The Company applies the discount rate of 5.16 percent to future resource costs. This discount rate is the after-tax marginal weighted-average cost of capital as defined and applied in compliance with Guideline 1 of Order No. 07-047 issued by Public Utility Commission of Oregon. See Page 6A-9 of the Company's 2009 IRP for the work paper demonstrating the derivation of the discount rate.

WUTC Request
Include the definition of the terms used at the head of columns and at the beginning of rows as well as elsewhere in the spreadsheets.

NW Natural's Response
Not applicable. The Company does not use spreadsheets for calculating its avoided costs.

WUTC Request
Include a narrative explaining the calculation.

NW Natural's Response
The avoided cost is calculated as described on page 6.2 of the Company's 2011 Modified IRP:

> **III. Methodology**
> The SENDOUT® resource planning model was used to generate the avoided costs. The base case demand parameters were used as inputs, including the design weather pattern, and base case customer and gas price forecasts. The high and low natural gas price forecasts, along with their accompanying CO_2 emission prices were used to generate the high and low avoided cost scenarios.
>
> SENDOUT® contains a marginal cost report which lists the daily incremental cost to serve the next unit of demand for each demand region. The DSM functionality was turned off so energy conservation was not an option for the model; demand was served with supply side resources only. In addition to existing supply side resources, the resource options included Mist Storage Recall, Grants Pass Lateral pipeline capacity, Palomar East pipeline capacity, and satellite storage. The model determines the lowest cost method for serving the next unit of demand and computes a marginal cost. This computed marginal cost includes the price for the commodity itself, transportation charges, and any related storage costs. Distribution costs were not included.

NW Natural appreciates the opportunity to respond to this inquiry and looks forward to participating in the Commission workshop planned for November 16, 2012.

Please contact me at (503)226-4211, extension 3590, if you have any questions.

Sincerely,

/s/ Jennifer Gross

Jennifer Gross
Rates and Regulatory Affairs