

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

Docket No.UM 1622

In the Matter of

ENERGY TRUST OF OREGON

Request for Approval of Exceptions to
Cost Effectiveness Guidelines.

Commission Staff's Comments
on NW Natural's Proposal for
Determining a Gas Efficiency
Hedge Value

Background

In Docket No. UM 1622, Order No. 14-332, issued October 1, 2014, directed the Oregon Public Utility Commission (OPUC) Staff to report back within six months on the development of a hedge value for natural gas. This update was provided April 14, 2015 during the Regular Public Meeting of the Commission.

As described in a Staff update memo, parties have been working together to consider an appropriate hedge value for gas efficiency measures. Although not complete, progress has been made and a workable solution is anticipated within the next few months. Parties have been asked to offer comments on NW Natural's proposed approach with the goal of arriving at a reasonable approach to be included in Energy Trust of Oregon's (Energy Trust) avoided cost value for gas energy efficiency going forward.

NW Natural's Proposed Approach

In February 2015, NW Natural Gas Company (NW Natural or Company) proposed a methodology to quantify the value gas energy efficiency provides in mitigating fuel price volatility within their system. The methodology is based upon the understanding that every therm of demand-side management (DSM) savings forgoes the need for a natural gas distribution company to purchase that therm of gas on behalf of customers, removing the price risk for the therms saved. NW Natural noted that DSM is a long-term hedge against volatile gas prices, similar to the role played by a long-term financial hedge product. To quantify the planning hedge value, NW Natural proposes obtaining quotes for a 10-year long-term fixed financial hedge product and comparing those annual values to their integrated resource plan (IRP) forward gas price forecast each year. The difference between the two, adding credit facility costs (hedge transaction costs), is considered to represent value associated with achieving price certainty. If the

difference is less than zero, meaning that the hedge values plus the hedge transaction costs are less than the IRP values, no value is assumed to be provided for that year through hedging.

Staff comments

Staff notes that NW Natural provided a strong starting point and thanks them for their work in developing the proposal.

During the February workshop, NW Natural described the goals of the meeting as obtaining consensus on a specific methodology to be used for calculating the hedge value of demand-side resources. Staff agrees that focusing on determining a methodology for calculating the hedge value is the goal of this work, not calculating the specific value or judging if the resulting value is too high or low. In addition, Staff would like to add that the methodology should be easily replicable across gas utilities, able to be incorporated into Energy Trust's avoided cost calculations, and should not result in a negative value that would reduce the value of gas energy efficiency.

The current proposal meets these goals. We recommend adopting this approach as a placeholder so that Energy Trust can update their gas avoided costs this spring to review cost effectiveness of 2016 measures. We are currently in a time of low gas prices but this environment may change. Therefore, agreeing to a sound methodology that can be applied to future market changes, whatever they may be, is helpful.

However, Staff also recommends suggestions for potential further improvement in the next IRP cycle. By considering the proposal as a placeholder, there may be ways to improve upon the methodology in the future as understanding of how to quantify the value of risk avoidance from gas efficiency grows.

Recommendations for improvement to the proposed methodology

- 1) Expand the definition of "hedge value for natural gas" as listed in Order 14-332 beyond only a value for mitigating **long-term** fuel price volatility but also explain how this proposal captures potential value for reducing consumer exposure to seasonal volatility and other uncertainties impacting spot market and long term contract commodity prices. For example, comments from the Citizens' Utility Board received throughout the UM 1622 process suggest including value to more rigorously account for the impact of energy efficiency at mitigating the risks of cold weather, which is a short term risk. Staff recommends exploring in future proceedings whether NW Natural's proposed method addresses all aspects of short term and long term fuel price volatility.

As NW Natural mentioned at the February workshop, there are numerous white papers from highly credible industry thought leaders on this topic but they are largely focused on electric efficiency risk avoidance values. One example in

particular from Lawrence Berkeley National Laboratory¹ from 2013 specifically lists short term seasonal and long term value of efficiency.

- 2) NW Natural specifically sought feedback regarding their approach to extrapolating the 10-year hedge product price quote forward into a 20-year value and beyond. Efficiency measures can provide savings well beyond 10 years, indeed up to 45 years' savings, making this component of the long term risk reduction worth further discussion. The difficulty in obtaining a quote beyond 10 years could be an indication of significant uncertainties in the market place leading to an unwillingness of market traders to forecast beyond 10 years. Staff sees NW Natural's proposal of applying the 5-10 year growth rate to years 10-45 as one reasonable approach but would like to explore a few more options for possible adjustment to the methodology for the next IRP.

Three suggestions include

- a. Combine a long term (10-20 year) physical gas purchase contract price with the long term financial hedge price in the determination of the gas planning hedge value.
 - b. Modify the longer term growth rates to reflect the divergence of forward price low and high case scenarios as used in the IRP compared to the base forecast in years 11-20.
 - c. Explain further why trends from years 1 to 4 are not included in the calculation of the growth rates of the hedge quote and why the overall trend from years 1-10 is not sufficient to provide the base value in forecasting the trend for future years.
- 3) Recommendation for IRP analysis to further understanding of the value of gas energy efficiency in reducing consumer price risk. Given further analyses discussed above, Staff believes that NW Natural's next IRP will provide the stakeholders the proper avenue to address other issues that may affect the hedge value and the avoided cost of natural gas energy efficiency. Those issues may include:
 - a. A brief discussion of interaction of energy efficiency, long term contracts, and financial hedges within NW Natural's greater strategy for optimizing system efficiencies and minimizing consumer exposure to price risk.
 - b. Run IRP models with and without energy efficiency under base case market fundamentals and across scenarios of a range of future avoided cost values.

¹ "Assessing Natural Gas Energy Efficiency Programs in a Low-Price Environment", <http://emp.lbl.gov/publications/assessing-natural-gas-energy-efficiency-programs-low-price-environment>

Summary

Staff appreciates NW Natural's review of the risk avoidance value gas efficiency provides. Staff would like to see the Company's placeholder methodology employed in setting Energy Trust's avoided costs for gas efficiency measures. There are a few areas where more investigation and consideration may help to improve the methodology going forward and NW Natural's willingness to revisit and improve upon the method is appreciated.

This concludes Staff's comments.

Dated at Salem, Oregon, this 15th day April, 2015.



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