



STATE OF WASHINGTON

## DEPARTMENT OF COMMERCE

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Comments of the Washington Department of Commerce  
Docket UG-121119 – Avista Corporation  
December 18, 2012

The Washington Department of Commerce State Energy Office provides policy and analytical support on energy issues within state government and is responsible for development of the state energy strategy. Commerce develops this strategy based on statutory direction to maintain competitive energy prices, foster the clean energy economy and jobs, and meet the state's greenhouse gas reduction requirements. This state is consistently recognized as a national leader in energy efficiency, and Commerce believes that this achievement is worth maintaining and advancing.

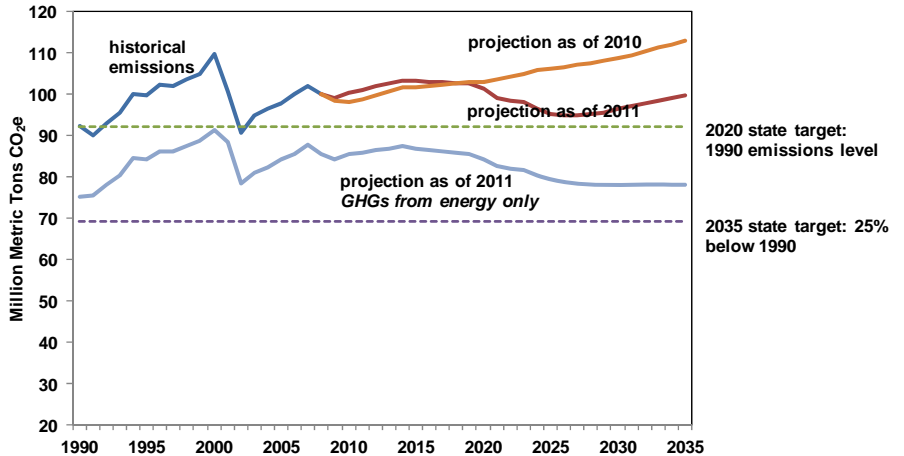
In the context of the state's energy strategy, any proposal to suspend natural gas energy efficiency programs is cause for concern and careful scrutiny. It certainly is the case that utility resource acquisitions should be guided by cost-effectiveness standards, and the natural gas markets have seen a dramatic change over recent years. However, the Commission should also consider the state's other policy objectives before backing off on natural gas.

Commerce believes Avista's proposal to suspend efforts to conserve natural gas goes too far. Suspension of limited aspects of the program are justified by changes in the marketplace, both changes in the expected cost of natural gas and changes in the equipment that will be offered to consumers. However, Avista's analysis does not support removing shell measures (primarily insulation) for buildings that use natural gas for heating. Removing gas-heated buildings from the shell measure program will raise costs for Avista's customers and will cause Avista to miss an opportunity to acquire cost-effective resources – both electric resources and natural gas resources. It will also cause Washington to increase its reliance on imported fossil fuels and reduce job opportunities in the state.

The Commission should consider the state's greenhouse gas emission targets as well as the customer-oriented benefit-cost analysis.

Washington law requires the state to reduce overall emissions of greenhouse gases in the state to 1990 levels by 2020 and to reduce overall emissions a further 25 percent by 2035 [RCW 70.235.020]. Avista's energy programs have a direct effect on the state's progress toward the legislative standard, but failure to meet the standard is not considered a "cost" in the benefit-cost calculations. Under the total resource cost (TRC) used by Avista and the Commission, costs incurred by anyone other than Avista's own customers are excluded from the analysis. If state or federal lawmakers were to impose a tax on emission of greenhouse gases, Avista would include that tax in its benefit-cost equation.

The Commission should consider Washington’s statutory greenhouse gas emissions standard, notwithstanding the fact that the Legislature chose not to establish a specific tax to enforce that standard. This chart, which was published as Figure 2.8 in the 2012 *Washington State Energy Strategy*,<sup>1</sup> shows where Washington stands relative to the statutory requirements. Compliance will require that all sectors of the state’s economy maintain and improve their resource efficiency. The energy efficiency programs of Avista and other utilities are important in meeting the requirements of state law.



Avista’s integrated resource planning process examined scenarios in which greenhouse gas charges were imposed on natural gas consumption. For its 2012 Oregon gas IRP, Avista considered greenhouse gas adders that ranged from \$.01 per therm in 2020 to \$.59 in 2035 [2012 Avista Natural Gas IRP, Appendix 4.2]. However, these potential costs are not reflected in the avoided costs used to analyze the natural gas efficiency program.

Shell measures are cost-effective in gas-heated buildings, even with lower gas prices.

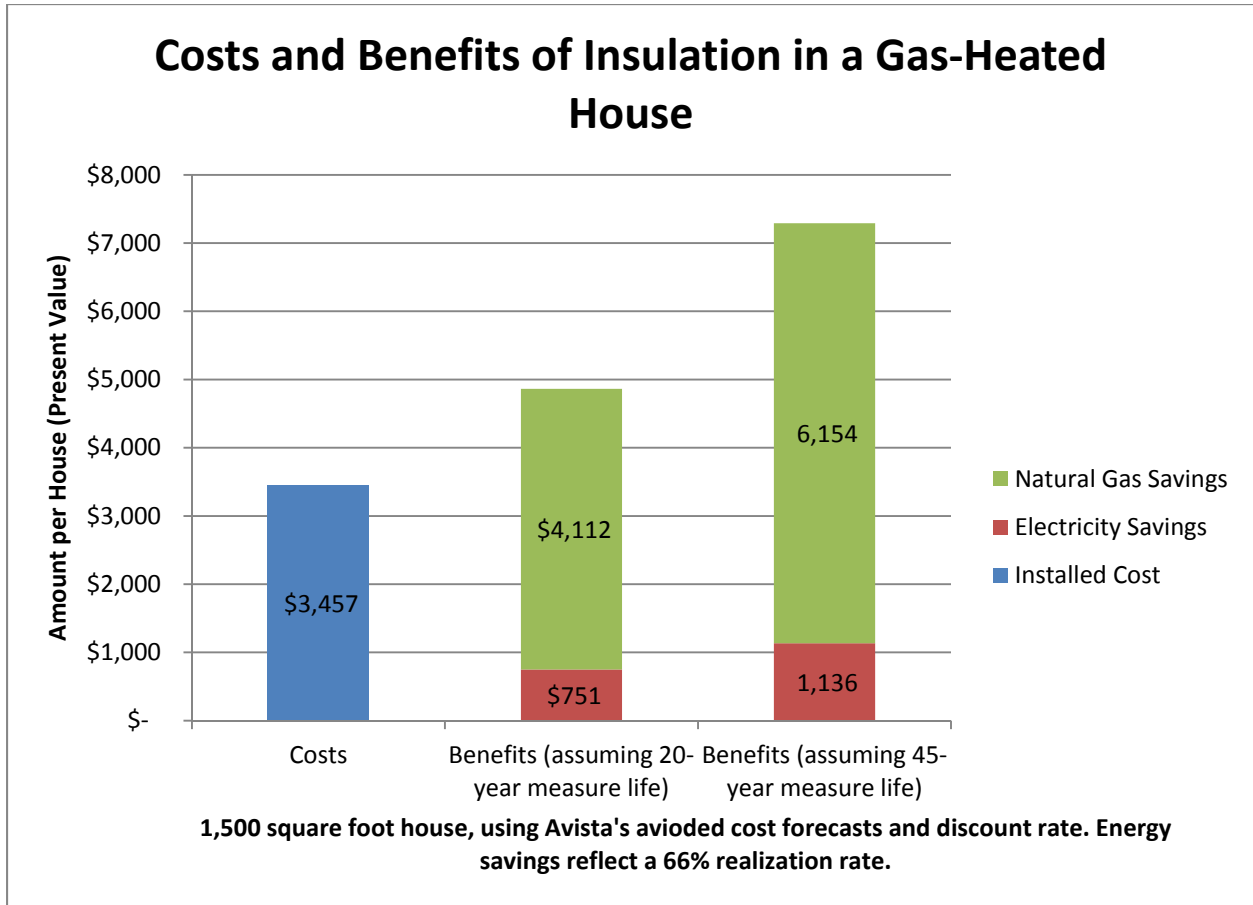
The Commission should start its analysis of Avista’s proposal with the understanding that installing shell measures in a residential or non-residential building is cost-effective, even if that building is heated with natural gas. Using Avista’s values for installation costs, energy savings, and expected natural gas and electricity costs, a shell project is a good deal.<sup>2</sup>

Here is a specific example: An Avista residential customer insulating the attic, wall, and floor of a 1,500 square foot house would pay \$3,457 for the project. The insulation would reduce consumption by approximately 660 therms per year. The upgrade would also reduce electricity consumption, since natural gas furnaces consume electricity. The electric savings are 1,000 kWh per year. The net present value of those energy savings is \$4,763, using Avista’s price forecasts and counting only the first 20 years of savings. Insulation of gas-heated houses is a good deal, with \$1.41 of benefit for every \$1 of cost.

<sup>1</sup> <http://www.commerce.wa.gov/Programs/Energy/Office/Topics/Pages/EnergyStrategy.aspx>

<sup>2</sup> The analytical results reported in these comments are based on the analysis by Avista submitted in Docket UG-121207, which Commerce believes to be the same analysis relied on by the company to support this tariff filing. The shell measures discussed here are attic, wall and floor insulation in the residential prescriptive program. The non-residential prescriptive program includes these insulation measures and efficient windows in new buildings; retrofit windows are not a cost-effective measure regardless of the heating fuel used and are excluded from this analysis.

The benefits are likely even greater than presented above, because Avista’s approach counts only the first 20 years of energy savings. The regional power council counts 45 years of savings from residential insulation measures,<sup>3</sup> and other gas utilities in Washington count 30-45 years of savings. Counting 45 years of savings would yield total benefits of \$7,290, or \$2.11 of benefit for every \$1 of cost.



Avista’s proposal to suspend appears to be driven by a fuel-specific approach to program definition.

Given that shell measures have a positive net benefit when applied to gas-heated buildings, why does Avista propose to exclude those buildings from its energy efficiency program? The proposal appears to be driven by an assumption that natural gas measures and electricity measures must be offered in separate programs with separate overhead costs. Avista has estimated that the base cost of a gas DSM program is about \$500,000, and that this overhead program cost would have to be offset by natural gas savings from individual measures.

<sup>3</sup> <http://www.nwcouncil.org/energy/rtf/measures/measure.asp?id=153>

In such a scenario, a fuel-specific DSM program targeted at natural gas shell measures would not be cost-effective, particularly after program effects are reduced to account for the customers who would have installed insulation without assistance from Avista. The number of available participants with gas-heated buildings is not great enough to yield \$500,000 of net benefits.

However, Avista does not operate a program to insulate gas-heated buildings and another program to insulate electric-heated buildings. Avista's shell measure program promotes the efficient use of all the energy that Avista delivers, whether that energy is electricity or natural gas. Avista offers this statement as the program objective:

Installing insulation measures for under-insulated homes offers customers a cost-effective way to achieve energy savings. [[2012 DSM Business Plan](#), p. C52]

The residential shell program is a single program that saves electricity in homes that heat with electricity and saves both electricity and natural gas in homes that heat with natural gas. Avista's proposal would not eliminate the gas program; it would eliminate gas from the program.

The Commission should ask this question: Given that Avista will continue to operate the residential and non-residential shell programs, what do customers gain or lose by shrinking those programs to exclude buildings heated with natural gas? In answering this question, the Commission should look past the accounting and cost allocation rules that Avista is using. This is not to suggest that these rules are invalid, because they promote both the integrity of the company's financial results and the equitable division of benefits and costs among customers. However, they are not relevant to the economic question of what level of conservation is cost-effective. Unless an expense is incremental to the program element being considered for inclusion or exclusion, it is not a cost in the economic sense and is not properly included in a benefit-cost analysis.

This concept is well understood by Avista, which raised it in last year's DSM business plan:

It is arguable whether the natural gas portfolio's current share of combined fuel portfolio costs is truly incremental to the natural gas portfolio. These costs could not entirely be excluded if the natural gas portfolio did not exist. [[2012 DSM Business Plan](#), p. 78]

In that plan Avista identified the need to

Broach the fundamental question of fixed cost allocation across the electric and natural gas portfolios. Specifically, initiate the discussion of whether the natural gas portfolio should bear only those costs that are truly incremental to that portfolio for purpose of cost-effectiveness calculation with the more robust electric portfolio bearing the remainder of the utility costs. ... Also consider whether the allocation of fixed costs for purposes of cost-effectiveness calculations is necessarily the same method as that which is used for cost recovery. [[2012 DSM Business Plan](#), p. 79]

This issue is not resolved in Avista's current filing. Avista has examined a variety of cost allocation scenarios, but they all allocate fixed program costs that are not incremental to the program element being considered.

Avista's shell measure programs will have higher net benefits if gas-heated buildings are included.

The residential shell measure program in Avista's *2013 DSM Business Plan* is actually quite modest, with 100 homes to be weatherized across Washington and Idaho.<sup>4</sup> The program would acquire 177 MWh of savings, which would yield residual net benefits of \$28,083 [*2013 DSM Business Plan*, p. 51]. Avista identifies \$2,893 of labor costs to achieve these savings [*2013 DSM Business Plan*, p. 57].

Such a small program would benefit from greater scale, and this scale is available through inclusion of gas-heated homes. Indeed, the quantity of shell measures available in gas-heated homes is roughly twice the amount that Avista plans to acquire in electric-heated homes. If Avista includes the available gas-heated houses in 2013, the residual net benefits of the residential shell program would increase by \$75,313. The program would acquire an additional 40 MWh of electricity savings (net of free riders), as well as acquiring 27,000 therms of natural gas savings (also net of free riders).

The greater scale would presumably increase direct labor costs of the program, but it seems unlikely that any additional costs would offset \$75,313 of additional net benefits. Indeed, maintaining the current fuel-neutral approach not only contributes to scale economies but also avoids complications inherent in excluding gas-heated homes as proposed Avista. The company's approach would require that it perform a billing analysis of each participant in order to determine whether the customer uses electricity for space heating.

The benefits of maintaining a dual-fuel approach are similar in the non-residential shell program, where Avista plans to acquire 46 MWh of electric savings system-wide, yielding \$28,896 in net benefits [*2013 DSM Business Plan*, pp. 40, 51]. Adding available gas-heating buildings would yield additional net benefits of \$95,166 and would allow Avista to acquire an additional 40 MWh of cost-effective electric conservation.

Avista's proposal to suspend furnace and water heating incentives is supported by the cost analysis.

The case for suspension of equipment efficiency measures – furnaces, boilers and water heaters – is much stronger than the case for shell measures. Even if Avista would not realize any savings in overhead program costs, suspension of these measures improves the net benefits of the overall DSM program. This is because the measures are not cost-effective at Avista's projection of natural gas prices, even if no program costs are assigned to them. The measures would fare better under a higher price scenario, but suspension would also be justified by upcoming increases in federal equipment efficiency standards. For natural gas furnaces, federal standards will increase in 2013 to require the level of efficiency (90% AFUE) that Avista now encourages through its rebates.<sup>5</sup>

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<sup>4</sup> The system-wide amounts are reported in order to recognize that Avista already realizes some scale economies in operating the prescriptive shell programs.

<sup>5</sup> [http://www1.eere.energy.gov/buildings/appliance\\_standards/pdfs/rfrac\\_hp\\_effec\\_dates\\_drf\\_oct31.pdf](http://www1.eere.energy.gov/buildings/appliance_standards/pdfs/rfrac_hp_effec_dates_drf_oct31.pdf)

## Conclusion

Avista's proposal to suspend gas equipment measures has merit, but the removal of gas-heated buildings from the residential and non-residential shell programs is not supported by the benefit-cost analysis. Removing those buildings will increase costs for Avista's customers, and it will cause Avista to miss an opportunity to acquire cost-effective and available electric conservation. This action would undermine the state's efforts to maintain competitive energy prices, foster the clean energy economy and jobs, and meet the state's greenhouse gas reduction requirements, and it would be a setback in the state's efforts to maintain national leadership in energy efficiency.