



September 24, 2021

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Oregon Public Utility Commission

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Re: UM 2178 – Response to Request for Comments on Natural Gas Fact Finding Workshop #3

Thank you for the opportunity to comment on alternative modeling scenarios for the Natural Gas Fact Finding docket. The NW Energy Coalition appreciates the work of staff to try to make this process as transparent and accessible as possible, given the condensed timeframe. We especially appreciate Staff's diligence in setting ground rules that support mutual respect, responding to stakeholder feedback about the format of workshops, and keeping the focus on fostering meaningful dialogue with the intent to inform utility planning and regulatory tools.

We understand that the materials presented at the September 14th workshop are a modeling exercise, meant to inform future decision making and planning, and do not represent the gas companies' actual plans for compliance with the Climate Protection Program (CPP). Our comments at this stage of the process are meant as suggestions to enhance the modeling, so that the findings are meaningful and comprehensive, and do not needlessly limit what utilities and the PUC will consider in the next IRP process or in future proceedings considering the use of gas in ongoing decarbonization efforts.

We agree with staff's statement that the CPP will be transformational, and its implementation will require an evolution in the resource planning regime. This evolution will take time. We view the work in this docket as a small, but important step in what we expect will be a longer process of regulatory and planning reforms to enable decarbonization.

Demand-side resources

In the modeling results presented so far, it is not clear that all demand-side measures are adequately evaluated. While utilities are appropriately considering equipment technologies that are not cost-effective today, they have not considered the impact that the increase in the avoided cost of supply-side resources will have on the overall energy efficiency portfolio, including building envelope efficiency measures. We recommend that alternative modeling consider a demand-side portfolio that maximizes the technical potential of a broad set of energy efficiency measures, such as building envelope measures in hard-to-reach segments like multifamily housing. These measures provide significant non-energy benefits (e.g., improved comfort and indoor air quality, structural integrity, and increased property values). We would also encourage more serious consideration of solar thermal technologies – especially solar hot water heating – which is a proven and mature technology that can generate natural gas

efficiency savings without increasing electricity demand. We appreciate that Energy Trust of Oregon has offered to provide more information to inform the availability of a broader set of energy efficiency measures under a CPP compliance scenario.

We also recommend that the modeling be adjusted or clarified to incorporate dual-fuel “hybrid” heat pumps as a replacement for existing natural gas furnaces only. Dual-fuel (“hybrid”) heat pumps are a viable near-term electrification and natural gas efficiency measure. However, in order to deliver emissions reductions to meet gas companies’ CPP compliance obligations, hybrid heat pumps would need to actually replace natural gas furnace usage. While there may be other benefits associated with dual-fuel heat pumps over electric resistance heating on very cold days, replacing electric resistance heat with a dual-fuel heat pump would not deliver emissions reductions to a natural gas utility to meet its CPP compliance obligations. In our view, the availability and benefits associated with single-fuel natural gas heat pumps are less certain, especially when compared with the dual-fuel and high-efficiency electric heat pump options.

Renewable Natural Gas

We agree that renewable natural gas (RNG) has a role in a decarbonized economy. The questions that need to be further explored are how much of a role, in what quantity and for what applications? As a matter of policy, we advocate that this limited and valuable resource be dedicated to its highest and best use. This is likely to be in industrial heating applications, or agricultural and municipal transportation uses supplied by anaerobic digesters, wastewater treatment facilities, and other waste streams that make up Oregon’s RNG supply.

We would caution the PUC against what we view are overly optimistic assumptions about the potential to replace a significant portion of core gas customer demand by putting RNG in the pipeline. As discussed at the September 14th workshop, today’s RNG market is primarily serving CNG vehicles now. Utilities expressed the need to offer long-term contracts to RNG suppliers to support investor confidence in this sector and enhance market development. While we generally support utilities having a role in market transformation for products that will provide significant benefits to customers, we are concerned that applying this reasoning to fuel markets may shift fuel price risks from private investors to utility customers in a way which could expose residential and commercial customers to greater fuel price risks over alternative lower-risk strategies.

A modeling exercise can inform, but cannot replace the Commission’s consideration of this important public interest question. In order to provide a counter-balance, we recommend that the PUC consider an alternative approach to the modeling which allocates limited RNG supply to industrial, agricultural, and transportation customers, who are more likely to either have a higher fuel price risk tolerance or have direct access to reliable sources of RNG.

Green Hydrogen

The September 14th workshop included considerable discussion of hydrogen’s role in decarbonizing the economy. Hydrogen is an emerging and evolving resource, and its

production, storage and transportation requirements, and applications are not yet well understood by the general public or utility regulators. However, clean hydrogen is an intriguing solution to help decarbonize heavy duty industry, transportation, marine, and energy storage use cases. To the extent that Oregon utilities invest in hydrogen, we advocate that it should be “green” hydrogen - meaning hydrogen produced by an electrolytic process using clean, renewable, and non-emitting generation resources such as solar, wind, off-shore wind, tidal and hydroelectric energy.

We would also note that the blending limitations, and the lower energy density of hydrogen compared to gas appear to be significant barriers to its widespread use on the distribution system. Methane is about three times more energy dense than hydrogen. This raises many questions about the feasibility of hydrogen as a replacement for direct use of gas, which warrant further exploration. For example, it appears that the more hydrogen that is blended onto the distribution system, the less energy customers would actually receive from the same throughput on the system. Customer and equipment readiness will be an important consideration with a strategy to blend hydrogen at any significant level. It’s not entirely clear that the modeling presented so far accounts for additional infrastructure needs (i.e., expanding distribution pipeline capacity) to meet the forecasted energy demand, considering this difference in energy density. While the models are showing significant reductions in per-customer usage by 2050, this is reflected in therms, and not on a volumetric basis.

One alternative modeling approach that could help inform the fact-finding would be a scenario that explores the significance of any infrastructure needs, such as bigger pipes, to accommodate a potential increase in volumetric throughput that would happen at higher blends of hydrogen. It is possible that the impacts are not significant at the blending level proposed, but if they are, that would be an important finding.

No customer growth

We appreciate the inclusion of the no customer growth sensitivities in this modeling exercise. These assumptions are flexible enough to accommodate electrification, whether it happens as a result of customer choice or whether it is policy-driven, providing important fact-finding information while avoiding some of the tougher policy questions, which the PUC has determined are outside the scope of this docket. It is not entirely clear that the modeling results for this sensitivity incorporate savings from avoided pipeline investments as a result of connecting no new customers, or whether it is assumed that these costs will continue and simply be shifted onto fewer customers. We think that this will likely prove to be a more relevant scenario than scenarios that project continued load growth going forward, and therefore, we recommend that the answer to this question be clarified as part of staff’s consideration of alternative modeling scenarios.

Conclusion

As with any other modeling exercise, the presentations at the September 14th workshop reflect three gas companies’ assessments of what a CPP compliance strategy looks like based on what they know right now. Ultimately, the best options for customers will evolve over time as

technology and research progresses, and more information becomes available. Long-term planning will therefore continue to have a critical role in helping the PUC determine which investments provide the greatest benefits to customers at the least risk. We appreciate the opportunity to provide comments on alternative modeling approaches, and look forward to participating in the next phase of workshops focused on regulatory tools.

Sincerely,

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