

Subject: INTERMOUNTAIN GAS COMPANY--APPLICATION TO REVISE ITS GENERAL SERVICE PROVISION

Docket: INT-G-20-01

Commenter: Chad Worth, Boise Idaho

My name is Chad Worth. I am an energy engineer and have been working in energy efficiency for over 10 years. I respectfully submit these personal comments to the Idaho Public Utilities Commission on the INT-G-20-01 docket regarding INTERMOUNTAIN GAS COMPANY--APPLICATION TO REVISE ITS GENERAL SERVICE PROVISION. In summary, for the reasons described below, I encourage the Commission to reject ratepayer-funded allowances for new gas main or service extensions. However, if Commission determines ratepayer-funded allowances are allowed, they should be revised lower and updated more frequently.

According to Intermountain Gas's (the Company) website, in 1955, the first five homes in the Treasure Valley were connected to the natural gas distribution system.¹ Since then Idaho has significantly increased its dependence on out of state natural gas, with over 350,000 Idaho homes and businesses relying on natural gas, mostly to heat the space and water. Natural gas is composed mostly of methane. Methane is a potent greenhouse gas that is up to 80 times more effective at trapping heat than carbon dioxide.² When methane burns in appliances it turns to carbon dioxide, a longer-lasting greenhouse gas. Both methane and carbon dioxide are greenhouse gases that contribute to climate change. Methane leakage throughout the gas system is also significant climate change problem. From extraction, distribution, and service delivery, methane leakage is 60% higher than the Environmental Protection Agency originally projected.³ The fact that the gas system is leaking such vast amounts of methane exacerbates climate change and, thus, counteracts methane's claimed "clean" attributes.

Burning methane in buildings (namely furnaces and water heaters) is also a major source of local air pollution, including nitrogen oxide (NOx) and carbon monoxide. NOx is a pollutant responsible for poor air quality (such as during Treasure Valley inversions) and carbon monoxide is a lethal indoor pollutant.

Furthermore, aging methane infrastructure presents a serious public safety risk, as gas explosion events become increasingly frequent. In 2018, for example, a series of explosions and fires occurred in as many as 40 homes in the Merrimack Valley in Massachusetts, killing one person and forcing another 30,000 people to evacuate their homes.⁴ In 2010, the San Bruno explosion in Northern California killed 8 people and destroyed more than 35 homes.⁵ There are many more stories like this every year. Idaho's methane infrastructure, like much of our nation's infrastructure, was built after World War II, and the consequences of continuing to rely on this aging infrastructure are only now starting to become clear.

The City of Boise's 2019 Energy Future Plan noted that within the City of Boise alone residents and business spend \$61 million per year on methane, with most of that money flowing out of state to methane producing states.⁶ (Idaho with its handful of gas wells is hardly one of them.) As the City's Energy Future Plan explains, use of methane is projected to grow more than 50% over the next 20 years. This trajectory is especially troubling for those concerned about climate change, as according the Energy Information Administration, more methane is burned each year in Idahoan's homes than all of Idaho's natural gas power plants combined.⁷

All homes and businesses need electricity, but a methane service is a luxury, albeit a dangerous and polluting luxury, and one that is no longer cheaper than its electricity alternatives. The maturity of energy efficient and cost-effective heat pumps to heat homes and hot water means gas infrastructure is not critical, even in some of Idaho's coldest winter months. Additionally, safe and high-performance induction cooking technology has negated the previous perceived

¹ <https://www.intgas.com/in-the-community/about-us/>

² <https://www.nrdc.org/onearth/natural-gas-industry-has-methane-problem>

³ <https://science.sciencemag.org/content/361/6398/186>

⁴ <https://www.npr.org/2018/11/16/668612558/federal-investigators-pinpoint-what-caused-string-of-gas-explosions-in-mass>

⁵ <https://sanfrancisco.cbslocal.com/2018/04/26/pge-to-pay-97-5-million-penalty-over-san-bruno-deadly-blast/>

⁶ <https://www.cityofboise.org/departments/public-works/boises-energy-future/>

⁷ https://www.eia.gov/dnav/ng/ng_cons_sum_dc_u_sid_a.htm (Idaho natural gas power plants include Langley Gulch (330 MW), Bennet Mountain (164 MW), Danskin (261 MW), Rathdrum (442 MW)).

benefit of gas stoves. All electric homes and businesses are commonplace and are safe and cost-effective alternatives to expanding methane infrastructure in Idaho.

The Company's current line extension policy is significantly outdated, having not been updated since 1986. The Commission should therefore take this once in a generation opportunity to examine the long-term risk and benefits of allowing the Company to have existing ratepayers support line extensions to new customers. Below are my personal recommendations:

- For the economic, environmental and safety reasons mentioned above, the Idaho PUC should consider whether line extension allowances are truly a benefit to Idahoans. As mentioned, methane service is a luxury utility service, thus the line extension allowance should be \$0. If a customer wants methane service, they should pay the entire cost of the service or main extension and should not be subsidized by other ratepayers. A significant portion of Idahoans live comfortably and affordably with only electric service at their homes.
- The analysis in Exhibit 3 and used to inform the modeled 0.234 therms/ft²/yr value in the proposed tariff shows higher gas consumption than the Company's own internal data. This has the effect of inflating the proposed allowance. As written in Exhibit 3 *"sample data gathered by Intermountain Gas shows actual gas usage factors of 0.227 therms/ft²/yr for climate zone 5B and 0.216 therms/ft²/yr for climate zone 6B."* Modeling is important, but it is no substitute for real data from real customers. By using the modeled data, it overstates the gas consumption by at least 6%. It's likely that the gas usage data the Company has is from a mix of building vintages, not just new construction, but this is not clear in the Company's application. The Company should clarify the underlying building stock used to develop their internal usage estimates. Taking the larger of the usage factors (in the case modeling value) only increases allowances, benefiting the Company as future gas interconnections are economically tilted in their favor. One reason for this skew towards higher consumption from the modeled data may be that the model maintains a set 68-degree F set point all year. In reality, people turn their thermostat down when they leave the house for work, at night and when on vacation. Assuming a "set-it and forget it" thermostat setpoint throughout the entire winter heating season vastly overstates the energy conservation and practical economic considerations of Idahoans. If actual data from newly constructed homes built to code is available, it should be used to set allowances.
- The federal Energy Policy and Conservation Act of 1975 requires that appliances (notably gas furnaces and gas water heaters in this case) have their energy efficient standards evaluated every 7 years for an update. Both of these appliances are past their statutorily required deadlines for updating, with the last standards published in 2007 and 2010, respectively. There is significant cost-effective savings for these appliances beyond the existing federal minimum requirements, especially furnaces and water heaters, where significant efficiencies can be realized with condensing technology. (See here: <https://appliance-standards.org/national>) Make no mistake, the Department of Energy will be updating these minimum efficiency standards in the near-future as a result of new executive initiative, or due to court-orders for DOE to catch up on its efficiency rulemakings as mandated by Congress. The line extension tariff should contemplate future updates to the building code and appliance standards.
- Finally, should the Idaho PUC continue to allow ratepayers to subsidize the expansion of methane infrastructure in Idaho through allowances, this analysis should be updated regularly. The climate is getting warmer, homes are getting more efficient via building codes and appliances are getting more efficient via mandatory federal appliance standards. All of these factors will decrease future methane consumption in homes. The line extension allowances should be updated every three years at minimum (this aligns well with building code updates) to not let another three decades pass before it is updated again.

Thank you and I appreciate the opportunity to provide these comments.

Best,

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