



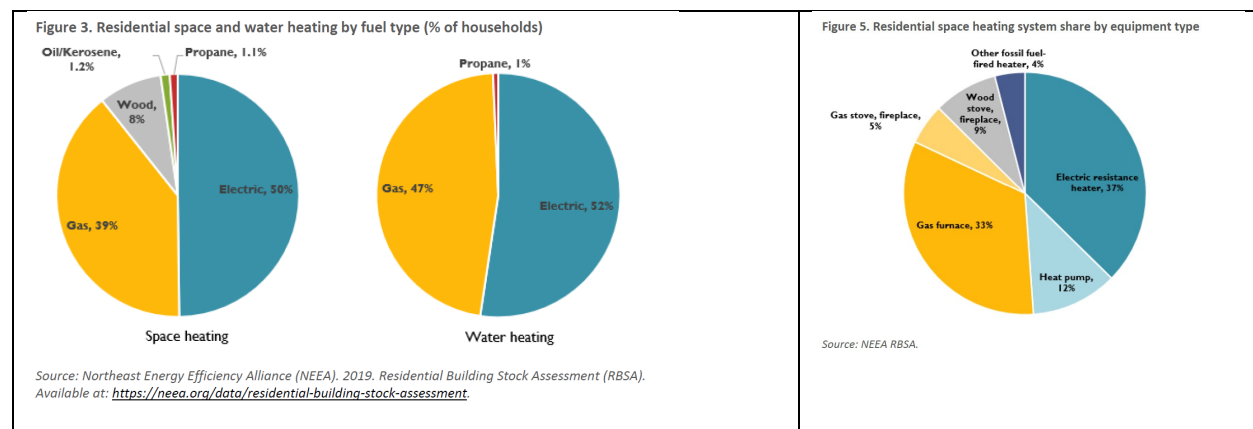
## Public Comments to the REBuilding Task Force

Co-Chairs Lieber and Marsh, and Members of the Task Force,

I am an energy system modeler and climate policy analyst, and I organize with the Mero Climate Action Team. I have two points to make regarding building electrification.

**Point 1: Gas is not a hedge against power outages.** Throughout these task force meetings, a theme of resilience has come up, and statements have been made inferring that the gas system is a good hedge against power outages. This definitely is not the case. According to the Citizen's Utility Board (CUB), "only a select few of your gas appliances can keep working without electricity. There is a common misconception that gas appliances are better because they keep working when the lights go out. While natural gas can still flow into your home during a blackout, many appliances still require power to operate." Basically, gas fireplace is the only device most likely to be operable without electricity, and maintaining the gas system is not a good hedge against power outages. Instead, we should be focused on micro-grids, back-up batteries, and hardening the electricity system.

**Point 2: Building electrification need not overload the electricity grid.** It's a fact that over half of the heating and hot water demand in Oregon homes is provided by electricity, with the vast majority of that based on electric resistance devices. Therefore, by also replacing these electric resistance heat and hot water systems (over time) with heat pump appliances that are 3 to 4 times more efficient, the resulting reductions in winter electric heating peak demands will significantly offset the increase in electricity demand from conversion of gas furnaces and water heaters to efficient electric heat pump appliances.



A recent report by Synapse<sup>1</sup> estimated future changes to the electric system's peak load (for space heating, water heating, cooking, drying and other electricity consuming end-uses in the residential and commercial building sectors. Because of the offsetting impacts of switching to electric heat pumps, their projected increase in the total building winter peak load, relative to 2019 levels, was 10-12% in 2030 and 13% in 2050.

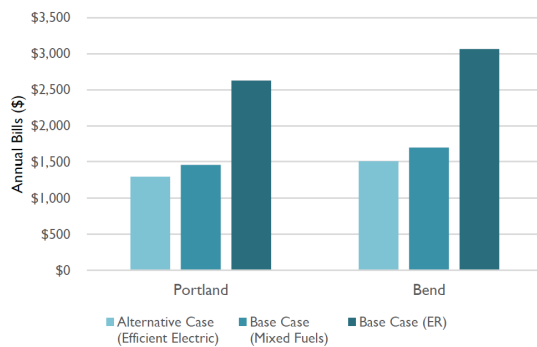
<sup>1</sup> Toward Net Zero Emissions from Oregon Buildings: Emissions and Cost Analysis of Efficient Electrification Scenarios, Synapse Energy Economics Inc., Prepared for Sierra Club, June 23, 2022.



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Synapse also performed an analysis of residential customer bill impacts and determined that efficient electrification measures provided the lowest annual bill in both Portland and Bend climates, with a 12-13% savings compared to a gas furnace, and 100% savings compared to electric resistance heating.

Figure 35. Annual bill impact summary across three cases in Portland and Bend



Thank you for the opportunity to provide comments.

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