To: Co-Chairs Senator Lieber and Representative Marsh and members of the Joint Task Force on Resilient Efficient Buildings.

Date: July 12, 2022

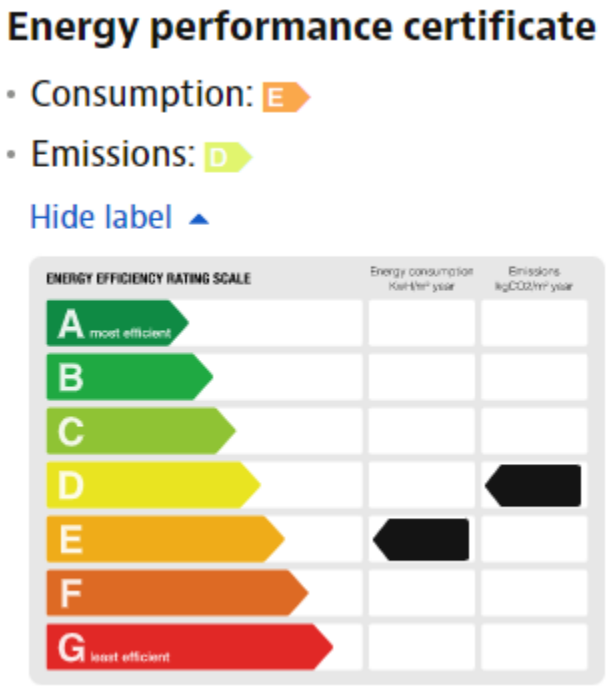
Re: Existing Buildings

Thank you for your work on resilient and safe buildings. I am pleased to see the excellent representation on the on the task force. Thank you for the opportunity to comment.

I am a member of the Metro Climate Action Team (MCAT), a Climate Reality Project Leader, and the owner of a 1925 duplex that I purchased in 1992. Over the years I have made several upgrades to be more comfortable and more energy efficient. I think my experiences may be helpful to the Task Force related to existing buildings, and building performance standards.

In 1992 when I purchased the duplex it had sparce insulation in the attic, an old gas furnace in my unit and a newer more efficient one in the other unit. Both had old wood windows, and unfinished basements. I was interested in it as a residence in a nice neighborhood and as an investment since some of the projected rent could be calculated as income to qualify for the loan. I had an inspection done but there was no energy efficiency standard required. If I had an energy score such as you discussed today, I would have had more power to negotiate with the seller and a better idea of what needed to be done to improve comfort and energy efficiency.

I am currently looking at houses in Spain and am impressed that every home listed has an energy performance certificate although disappointed that most of them are in the yellow and orange.



As I experienced cold bedrooms in the winter and learned about global warming, I began to look for ways to improve my energy efficiency. Insulating the attic and replacing the old single pane windows

with new ones helped. Later when contemplating a new furnace, I contacted Energy Trust of Oregon for suggestions and other 'weatherization' options. They provided suggestions on weather stripping and more insulation. When I asked them about heating, they explained I could get a more efficient gas furnace. When I asked about electric heat options they said, 'We do not recommend fuel switching'.

By 2014 I was living elsewhere and both units were vacant at the same time so I decided to finish the basements to add a second bath and a family room. I asked the company that serviced my furnaces about electric heating options. I had heard something about heat pumps but did not understand how they worked. The company told me, 'We do not recommend fuel switching' and sold me a 95% efficient gas furnace.

In 2018 I decided to move into the duplex and renovated the kitchen. I wanted all appliances with Energy Star ratings and was told that gas ranges were not rated. No explanation, just that an Energy Star rating was only applied to electric appliances. Later I discovered that is because there is no true energy efficiency with gas.

In 2020 I was better educated and angry by the failure of the Clean Energy Jobs legislation and what appeared to me to be heavy lobbying by the gas companies. I had control over only my own carbon footprint and the carbon emissions for the duplex were much greater than for my car so I decided to electrify. I have been a Blue-Sky customer with Pacific Power for years. I contacted Energy Trust of Oregon again and the consultant brought me power strips, low flow shower heads, and LED light bulbs. When I asked for help with heat pumps and electric ranges I was told, 'We do not recommend fuel switching'.

Fortunately, I knew that 'not recommending fuel switching is political and not technological. I found a good contractor on my own who could size the heat pump to my home and manage all of the work with electrical and plumbing subcontractors. He even helped explain how heat pumps work so my tenant felt comfortable giving it a try. We can vouch for heat pumps and electric induction cooking. Our heat pump air handlers put warm or cool air into the existing 1925 duct work and has a four-inch HEPA filter. The 2020 forest fires started shortly after installation was completed and we changed the filter after two weeks but had relatively good air quality inside. Like many in the Northwest we had not had air cooling before. The heat pump again kept us comfortable in the 2021 heat dome. The only time we have not been comfortable is the three days the power was out in the neighborhood because of an ice storm. no one's gas furnace was working either. Although battery back up for the whole house is cost prohibitive for me, I learned from Electrify Now that smaller, less expensive, battery backups can provide lights and power for an electric blanket to stay comfortable when another such outage occurs.

My new induction range provides highly responsive temperatures and cleaner cooking. The gas range put out so much heat that the combination fan and microwave over it required a hot pot holder to open the door. This is no longer a problem with the induction range. I have not set a hot pot holder on fire and often do not even need to use one. I don't need to adjust and readjust a flame, I just learn the number and the oatmeal cooks without boiling over or burning. I am no longer plagued by concerns of gas leaks and the need to have a safety value to shut off the gas in case of an earthquake. In fact, I no longer have a meter because I asked NW Natural to cut the gas off at the street.

The cost for this full conversion per unit was $15,333 dollars. Because I 'fuel switched' there were no rebates available. I refinanced to cover the cost. Not everyone is able to do this and we need programs

to promote fuel switching and to help finance them. Perhaps, given the climate crisis and the need to rapidly reduce the emissions from methane we could even advocate for fuel switching. Separate from the climate crisis I am very pleased with my all-electric home and the electric fireplace insert gives me the ambiance without any of the mess of wood or gas.

I encourage this Task Force to develop legislation to incentivize all home owners to convert, become more energy efficient, and use clean energy. Most, if not all, homes in Oregon have electricity, not all have gas and many use propane or wood for heat. We are prime to go all electric and only need to increase the clean energy generation as planned with HB2021.

Multi family dwellings present a unique perspective because utility costs are usually born by the tenants. Because mine is only two units I have tried to keep them in equal to maintain the resale value. Seattle has piloted a program that helps owners of multi-family units benefit from utility savings from the efficiencies they add to the building. The Metered Energy Efficiency Transaction Structure (MEETS) program may be a useful one for Oregon. More details including offers for consultation are available on the coalition website, https://www.meetscoalition.org/

Thank you for reading my story. I appreciate the work of the Joint Task Force on Resilient Efficient Buildings because everyone deserves a safe comfortable home and we need these homes to be clean energy efficient to reduce our total greenhouse gas footprint. I look forward to the recommendations of the Task Force and am happy to help support legislation that will help us reduce our greenhouse gas emissions.

By the way, I have referred several friends to Balanced Energy Solutions for assistance with their own electrification projects. One of them, who now also refers people to Gregg Robinson says, 'call Gregg, tell him you want the full Stackhouse'.

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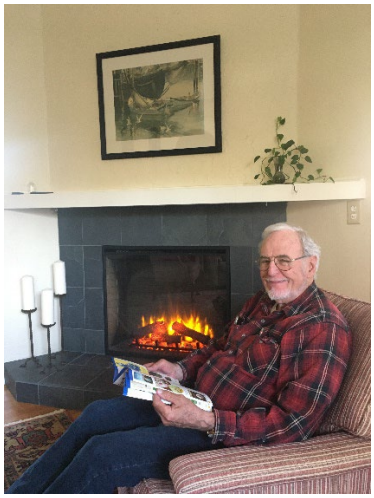
Air handler and heat pump hot water heater



The ambiance of electric fire without CO2