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Testimony in Support of LD 1679, An Act to Establish the Maine Climate Change Council to Assist Maine to Mitigate, Prepare for, and Adapt to Climate Change.

Senator Carson, Representative Tucker, Members of the Committee on Environment and Natural Resources. My name is Julia Bassett Schwerin, I live in Cape Elizabeth, I am a Broker with Coldwell Banker Residential Brokerage and I am a Green Broker, designated by the National Association of Realtors, since 2011. I come before you today representing only myself to support LD 1679.

I have been analyzing technology markets since commercializing wind and solar photovoltaics in the early 1980s. I've been brokering land and buildings for the last 12 years in southern Maine, and specifically nurturing net zero buildings – they make as much energy as they use. I teach an original, 3 hour, accredited course for Maine Realtors on high performance green and smart buildings. I create and share info on building energy efficiency and renewable energy on my website, MaineGreenBroker.com.

Buildings use 39% of all the energy in Maine, compared to the industrial and transportation sectors, and they exhaust 28% of Maine's carbon, at a cost of \$2.3 billion or 43% of the expenditures, every year. Maine houses also tend to be older, with 60% built before 1980. Maine buildings are heated 67% by oil, higher than any state. The average boiler is 19 years old according to studies for Efficiency Maine, close to the end of their useful life. The heating systems are inefficient because oil boilers only can use 80% of the carbon in the fuel, and the fuels are all imported from outside the state of Maine.

There are three things we need to do to de-carbonize our buildings, cut down on pollution to improve our health, and stop wasting money: weatherize, electrify and solarize.

1. Weatherize to make buildings energy efficient: including an energy audit, air sealing, added insulation, and mechanical ventilation. Studies show this results in an 8-11% decrease in operating costs in existing building stock; new studies from Northeast Energy Efficiency Partnerships show this results in a 25% decrease in operating costs for new construction, which is a great return on investment (ROI) because it pays for the investment by lowering energy bills.

2. Electrify; once you improve the building envelope, an opportunity opens up. Replace combustion heating systems and appliances with electric EnergyStar ones, because combusting oil, propane and natural gas creates air pollution which degrades our outdoor and indoor air quality (IAQ) and produces unhealthy air and green house gases (GHG). Both 1 and 2 result in a 5-7% increase in resale asset value.

Nearly three-quarters of Maine's electricity generation is from renewable energy, including hydro, wind and biomass, whereas imported oil has taken a heavy toll in extraction and greenhouse gas consequences to our planet. Many building owners will want to go all the way to net zero by way of

3. Solarize, in the form of rooftop, ground mount or community solar.

The carbon reduction benefit of doing these things will be huge – 28% of the *total* carbon we need to eliminate by 2050 – and this is totally doable in a much shorter time frame.

This bill establishes critically necessary and doable GHG reduction and renewable energy goals in the electricity sector, as well as a Climate Change Council of experts to guide their realization.

I wholeheartedly believe the building sector in Maine, with its old, leaky structures and reliance on dirty oil for 2/3 of its heat and hot water, can be retrofitted to meet these goals with incentives that emphasize the economic payback of significantly and substantial measures to make our buildings energy efficient, using clean electricity to power them, and using renewable energy on or off site to create that electricity. When you make the economic argument, all the politics of GHG emissions and their causes are moot: there has simply emerged a more cost effective way of doing things. The environmental and health benefits are also real and significant and should be promoted, but will not probably move the average building owner to action like saving money will. We are fortunate to have a group in Efficiency Maine Trust who understands and is experienced in the weatherization and electrification of buildings. They have a plan to assess and weatherize all buildings in Maine, but have tabled it due to lack of modest funding, which needs to be funded. Lastly, we need to provide a path for workers to become educated in the new energy economy jobs so there is a bridge from being a fossil fuel worker to being a renewable energy/efficiency worker. This bridge, along with the economic proof, will bring building owners and the workforce on board, while the environmental benefits are accruing in the background.

Speaking as a Green Broker with over 7 years of experience representing clients buying and selling significant green homes, an educator for other real estate agents on green building brokerage, a student of energy efficiency and energy codes in buildings and all types of renewable energy, I wholeheartedly support LD 1679 for establishing climate change goals and empowering a council for intelligent action.

Thank you for all you are doing for our environment and thanks for the opportunity to speak in support of LD 1679 today.

Sources: MaineGreenBroker.com, NEEP, NMR, Efficiency Maine, DOE/EIA and Dodge Analytics

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