SIERRA CLUB

September 11, 2020

VIA ELECTRONIC FILING

Harry Lanphear
Administrative Director
Maine Public Utilities Commission
26 Katherine Drive
Hallowell, ME 04347

RE: Sierra Club Supplemental Comments on Amendments to Portfolio Requirement Rule (Chapter 311), Docket No. 2020-00212

To Whom It May Concern:

The Sierra Club respectfully submits the following supplement to its comments dated August 26, 2020 concerning the Public Utilities Commission request for public comment on amendments to the Portfolio Requirement Rule (Chapter 311) in Docket No. 2020-00212.

It is critical that Maine reduce emissions from the building sector in order to meet the state's greenhouse gas (GHG) emissions reduction targets.[1] A thermal renewable portfolio standard (RPS) can help Maine transition its building sector away from fossil fuels, but only if the program is designed with that goal in mind. To that end, Maine should include heat pumps as an eligible technology in its thermal RPS, as heat pumps represent the most promising way to reduce fossil fuel end-use consumption in the state's homes and businesses. Massachusetts and Vermont have already included heat pumps in their renewable portfolio standards under the following parameters:

- In Massachusetts, air source heat pumps are an eligible technology for Alternative Energy Portfolio Standard (APS) Renewable Thermal Generation Units.[2] The APS requirements direct retail electricity suppliers to supply a minimum percentage of electrical energy sales from alternative energy generating sources.[3] The amount of alternative energy credits (AECs) heat pump systems generate depends on a number of factors, including the size of the space heated and the efficiency of the system.[4] Heat pumps are divided by output capacity into small, intermediate, and large units; owners of small air source heat pumps receive 10 years of AECs preminted upfront, while intermediate and large air source heat pump Generation Units receive AECs based on their metered production on a quarterly basis.[5] To qualify for the program, heat pumps must supply 100% of newly constructed

[1] 38 MRSA §576-A (2019) (setting targets of 45% below 1990 emissions levels by 2030 and 80% below 1990 emissions levels by 2050).
[2] 225 CMR 16.00: Alternative Energy Portfolio Standard (APS).
[3] *Id.*
[4] Massachusetts Department of Energy Resources, Qualifying Air Source Heat Pump in the APS, https://www.mass.gov/service-details/qualifying-air-source-heat-pump-in-the-aps.
[5] *Id.*

buildings' total annual heating or 90% of a building's total annual heating in retrofits or existing buildings.[6]

- In Vermont, heat pumps are included in the state's Renewable Energy Standard (RES) under the Tier III "Energy Transformation" category. Distribution utilities can meet the RES requirements by achieving fossil fuel savings from energy transformation projects, defined as projects that reduce fossil fuel consumed by distribution utility customers.[7] The net reduction in fossil fuel consumption resulting from an energy transformation project is converted to a MWH equivalent of electric energy to determine application of a given project to a distribution utility's annual requirement.[8] For Tier III, Vermont's RES established a required amount of 2% of a distribution utility's annual retail electric sales beginning in 2017 and increases by two-thirds of a percent each year until reaching 12% in 2032.[9]

Under Maine's current thermal RPS statute heat pumps are likely only included in the thermal RPS if they are paired with solar panels—solar panels would provide power to the heat pump. This is not too attenuated a connection to meet the statutory condition that thermal energy be "produced directly by a facility using sunlight"—the heat pump would be powered directly by energy from the solar panels, thus producing thermal energy directly from sunlight. Heat pumps should not have to exclusively rely on sunlight to be included in the thermal RPS, as the same requirement is not placed on other fuels included in the program. To the extent a heat pump is powered by sunlight it should be eligible to receive thermal renewable energy credit for the renewable thermal energy produced.

Heat pumps would be appropriately subsidized as part of the thermal RPS by electric ratepayers, as heat pumps are an electric technology. Conversely, it is wholly inappropriate for electric ratepayers to subsidize the non-electric heating fuels included in the thermal RPS. An increase in costs for electric ratepayers would perversely make cleaner electricity less cost-competitive with dirtier non-electric alternatives and would be counterproductive to achieving Maine's GHG emissions reduction goals. Responsibility for thermal RPS requirements that encourage non-electric technologies should fall on heating fuel providers rather than electricity providers.

Respectfully submitted,

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[6] *Id.*
[7] Vermont Department of Public Service, Renewable Energy Standard, https://publicservice.vermont.gov/renewable_energy/state_goals.
[8] 30 V.S.A. § 8005, https://legislature.vermont.gov/statutes/section/30/089/08005.
[9] Vermont Department of Public Service, Renewable Energy Standard, https://publicservice.vermont.gov/renewable_energy/state_goals.