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421 SW Oak St., Suite 300
Portland, OR 97204

1.866.368.7878
503.546.6862 ***fax***
energytrust.org

Energy Trust of Oregon Testimony before the Oregon House of Representatives Energy and Environment Committee, Representative Ken Helm, Chairman

Good afternoon Chair Helm and members of the committee. For the record, I am Hannah Cruz with Energy Trust of Oregon.

Energy Trust is a nonprofit organization delivering energy efficiency and small-scale renewable power services and cash incentives to 1.6 million customers of Portland General Electric, Pacific Power, NW Natural, Avista, and Cascade Natural Gas.

As you can see here, our territory aligns with those 5 utility territories, spanning some, but not all of the state.

In 15 years of serving customers, we have helped save or generate 600 average megawatts of electricity and 45 million therms of natural gas, saving $2.3 billion on customer utility bills.

Thank you for the opportunity to appear before the committee, and provide information regarding the expiration of the Residential Energy Tax Credit and how it could impact Energy Trust of Oregon's services for Oregonians.

Pursuant to our grant agreement with the Oregon Public Utility Commission, Energy Trust takes no position on the legislation before the committee, and we hope this information will be useful to you in your deliberations.

The Commission authorizes us to deliver cost-effective energy efficiency programs as well as small-scale renewable energy programs—for homeowners those are rooftop solar electric systems.

Both programs interact with the Oregon's Residential Energy Tax Credit, and in different ways.

I'll cover energy efficiency programs and my colleague Jed Jorgensen will describe our solar program.

On the energy efficiency side, our mandate is to save energy cost-effectively—that is—at a lower cost than the utilities would otherwise pay for it.

To determine whether any one energy-efficiency improvement is cost-effective—whether a heating system, water heater or a light bulb—we use Public Utility Commission-required cost-effectiveness tests to ensure the customer benefits outweigh the costs.

In evaluating the costs, we often factor other available incentives into the calculation, including the Residential Energy Tax Credit.

Without the tax credit, the measure cost increases and since the benefits remain the same, this changes the cost-effectiveness score.

Without the tax credit, improvements which are cost-effective today may no longer be cost-effective, and therefore no longer be eligible for Energy Trust incentives.

Our initial analysis indicates the following 6 efficiency measures would be impacted by the expiration of the tax credit. Those in bold would likely be impacted the most:

Direct-vent gas fireplaces

Ductless heat pumps

Gas furnaces

Heat pumps

Heat pump water heaters

Tank gas water heaters

This slide shows a typical financing breakdown for a ductless heat pump, which is often used to replace inefficient electric baseboard heating in older homes and apartments.

A ductless heat pump costs around $4,600 installed. Oregon offers a maximum tax credit of $1,300; reducing the customer's cost to approximately $3,300.

Energy Trust currently offers an incentive of $800, leaving the homeowner responsible for about $2,500. However, eliminating the tax credit is likely to significantly lower the cost-effectiveness score for ductless heat pumps and an Energy Trust incentive may also not be available. Should the measure become non-cost effective, the homeowner would be responsible for the entire $4,600 cost.

As you can see from the orange, top line, ductless heat pumps are an increasingly popular improvement, particularly among Oregonians with modest incomes.

Should both the tax credit and Energy Trust incentive be withdrawn, the price to the homeowner would nearly double.

And we anticipate that the number of energy-efficient improvements installed, such as ductless heat pumps, would decrease. In that case, more Oregonians would continue using less efficient and more energy intensive options, foregoing monthly energy and bill savings.

Accurately predicting the decrease in ductless heat pumps is complex. However, if the increased cost to homeowners eliminated <u>all</u> ductless heat pump installations for an entire year, 2,200 systems would not be installed, leaving homeowners with less efficient heating and cooling systems, and we project we would deliver 4 percent fewer savings in our Residential Sector.

I'd like to turn it over to my colleague Jed Jorgensen who will describe Energy Trust's residential solar program.

Thank you, Hannah. Chair Helm, members of the committee, I'm Jed Jorgensen with Energy Trust of Oregon.

Hannah's presentation covered efficiency, which constitutes the vast majority of our programs. I'll take a minute to talk about the smaller slice that makes up our renewable energy work.

Within our renewables sector, Energy Trust provides incentives for residential solar projects as part of our larger goal of creating a vigorous and sustainable market for solar in Oregon—one that will ultimately thrive without incentives. Our solar program is designed around incentives that are managed in response to market behaviors and are capped at the "above-market cost" of the project.

Above-market cost is defined as the difference between the total cost of the project and the value of the power it generates over the life of the project.

We also create and enforce quality standards, we aid the industry to drive down non-hardware "soft" costs, and we ensure a robust, qualified installer base.

At present there are 55 active residential solar trade ally companies in Energy Trust's service territory.

In 2016 these trade allies installed solar on 1,640 homes, with enough annual energy combined to fully power about half of those homes.

Costs for solar have gone down over time and the number of residential solar systems installed each year has increased, along with the size of the systems being installed.

Nearly all residential customers receiving an Energy Trust solar incentive also avail themselves of the Residential Energy Tax Credit.

These changes are reflected in the incentives that Energy Trust and the Residential Energy Tax Credit have provided to home owners. This chart shows how incentives and costs stack up for an average system installed last year.

In 2016 the average size of a residential solar system was 6 kW. Trade allies sold these systems for an average of $3.81 per kW, and the average total system cost was also around $23,000.

Over time the state-managed Residential Energy Tax Credit program has made periodic adjustments to the amount of funding provided to the average applicant.

The changes over time to both system costs and the Residential Energy Tax Credit have reduced the remaining above-market costs for which Energy Trust can provide an incentive. So Energy Trust stepped down its residential solar incentives as well to ensure we are not paying more than the above-market cost.

So what will happen if the tax credit expires as scheduled?

Without the tax credit the total remaining above market cost for solar will increase. If Energy Trust raises its incentive to cover more of the above market cost, it would significantly reduce the total number of systems we could support. If the customer has to cover the increase, we would expect fewer home owners to move forward with installations.

In either case—for Energy Trust to increase incentives or for the homeowner to pay more—without other changes in the market Energy Trust would expect to see a reduction in the total number of projects installed each year. If fewer projects are being installed we would also expect to see trade ally contractors leave the market because the volume of business will go down.

This assessment is based on the market contractions which other states have experienced when they reduced or eliminated solar tax credits or other incentives. In Louisiana, as this chart shows, the end of the state tax credit for solar at the end of 2015 led to a sharp decline in solar installations. Similar results have occurred in other states as well.

Thank you Chair Helm and members of the committee for the invitation to provide information about these potential impacts. Both Hannah and I are happy to answer any questions you have.