

The Home Energy Metering Study

The Northwest Energy Efficiency Alliance (NEEA) and its partners in the study are seeking participants for the Northwest End Use Load Research (EULR) project's Home Energy Metering Study (HEMS).

What is the Northwest EULR Project?

The Northwest EULR project is an electrical end-use metering project being undertaken in residential and commercial buildings in the Northwest. Composed of two studies and funded by regional electric utilities and government agencies, the EULR project was initiated in 2017 and is managed by NEEA.

Designed to fill a widely recognized need for current electrical end-use data, the EULR project collects continuous energy consumption data, including key heating and cooling technologies and other major end uses, through the Commercial Energy Metering Study (CEMS) and HEMS.

What are the studies (HEMS / CEMS) about?

The HEMS and CEMS studies will help the region meet its clean energy goals. The studies will provide a better understanding of the regional impacts of energy efficiency for reducing energy use, lowering energy costs, and maintaining reliability of electric service under extreme weather conditions. They will result in a better understanding of how Northwest electricity customers use electricity on a day-to-day basis and allow more accurate forecasting of the need for future energy resources.

Why do we need to do these studies?

Existing residential energy use data that is used for planning purposes by regional energy efficiency organizations is up to 30 years old and increasingly inaccurate. By updating the data used for planning purposes, the region can save millions of dollars on future energy investments.

How will this information be used?

The information is very important for designing and delivering better energy efficiency programs to electricity customers. Other important uses include designing programs to reduce electricity use at times of peak demand and improving electricity demand forecasting, resource planning, distribution planning, transmission planning, rate-making, and financial planning.

When will the study occur?

HEMS has begun, with the initial meters installed in homes during August 2018 and installations continuing into 2022. Data will accumulate year-by-year and the results from the study will be complete in 2025.

Who is expected to participate in the study?

Ideally, those homes that participated in NEEA's Residential Building Stock Assessment (RBSA) will also volunteer to participate in the studies. However, if there are not enough volunteers from the RBSA, new study participants will be recruited.

Why should households volunteer to participate?

Volunteers will help the region become more energy efficient. Other benefits include helping regional utilities to keep rates lower, lowering the costs of renewable energy, and avoiding service interruptions at times of peak electricity demand. As an added incentive, once the metering equipment has been installed, homes participating in the study will receive a \$200 incentive for participation in the form of a check.

Will this data be publicly available?

All personally-identifiable information will be removed before being released to the public. The data will not identify which homes are being metered and will be part of a large database. Individual consumer data will be treated as confidential and will not be publicly-released.

What will happen during the site visit?

Two engineers from either kW Engineering or Michaels Energy, along with a licensed electrician, will arrive at the participating residence at the scheduled day and time of the appointment. They will discuss the equipment and installation with the homeowner prior to installing the equipment.

Why does an electrician need to be there during the site visit?

The electrician is there to ensure that the metering box is installed safely and correctly. While it is a plug-in device, it has monitors connected to the electrical panel.

Where does the metering equipment go?

In homes, the meter box will be installed close to the electric circuit panel, often located in the garage or in a hallway. In addition, the installers will consult with the study participants on where to put an indoor temperature sensor in the home.

How long will the site visits take?

The site visit will take between three and four hours, varying slightly depending on the size of the home and/or types of appliances in the home.

What happens to the metering equipment when the study is over?

Upon completion of the study, the installers will schedule an appointment and return to remove all equipment, working to restore the location to the same condition it was in before the installation.

How will the study protect the health and safety of study participants and field staff?

While the COVID-19 pandemic has subsided, contractors and NEEA staff performing any site visits to homes must be vaccinated and adhere to the Centers for Disease Control and Prevention's (CDC's) guidelines, along with all applicable laws and restrictions, to help prevent the spread of the virus. The safety and health of study participants and staff is of the utmost importance.

Who is sponsoring the two studies?

The studies are currently being funded and overseen by Avista Utilities, the Bonneville Power Administration, Clark PUD, Energy Trust of Oregon, Eugene Water & Electric Board, Northwest Power & Conservation Council, National Renewable Energy Laboratory, PacifiCorp, Portland General Electric, Puget Sound Energy, Seattle City Light, Snohomish PUD, and Tacoma Power.

What is the Northwest Energy Efficiency Alliance?

The Northwest Energy Efficiency Alliance (NEEA) is a nonprofit organization based in Portland, Oregon. It is an alliance of more than 140 Northwest utilities and energy efficiency organizations working on behalf of more than 13 million energy consumers. Since 1996, the region has cost-effectively delivered over 850 aMW of energy efficiency through Market Transformation - enough energy to power more than 620,000 homes each year.

What is Evergreen Economics?

NEEA is partnering with Evergreen Economics, a Northwest-based energy research firm, to lead HEMS. Evergreen will be responsible for the customer recruitment and metering efforts on behalf of NEEA.

Who do I contact if I have further questions about the study?

Please contact the study managers at Evergreen Economics if you have any questions or concerns about the research. Utilities may also reach out to NEEA with additional questions.

Evergreen Economics

1-833-971-4367

EndUseLoadResearch@evergreenecon.com

David Clement, NEEA

1-206-852-5512

dclement@neea.org