

The Commercial 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 Commercial Energy Metering Study (CEMS).

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 Home Energy Metering Study (HEMS) and CEMS.

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 these studies?

Existing commercial 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?

CEMS has begun, with the initial meters installed in buildings during 2019 and installations continuing into 2023. 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 buildings that participated in NEEA's Commercial Building Stock Assessment (CBSA) will also volunteer to participate in the study. However, if there are not enough volunteers from the CBSA, new study participants will be recruited.

Why should businesses 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, buildings participating throughout the study will receive a choice between a \$500 financial incentive, a donation to a charity, a site specific HVAC electric summary report, or the equipment used for the study so that the building can track and analyze its own energy use by circuit online.

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 buildings are being metered and will be part of a large database.

What will happen during the site visit?

Engineers from DNV, along with a licensed electrician, will arrive at the participating building at the scheduled day and time of the appointment. They will discuss the equipment and installation with building staff both prior to the site visit and will confirm details of the installation 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 equipment is installed safely and correctly. The metering equipment is usually connected to the building electrical circuit panels.

Where does the metering equipment go?

The meter box will be installed close to the electric circuit panel, often located in the building utility or electrical room. In addition, the installers will consult with the study participants on where to place 1-3 indoor temperature sensors.

How long will the site visits take?

The site visit will take between three and five hours, depending on the size of the building and/or types of equipment in the building.

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. If the building manager wishes, the equipment can remain in the building for use by the building manager.

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), 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 DNV?

NEEA is partnering with DNV, a national energy research firm, to lead CEMS. DNV will be responsible for the customer recruitment efforts on behalf of NEEA.

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

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

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