

Affiliated Tribes of Northwest Indians
AirWorks, Inc.
Alaska Housing Finance Corporation
Alliance to Save Energy
Allumia
Alternative Energy Resources Organization
Ameresco
American Rivers
Backbone Campaign
Beneficial State Bank
BlueGreen Alliance
Bonneville Environmental Foundation
Byrd Barr Place
City of Ashland
City of Seattle Office of Sustainability & Environment
CleanTech Alliance
Climate Smart Missoula
Climate Solutions
Community Action Center of Whitman County
Community Action Partnership Assoc. of Idaho
Community Action Partnership of Oregon
Earth and Spirit Council
Earth Ministry
Ecumenical Ministries of Oregon
eFormative Options
Energy350
EnergySavvy
Energy Trust of Oregon
ENGIE Services U.S.
Enhabit
Environment Oregon
Environment Washington
EQL Energy
Forth
Global Ocean Health
Green Energy Institute at Lewis & Clark Law School
Homes for Good
Home Performance Guild of Oregon
Human Resources Council, District XI
Idaho Clean Energy Association
Idaho Conservation League
Idaho Rivers United
League of Women Voters Idaho
League of Women Voters Oregon
League of Women Voters Washington
Montana Audubon
Montana Environmental Information Center
Montana Renewable Energy Association
Montana River Action
Multnomah County Office of Sustainability
National Center for Appropriate Technology
National Grid
Natural Resources Defense Council
New Buildings Institute
Northern Plains Resource Council
Northwest EcoBuilding Guild
Northwest Energy Efficiency Council
NW Natural
OneEnergy Renewables
Opportunities Industrialization Center of WA
Opportunity Council
Oracle
Oregon Citizens' Utility Board
Oregon Energy Fund
Oregon Environmental Council
Oregon Physicians for Social Responsibility
Oregon Solar Energy Industries Association
Pacific Energy Innovation Association
Pacific NW Regional Council of Carpenters
Portland General Electric
Puget Sound Advocates for Retired Action
Puget Sound Cooperative Credit Union
Renewable Northwest
Save Our *wild* Salmon
Seattle City Light
Seinergy
Sierra Club
Sierra Club, Idaho Chapter
Sierra Club, Montana Chapter
Sierra Club, Washington Chapter
Small Business Utility Advocates
Smart Grid Northwest
Snake River Alliance
Snohomish County PUD
Solar Installers of Washington
Solar Oregon
Solar Washington
South Central Community Action Partnership
Southeastern Idaho Community Action Agency
Spark Northwest
Spokane Neighborhood Action Partners
Sustainable Connections
The Climate Trust
The Energy Project
Transition Missoula
UCONS, LLC
Union Of Concerned Scientists
United Steelworkers of America, District 12
Washington Environmental Council
Washington Local Energy Alliance
Washington Physicians for Social Responsibility
Washington State Community Action Partnership
Washington State Department of Commerce
Washington State University Energy Program
YMCA Earth Service Corps
Zero Waste Vashon



NW Energy Coalition
for a clean and affordable energy future

May 17, 2019

ENERGY STAR HVAC Program
US Environmental Protection Agency
Washington, DC 20460

Comments on Draft 1, Version 3.3 ENERGY STAR Water Heater Product Specification

The NW Energy Coalition (NWECC) provides these comments in support of the Draft 1 ENERGY STAR Water Heater Product Specification. We also support the comments submitted by Portland General Electric, one of our member organizations.

The NW Energy Coalition is an alliance of about 100 environmental, civic, and human service organizations, progressive utilities, and businesses in Oregon, Washington, Idaho, Montana and British Columbia. We promote development of renewable energy and energy conservation, consumer protection, low-income energy assistance, and fish and wildlife restoration on the Columbia and Snake rivers.

The need for various forms of flexible demand management in the Pacific Northwest electric power system is rapidly growing. Our region is experiencing significant population and economic growth. The Northwest has long committed considerable effort to accomplishing energy efficiency, achieving more than 6,000 MW since the 1980s, much of it in the last decade, according to the Northwest Power and Conservation Council, which provides regional power system analysis and recommendations under the Northwest Power Act of 1980.

However, current Council analysis also shows rising pressure on resource adequacy, that is, the ability to serve load during daily, seasonal and annual demand peaks, as the region grows and thermal generation retirements occur. While energy efficiency is our first-priority resource and provides substantial associated system capacity contribution (ASCC) in the Council's modeling, additional peak capacity resources must be acquired going forward.

To that end, NWECC has strongly supported a broad effort to develop demand response (DR) in support of meeting peak needs. In particular, we are very encouraged by the grid-integrated water heater field test conducted by the Bonneville Power Administration, Northwest Energy Efficiency Alliance and Portland General Electric, along with other participating utilities, in 2017-18. Our view on the CTA-2045 Water Heater Demonstration Report can be found at:

<https://nwenergy.org/featured/water-heaters-a-potent-weapon-in-the-fight-against-climate-change/>

An immediate and welcome consequence of the field test is that NWEC and others have successfully promoted the adoption of the requirement by the State of Washington for all new electric storage water heaters to include a modular demand response communications port compliant with the ANSI/CTA-2045-A communication interface standard, as of January 1, 2021. This provision is included as Section 5 of HB 1444 (attached), a general revision of state appliance efficiency and design standards which passed the legislature and was signed into law by the governor on May 7, 2019.

NWEC estimates that between 1000 and 2000 MW of peak load reduction is technically achievable from deployment of CTA-2045-A enabled capabilities in electric water heaters over the coming decade, as existing units are retired and replaced. This single measure, as it becomes widely adopted, will provide a substantial addition to the Northwest's response to peak capacity needs, which currently is in the mid-30,000 MW range at the regional level and growing. In addition, the cost of CTA-2045-A enabled water heating peak reduction is expected to be far less than new peaking generation, while also providing additional value in load shifting to accommodate system needs.

Finally, the CTA-2045-A technology is also applicable to many other end uses, so its implementation for water heaters will provide an anchor point for a flexible demand approach involving a significant fraction of total load.

As a result, NWEC highlights the elevated importance of moving forward the proposed ENERGY STAR Water Heater Product Specification. We believe that the lessons already learned in the Northwest are applicable and will provide substantial benefits nationally through adoption of the specification, by streamlining technical development, reducing complexity, improving business certainty for the water heater value network, and accelerating market uptake to improve grid reliability and economic benefit for customers.

We also join with Portland General Electric in their more detailed comments on the draft specification, particularly on two key points:

- NWEC supports implementation of a standard method for establishing the communication link from the customer water heater to the utility. This will avoid complex and costly arrangements to customize the interaction, simplify the equipment and program development process for both manufacturers and utilities, and provide a consistent customer experience.
- Beyond the scope but connected to the Water Heater Product Specification, NWEC also supports the recommendation by PGE to consider a modification to ENERGY STAR or a new, separate and voluntary GRID STAR program to facilitate wider and consistent inclusion of large load products using the capabilities of the CTA-2045-A and similar open communication standards.

Thank you for your consideration of NWEC's comments.

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