# Smart Appliances – The New Wave of Grid Resources

### British Standards Institute Smart Appliance Standard Incorporates OpenADR

BSI, the UK National Standards Body, published in 2021 two new standards for energy smart appliances that will support the transition to a flexible and low $CO_2$ energy system. The standards were sponsored by the Department for Business Energy and Industrial Strategy (BEIS) and the Office for Zero Emissions Vehicles (OZEV). "Although the new standards are UK developed, this provides an exciting entry point into the Europe market for our members," said Rolf Bienert, technical and managing director, OpenADR Alliance. "The UK appliance market provides a plethora of new opportunities for OpenADR certified solutions."

**PAS 1878** specifies the requirements and criteria that an electrical appliance needs to meet in order to perform and be classified as an energy smart appliance (ESA).

**PAS 1879** sets out a common definition of demand side response (DSR) services for organizations operating within the consumer electricity sector and provides recommendations to support the operation of ESAs.

***https://bit.ly/3TWbAxW***

### EcoPort®Certified Program for Smart Appliances Has Launched in the U.S.

The OpenADR Alliance is playing a key role supporting smart appliances in the USA. EcoPort® is the brand name associated with CTA-2045 certified products. CTA-2045 is a technical standard promulgated and published by the Consumer Technology Association (R7.8 Modular Communication Interface for Energy Management Subcommittee.) Compliance means that a product has been submitted to the EcoPort certification program (operated by the OpenADR Alliance, which also operates a certification for the separate OpenADR standard, IEC 62746-10-1.) Smart appliances are being used in energy flexibility programs operated by DSO's, and EcoPort enables OpenADR messages to flow to appliance owners while allowing DSOs to use communications (WiFi, cellular) of their choice.

In the U.S., several states now require all new electric storage water heaters sold in the state to include a CTA-2045 communications port. The large California market has also announced a rulemaking incorporating both EcoPort and OpenADR in appliance requirements.

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# SMART GRID DEVICES



## Intellihot – Electron Series iE1

Intellihot offers a unique electric heat pump water heating system that is healthy and sustainable.

Our Electron series is the world's first electric tankless heat pump water heater that heats water on-demand by using energy stored in a thermal battery. It produces clean, healthy, and efficient hot water without storage while providing the utmost reliability. No compromise between health or efficiency unlike others.The iE1 is EcoPort (CTA 2045) compliant.

## Rheem – ProTerra

Rheem® has expanded the ProTerra® family of heat pump water heaters, the most efficient and most advanced solutions available, with new 120-volt plug-in models. ProTerra Plug-ins are a sustainable, smart and easy replacement with uncompromising performance.

## American Standard – Hybrid Heat Pump Water Heater

The American Standard Water Heaters Hybrid is modern heat pump water heater that delivers maximum energy savings, quality you can trust, intelligence and connectivity, and maximum ease of installation. Product is built to respond to Demand Response commands through the CTA-2045 protocol and it is ready to optimize energy consumption based on Time of Use Rates. The heat pump also features WiFi/app remote control, scheduling, energy reports and diagnosis. The Hybrid was designed for quick install, universal replacement, rapid set-up, and app connection. The following models include EcoPort:

| | |
|---|---|
| ASHPWH-50 | ASHPWH-50-JA13 |
| ASHPWH-65 | ASHPWH-65-JA13 |
| ASHPWH-80 | ASHPWH-80-JA13 |

## HTP Water Heaters

HTP water heaters that are EcoPort (CTA-2045) enabled.

*Water heaters applicable:*
EVR040C2X045NDR
EVR052C2X045NDR
ELV055C2X045NDR

## Ariston Water Heaters

Ariston water heaters that are EcoPort (CTA-2045) enabled.

*Water heaters applicable:*
ARIER040C2X045NDR

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# INNOVATIVE PRODUCTS



## SkyCentrics – SkyBox EcoPort to Modbus AC SGD Adaptor

SkyCentrics' AC form factor SkyBox EcoPort to Modbus AC SGD Adaptor (MA01-EP) is an industry innovation enabling OEMs to rapidly go to market with a certified grid-interactive EcoPort CTA-2045 solution. We work with the following products and OEMs to enable their certified EcoPort CTA-2045 solution. The SkyBox EcoPort will accept and function with any EcoPort certified AC UCM. When using the SkyCentrics UCM, the products below are also certified OpenADR 2.0b compliant through the SkyCentrics OpenADR 2.0b certified VEN cloud.

SkyCentrics will assist any OEM interested in making their product Grid-Interactive using the open standards OpenADR 2.0b, OpenADR 3.0, and CTA-2045 EcoPort.



## Harvest Thermal, Inc. – Harvest Pod

The Harvest Pod leverages software and thermal energy storage to make heat pumps smarter. Harvest Pod operates the heat pump at times when when electricity is abundant, cheap, and clean, stores that clean energy in a hot water tank, and delivers it as heating and hot water whenever needed, without running the heat pump at times when grid electricity is more expensive and dirtier. Harvest Pod optimizes your energy bills per your time-of-use rate and can respond to grid events or hourly price signals via the EcoPort (CTA-2045) communication port and protocol.