Interoperability: connecting the dots in a fragmented digital energy landscape

Tuesday, 29th November 2022

14h00 – 15h00 CET

International Energy Agency

Background information

In the context of this webinar, interoperability is the capability of residential appliances and equipment to interact with other systems, that is to reduce their energy consumption to use the least amount of energy necessary to achieve a task (intelligent efficiency), or respond to changes in electricity supply or demand (demand flexibility). There are important opportunities for digital technologies and data to transform the energy sector, but there are also challenges that need to be managed.

As identified in the IEA 3DEN Digital Toolkit - Towards net-zero: Interoperability of technologies to transform the energy system, there are now more connected devices globally than people. The electrification of heating and transport offers opportunities for increased digital connectivity and reduced carbon emissions. However, a lack of device interoperability could limit the ability of residential equipment to provide demand flexibility to the electricity system, and thus will limit the deployment of renewable energy sources with increased curtailment, or could create grid stability issues caused by unmanaged charging of electric vehicles. To put the global economy on a sustainable pathway towards net-zero emissions by the middle of the century, it is necessary to realise all available means of energy demand reduction available by examining the technologies that are available today, but also to see the role of the technologies of the future to provide flexibility to adapt to increasingly complex decentralised energy systems.

The event

The IEA's Digital Demand-Driven Electricity Networks (3DEN) Initiative and IEA - 4E TCP Electronic Devices and Networks Annex (EDNA) are co-organising this webinar on the topic of interoperability of household appliances and equipment.

The webinar will draw on the key findings of a report on Interoperability, commissioned by EDNA and authored by Viegand Maagøe. The objective of the report is to gain a better understanding of the issue of (a lack of) device interoperability, and the resultant impact of this on intelligent efficiency and demand flexibility. The report attempts to answer the following questions:

- What is a suitable definition for interoperability?
- To what extend does lack of interoperability limit intelligent efficiency and demand flexibility?
- What are the causes of a lack of interoperability?
- To what extent do "closed" proprietary device ecosystems limit interoperability?
- What standardisation efforts are underway and where are the gaps?
- What are the implications for (government) policy makers?

The webinar will be presented by the authors of the report, Rocío Rodríguez Quintero and Jan Viegand.

Agenda

Tuesday 29th November	
14h00	**Welcome and opening remarks** • Brendan Reidenbach, Energy Analyst, International Energy Agency • Hans-Paul Siderius, 4E EDNA
14h10	**Presentation of the main findings from the report "Interoperability"** • Rocío Rodríguez Quintero, Chief Adviser, Viegand Maagøe • Jan Viegand, Partner, Viegand Maagøe
14h30	**Discussion and Q&A** Moderated by Brendan Reidenbach, Energy Analyst, International Energy Agency
14h55	**Wrap up and closing** Brendan Reidenbach, Energy Analyst, International Energy Agency

Speakers bios

Rocío Rodríguez Quintero

Rocío is chief adviser at Viegand Maagøe, an advisory company assisting our clients in green transition and sustainability, now employing 85 experts within energy and resources, products, buildings, manufacturing industry, economics and communication. Rocío is providing technical assistance in policy-making on the field of energy efficiency and sustainability: environmental, technical and economic analysis, modelling, impact assessment, policy recommendations to IEA EDNA, the European Commission and national and regional energy and environmental authorities and organisations. Rocío holds master degrees in chemical engineering, environmental engineering and thermal energy systems. Before the employment at Viegand Maagøe, she worked nine years at the European Commission Joint Research Centre as scientific project officer.

Jan Viegand

Jan is partner at Viegand Maagøe, and he has 35 years of experiences as an expert and project manager within energy efficiency and sustainability of products, appliances and systems and policy measures to promote them including regulation, labelling, voluntary agreement etc. He is specialized in IT, electronics and office equipment and works broadly with all product groups. Jan works with main European schemes such as EU Ecodesign, EU Energy Labelling, Green Public Procurement, Ecolabel and EU Code of Conduct for the European Commission and for European energy authorities and is expert in policy instruments and policy analysis. He combines technical consultancy with communication activities being a journalist in addition to having a M.Sc. in Engineering in Energy & Economics