Introduction to IEA-4E / EDNA

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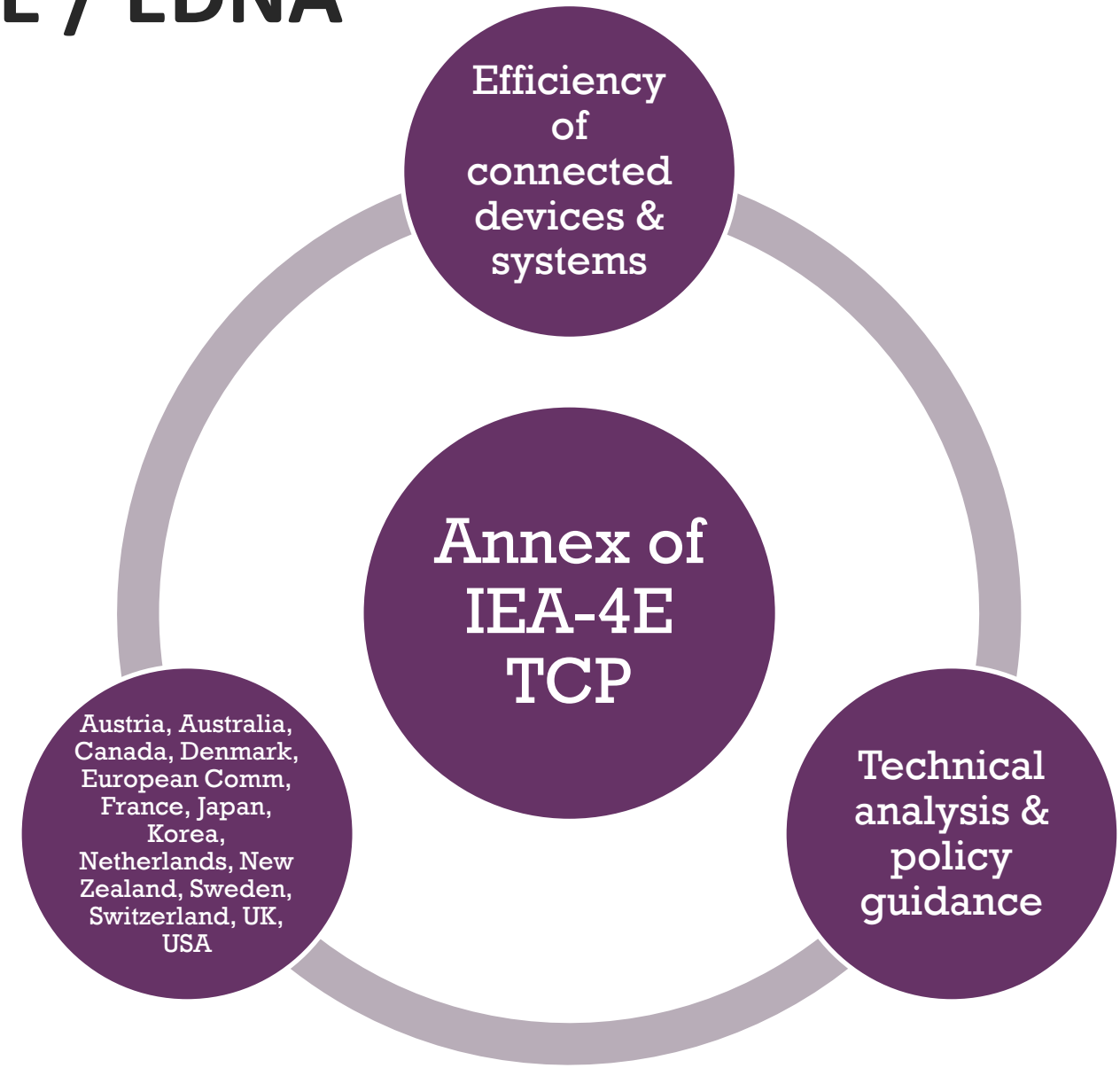
Webinar hosted by the International Energy Agency

Interoperability - Connecting the Dots in a Fragmented Digital Energy :andscape

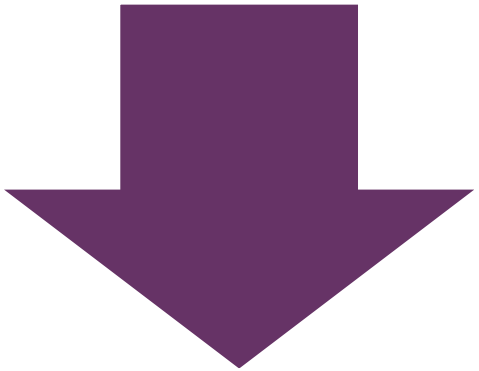
Tuesday 29 November 2022

4E Electronic Devices & Networks Annex
EDNA

IEA-4E / EDNA


Efficiency of connected devices & systems
Annex of IEA-4E TCP
Austria, Australia, Canada, Denmark, European Comm, France, Japan, Korea, Netherlands, New Zealand, Sweden, Switzerland, UK, USA
Technical analysis & policy guidance

Energy Implications of Device Connectivity

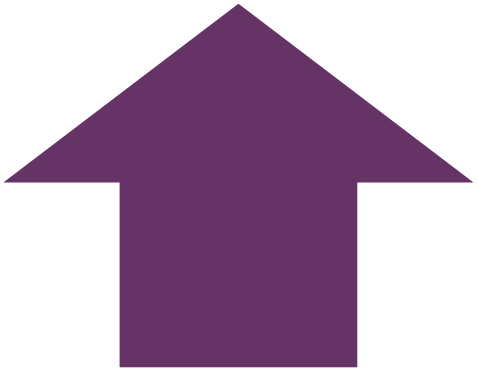


Digitalisation

- Intelligent efficiency
- Demand flexibility

Energy Costs

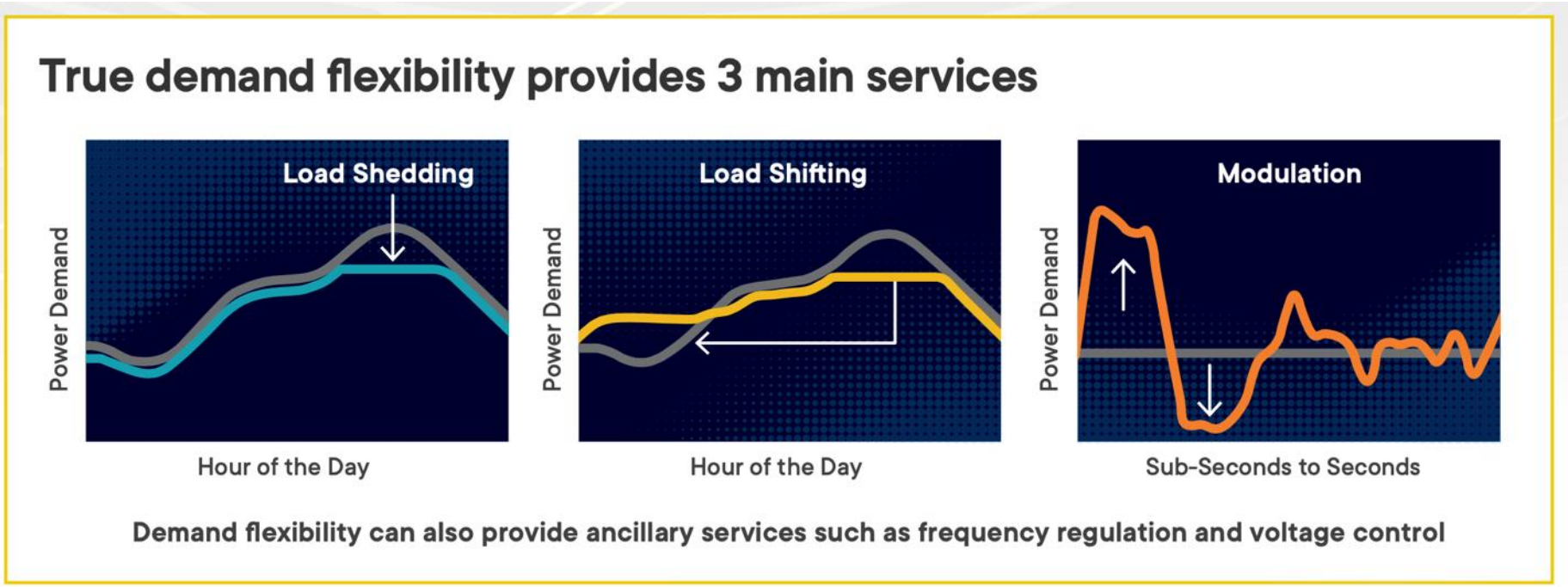
- Wasted energy
- Upstream energy



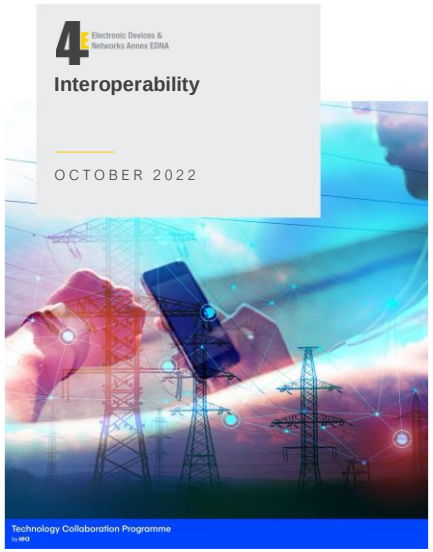
Intelligent Efficiency

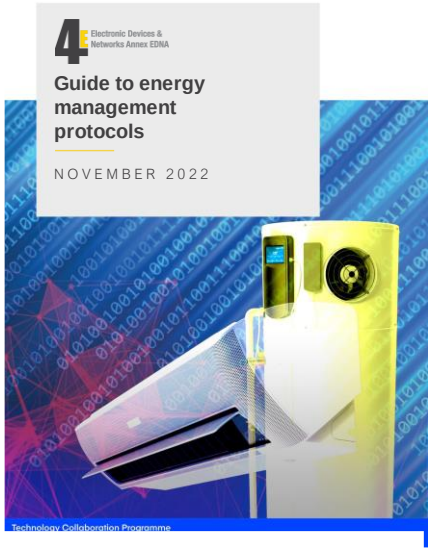
- The deployment of network-connected ICT technologies to facilitate efficient operation of energy-using equipment, leading to energy savings
- IE typically operates at the system level, rather than at the device level, to optimise the operation of a system of equipment, leading to energy savings

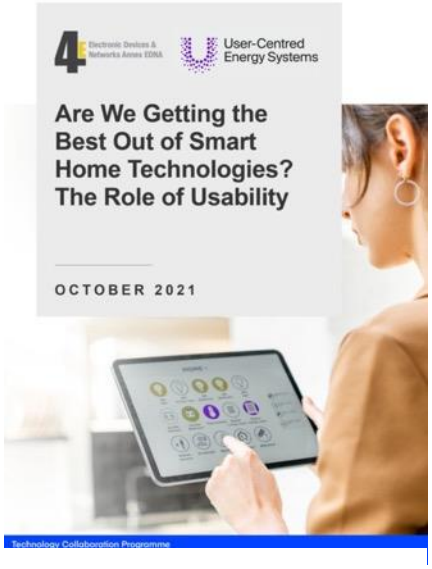
Demand Flexibility

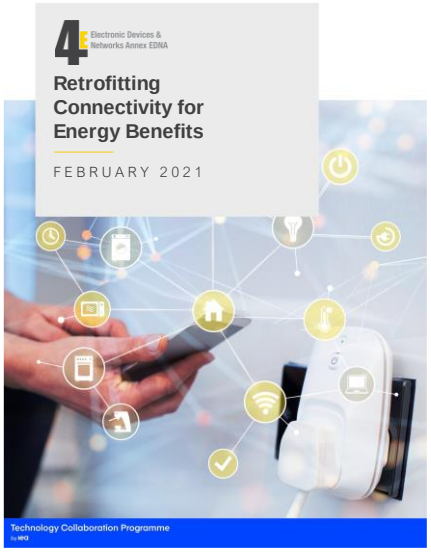


EDNA Studies on Demand Flexibility







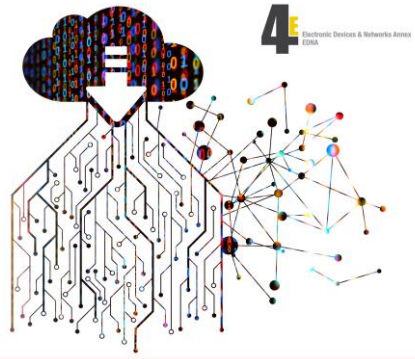


Electronic Devices & Networks Annex EDNA

Roadmap for Consumer Devices to Participate in Demand Flexibility

JUNE 2020

Technology Collaboration Programme by IEA



Energy Applications Within IoT and Digitalisation Strategies

JUNE 2020

Technology Collaboration Programme by IEA

Policy Guidance for Smart, Energy-Saving Consumer Devices

MAY 2020

Technology Collaboration Programme by IEA

Energy Aware Devices

Study of Policy Opportunities

OCTOBER 2016

connected devices ALLIANCE

Encouraging Intelligent Efficiency

Study of Policy Opportunities

APRIL 2017

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Intelligent Efficiency

A Case Study of Barriers and Solutions - Smart Homes

MARCH 2018

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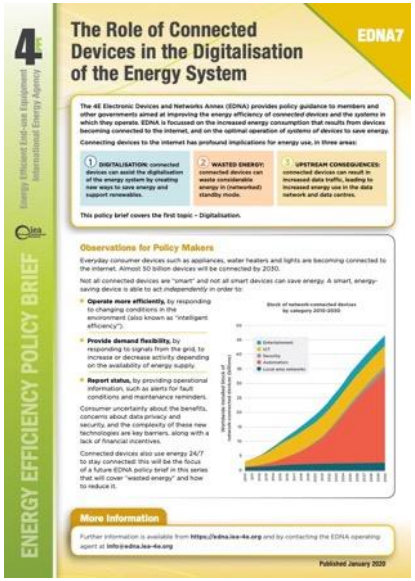
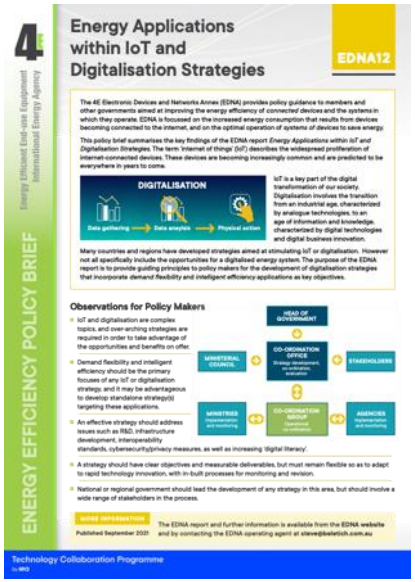
Policy Briefs





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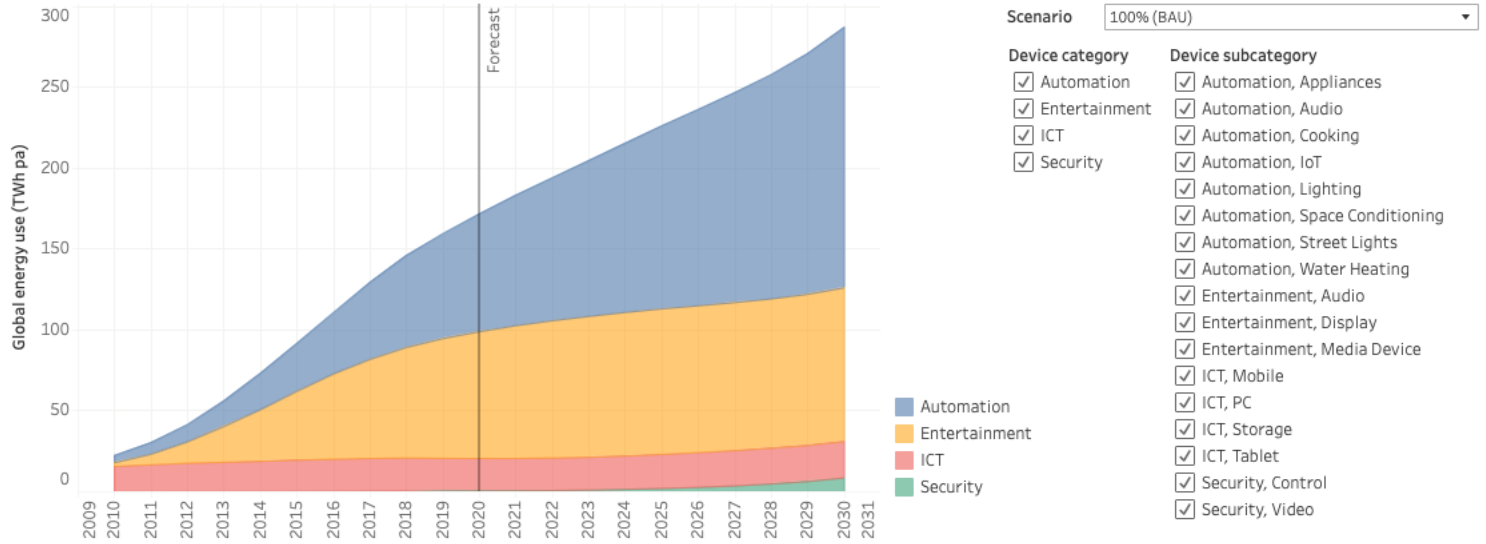
EDNA Studies on the Energy Costs

- 20+ studies on this topic
- ‘Network zero’ devices
- Total energy model

Edge Devices, Network Standby Power

The graph below depicts the energy used by connected “edge” devices, in the network standby condition. The average network standby power of devices can be varied up or down, and different product types can also be selected.

The dropdown menu to the right is used to select the network standby power of connected edge devices, as a percentage of their estimated business-as-usual (BAU) network standby power. For example, in the 75% scenario, the edge devices entering the stock (from 2021 onwards) would have a network standby power which is 75% of the projected BAU network standby power. This 75% is applied (not cumulatively) to the projected BAU network standby power for each of the years 2021-2030.



More Information

- Website
  - https://www.iea-4e.org/edna/
- Total energy model
  - https://www.iea-4e.org/edna/tem/
- Studies and policy briefs
  - https://www.iea-4e.org/edna/publications/
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