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# Beyond Network Standby

Further energy implications & challenges that need to be addressed

Moderator: Melissa Damnics - Maia Consulting
4E Standby Power Annex Operating Agent







- Network standby policies are only part of the solution
- Efficiency can be maximised by targeting ICT systems

**Products** 

Network Equipment

Servers

Connection Medium Data Storage





### Making Sure Smart is Efficient

- Network Standby is one part in a bigger system
- To maximise efficiency the whole system needs to be considered
- To avoid energy shifting need to consider other parts of the system

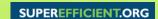




#### What is Beyond Network Standby?

What are the priority areas?

- Efficient Network Services
- Smart Meters & Energy Monitoring Systems
- Demand Response Enabled Products
- Smart homes
- Others?

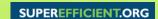






#### What is Beyond Network Standby?

- Approaches for promoting efficiency in the priority areas
- ❖ Who will / should lead this work?
- How can you support this work?



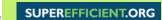




#### Efficient delivery of network services

Effective energy management needs to:

- Consider the complexity and interdependency of multiple devices and products on a network
- Appreciate the relationships between all connected products
- Understand to gain savings in one part of the system may require action in another
- Power scaling or adjusting energy use to work required







#### Efficient delivery of network services

- Software
- Network design
- Network architecture
- Communication protocols
- Technical standardisation processes
- Service providers
- Product & component manufacturers





## "Smart" meters and energy monitoring systems

- Installation of these systems are increasing globally
- Have potential to control and reduce energy use of equipment
- What is the energy consumption of these products?
- Are there energy savings over the whole system?

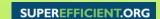






## Demand response enabled products

- "Smart" appliances interactive with the Grid
- Control power use to reduce peak power consumption
- Gives more flexibility to electricity supply
- Technology available systems for implementation need development







#### "Smart" or Automated Homes

- Appliances are connected to a home gateway
- A home gateway connects its local area networks to the Internet or other wide-area networks.
- Home gateways allow automated or remote control of appliances
- Potential to incorporate automated energy efficiency



