



Digitalizing electricity systems

Agenda Item 7 – 17th Session of the Group of Experts on Cleaner Electricity Systems

7 October 2021, 15h00 – 17h00 CEST (Geneva time)

Objective: to launch activities on opportunities and challenges provided by digitalizing electricity systems on grid management and operations and on market, with a focus on supply side

Context:

Adoption of digital technologies allows the electricity system to become more connected, more flexible and provides new ways of looking at the existing energy efficiency challenges.

The digital technologies such as Artificial Intelligence (AI), Internet-of-Things (IoT), Big Data, etc. could provide many benefits for customers, grid operators, regulators and markets by enabling more decentralization, more scalable solutions, more non-traditional generation and more non-transmission solutions such as smarter load management. It will allow more flexible operations of the energy system and could provide new market opportunities that will, for example, allow customer to play a more active role.

However, it also comes with some side-effects such as critical security and privacy concerns. These side-effects could be mitigated and even offer some opportunities.

The digitalization will thus offer opportunities to make the electricity system cleaner and more sustainable contributing to attainment of carbon neutrality.

This session will be delivered jointly by the Group of Experts on Cleaner Electricity Systems and the Group of Experts on Energy Efficiency and its Task Force on Digitalization in Energy.

15h00 Opening by the Chair, Jim Robb

15h03 Setting the scene – Connecting to TF on Digitalization and GEEE meeting (15min)

Piyush Verma, Chair TF on Digitalization

15h15 Panel on Digitalizing Electricity Systems will address:

- Benefits of digitalization on energy efficiency and on cleaner electricity systems
- Impact on grid management, market and consumers
- Opportunities in demand and supply side response through digitalization
- Challenges associated with cyber security
- Opportunities and challenges for customers
- Role of public policies and regulatory environment

Moderator: Sylvain Clermont, Vice-Chair of the Group of Experts on Cleaner Electricity Systems

Panellists:

A system operator providing lessons learned on the integration of DER
Mark Rothleder CAL ISO, United States

View on cybersecurity and privacy
Marthe Kassouf, IREQ, Canada

Digitalization of power grid and demand response

Igor Chausov, IC Energynet, Head of Analytic Branch, Russian Federation

New role of customers and smart technologies

Ana Trbovich, Grid Singularity & Energy Web Foundation Co-Founder

16h00 Discussion

16h30 Next steps

- Overview of digitalization related activities for the period from 2022-2023.
- Next steps for the TF on Digitalization, the Group of Experts on Energy Efficiency and the Group of Experts on Cleaner Electricity Systems

