European Energy Forum

The following fact sheet is provided by the EEF for a better understanding of the topic to be discussed.
The information is non-exhaustive and serves as background information.

REPowering the grid: distributing renewable energy across the EU

Energy Debate – 4 October 2022

The co-hosts – EEF Associate Members

ENEDIS manages the public electricity distribution network for 95% of continental France. ENEDIS plays a key role in the energy transition by operating, maintaining and developing nearly 1.3 million km of distribution network.

PGE - Polska Grupa Energetyczna S.A. - Capital Group is Poland's largest energy sector company. Within this group PGE Dystrybucja, manages a distribution network of almost 300 thousand km and almost 38 TWh of energy distributed. PGE guarantees a safe and reliable power supply to over 5.5 million households, businesses and institutions and plays a key role in the modernisation of the power sector in Poland.

Background information

The Power System

Transmission System Operators (TSOs): entities responsible for transmitting high-voltage electrical power from generation plants over the electrical grid to regional or local electricity distribution operators (DSOs).

Distribution System Operators (DSOs): entities responsible for distributing lower voltage electricity to all end-users through the distribution network.

In the energy system, all elements – generation, transmission, distribution and consumption - are interdependent.

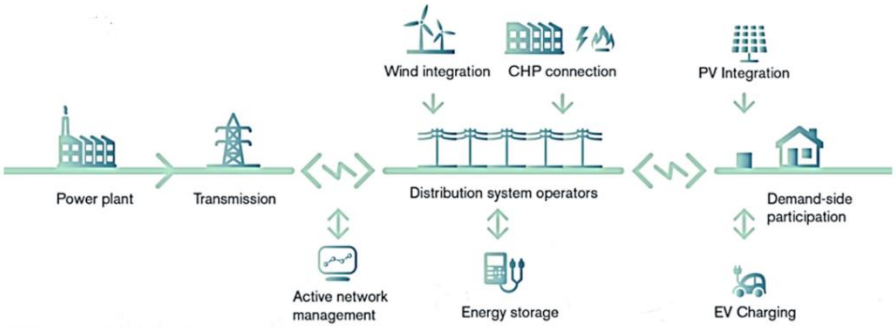
Traditionally, electricity systems are based on predictable and centralized power generation. Electricity flows in one direction:

Source: E.DSO

Today:

- more and more energy is produced from variable renewable energy sources (RES)
- the majority of RES electricity is directly connected to distribution networks: it is forecasted that by 2030, in the EU 70% of new RES will be connected at distribution level.
- the role of local generation and demand sources as active participants in the power market is also set to grow.

This affects the power system, which is changing accordingly, with electricity flowing bi-directionally and DSOs increasingly becoming active network managers.



Source: E.DSO

REPowerEU Plan: main points affecting electricity DSOs

- **Amendments to REDII**
  - EU renewables target increased to 45% - already present in the EP position on RED III adopted in September
  - Establishment of renewable "go-to-areas"
  - Measures to streamline permitting procedures
- **Amendments to EPBD**
  - Introduction of binding targets for solar installations on buildings
- **Solar Strategy**
  - 320GW of solar photovoltaic online by 2025 and almost 600GW by 2030
  - EU Solar Rooftops initiative to promote quick and massive PV deployment
- **Recommendation on permitting and detailed guidance on simplifying permitting procedures**

A DSOs perspective on REPowerEU – ENEDIS & PGE main points

- Distribution grids a will play a key role in identifying "go-to areas" which need to be based on grid data and availability, complying with permitting procedures' timeframe and providing reliable and secure grid connection to new loads of RES.
- Digitalization and automation of the distribution network is a necessity to enable flexibility services through the demand side response. At the same time, the main task of the DSOs remains to provide continuous supply of energy and maintain energy security.
- Rapid and massive investments are required in electricity distribution: a study by Eurelectric, E.DSO and Monitor Deloitte in 2021 identified that around €400 billion for investments in distribution grids were needed until 2030, entailing an increase of up to 70% compared to today.
- The ambitious EU policy regarding the deployment of RES must entail an increased support for the related infrastructure on the distribution level to ensure secure, efficient and reliable operation of the overall electricity system.
- European DSOs are the enablers of the energy transition.