

# Smart energy grid technologies for a sustainable market

## SMART ENERGY GRID TECHNOLOGIES

### Providing Digital Manufacturing solutions

The energy sector accounts for more than 75% of the European Union's greenhouse gas emissions. Increasing the share of renewable energy across the different sectors of the economy is a key ingredient to achieve an integrated energy system and match Europe's goal of climate neutrality.

TDX-ASSIST, CROSSBOW, E-LAND, TRINITY and X-FLEX are European-funded projects addressing Smart Grid, Energy storage and digitalisation challenges to achieve an open, decarbonised, environmentally sustainable and climate-resilient energy value chain.

### Challenges addressed

- ◆ Secure, clean and efficient energy
- ◆ Enforcing the role of citizens as active players
- ◆ Development of flexible Smart Grid ICT tools for all energy sectors
- ◆ Increase distributed renewable energy market penetration
- ◆ Improve security and stability of the electricity grid
- ◆ Enabling enhanced TSO-DSO interaction
- ◆ Facilitate the interconnection of SEE electricity markets
- ◆ Increase the use of business models for energy communities

### New results & services



Use case repository



CIM extensions



Data exchange platform



Software products



The **HRB - Horizon Result Booster** is an initiative funded European Commission, Directorate General for Research and Innovation, Unit J5, Common Service for Horizon 2020 Information and Data.

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## SMART ENERGY GRID TECHNOLOGIES

### Main solutions

- Transmission and Distribution System Operators and other market participants interoperability to increase the effectiveness of Distributed Energy Resources
- Holistic and integrated synergies across all energy sources, technologies and smart grid actors to create an efficient and cost-effective energy value chain.

### Who benefits?



### Join our community and contribute to increase the sustainability of the European Smart Grids

#### » TDX-ASSIST »

**TDX-ASSIST** - Facilitating scalable and secure information system between Transmission and Distribution System Operators in the power management and smart grid sector. [tdx-assist.eu](http://tdx-assist.eu)

Grant Agreement No. 774500



**CROSSBOW** - Fostering cross-border renewable energies and storage units management to increase clean energy uptake. [crossbowproject.eu](http://crossbowproject.eu)

Grant Agreement No. 773430



**E-LAND** - Developing tools and methods to achieve the decarbonisation of Local Energy System. [elandh2020.eu](http://elandh2020.eu)

Grant Agreement No. 824388



**TRINITY** - Developing solutions to support the integration of the South-Eastern Europe electricity markets. [trinityh2020.eu](http://trinityh2020.eu)

Grant Agreement No. 863874



**X-FLEX** - Developing solutions that foster a stable and secure climate resilient electricity system. [xflexproject.eu](http://xflexproject.eu)

Grant Agreement No. 863927

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