

ODEON project will revolutionise the Green and Digital Energy Transition

Valencia, February 12, 2024 – In January 2024, the Horizon Europe project ODEON started its mission to revolutionise the Green and Digital Energy transition through the creation of an inclusive ecosystem of stakeholders characterized by the integration of a mesh of Data, Intelligence, Service, and Market flows. ODEON enables the resilient operation of the energy system considering the increased integration of Renewable Energy Sources (RES) and the effective orchestration of flexibility from assets residing at the edges of the system. With a budget of 22,56 M€ allocated over four years, the project represents a significant stride toward a sustainable, secure, and competitive energy supply. Coordinated by ETRA, ODEON is set to make an impact with a consortium of 34 partners from thirteen European countries.

ODEON aims to promote connectivity, interoperability, and seamless data exchange between different stakeholders in the energy sector, prioritising privacy, and data protection. It advocates for increased investment in electricity grids to facilitate a smarter and more resilient energy system, alongside accelerated deployment of digital solutions. Additionally, it focuses on empowering consumers, especially those vulnerable or with low digital skills, to participate in the energy transition while protecting them against high energy prices online as they are currently off-line. ODEON underscores the importance of enhancing cybersecurity, addressing the energy consumption of digital technologies, and promoting greater efficiency and circularity. Ultimately, it seeks to establish a coordinated EU-wide approach to drive green and digital energy transition.

To achieve these goals, ODEON provides a set of five innovations for transforming the energy sector. It introduces a reference Federated Energy Data Spaces implementation that facilitates the integration of the value chain around energy, employs Artificial Intelligence (AI) for efficiency, and ensures network resilience for DSOs. But also, it supports cost reduction and autonomy for Local Energy Communities (LECs)/Aggregators and enables transparent energy transactions for prosumers through tailored marketplaces.

ODEON showcases its innovation through five large-scale demonstrators in Greece, Spain, Denmark, Ireland, and France. The demonstrators involve a diverse range of energy sources, networks, IoT infrastructure, systems, and assets, which are implemented across heterogeneous, climatic, geographic, and socio-economic conditions and sizes. This diversity facilitates replicability, scale-up, and eventual market launch after the project ends.

Thanks to these efforts, ODEON could help revolutionise the energy system through its Cloud-Edge Data and Intelligence technology, fostering inclusivity and collective intelligence to drive decarbonisation and resilience of the energy system. By empowering citizens, prosumers, and LECs, ODEON promotes effective engagement while leveraging data from diverse energy actors to enhance grid management and facilitate the integration of RES, ultimately reducing CO2 emissions. Finally, through increased data availability and transparency, ODEON establishes a new economy around energy data exchange, ensuring interoperability and trust across the energy value chain.

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