



Press Release

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## **From Data to Action: How Digitalisation Accelerates the Energy Transition**

In a big step toward a more independent and sustainable energy future, the ECLIPSE DIGITAL PROJECT recently organised the workshop called "From Data to Action: How Digitalisation Accelerates the Energy Transition."

The event brought together five major EU-funded projects to show how digitalization is transforming Europe's energy system, from a traditional, centralized model to a more digital, flexible, and decentralized ecosystem.

### **A Unified Vision for a European "Digital Spine".**

The workshop opened with a keynote from Ms. Patricia Arsene (European Commission, DG CONNECT), highlighting the European Commission's strategic push for a "**digital backbone**" or "**digital spine**". This vision focuses on the digital orchestration of energy assets, such as renewables, electric vehicles, and batteries, ensuring they can intercommunicate seamlessly. The goal



is **ensuring interoperability** so that data can flow across borders to enable new services and maintain network stability, throughout Europe.

### **ECLIPSE DIGITAL PROJECT: Connecting Consumers to the Energy Transition.**

At the heart of this digital transformation is the **ECLIPSE DIGITAL PROJECT**, which is developing the **Common European Reference Framework (CERF)** for energy applications. The CERF defines the common requirements and conditions for consumers energy apps to operate across countries, grids, and third-party systems without compatibility issues. Its purpose is to make digital energy services

interoperable, secure, user-friendly, and beneficial for both consumers and the grid.

During the workshop, the ECLIPSE DIGITAL PROJECT team shown a pioneering mobile energy app based on CERF, that serves as a practical example of how the CERF can be implemented to provide:

- **Real-time Monitoring:** Users can track hourly power consumption and local grid status.
- **AI-Powered Insights:** Utilizing Non-Intrusive Load Monitoring (NILM), the app can disaggregate total household consumption into individual appliances, like fridges or heaters, without the need for additional sensors.
- **Flexibility Recommendations:** Consumers receive personalized tips and notifications to reduce loads during peak times, helping to stabilize the grid while lowering energy bills.

As described during the session, if the European data infrastructure represents the "pipelines," the CERF serves as the "tap" where the value of that data is finally experienced by the citizen.

### **Collaborative Innovation Across the Sector.**

ECLIPSE DIGITAL PROJECT was joined by four other flagship projects, each addressing a different layer of the transition:

- **OPENTUNITY:** Focused on software for grid operators, including an open-source **Topology Converter** to standardize grid data into the CIM format.
- **ODEON:** Developing **cloud-edge platforms** and a catalogue of AI artifacts to manage decentralized assets and increase data observability.
- **BEGONIA:** Identifying the digital infrastructure and "**Operational Digital Platforms**" needed for cross-border use cases like EV integration and data center optimization.
- **INSIEME:** Building the **Common European Energy Data Space** with 54 partners to ensure a "by the sector, for the sector" approach to data governance.

### **Breaking Barriers: Policy and Interoperability.**

The workshop concluded with a high-level panel discussing the **hurdles to full-scale deployment**. Experts emphasized that while technological solutions are often ready, national **policy fragmentation** and **regulatory lags** remain



**significant bottlenecks.** The consensus was clear: to ensure no citizen is left behind, technology must be transparent, and user-centric, providing tangible financial and environmental benefits.

Through the ECLIPSE DIGITAL PROJECT and its partners, Europe is moving toward a system where digitalization is no longer just a support tool, but the essential backbone of a competitive, resilient energy union.

### **About ECLIPSE DIGITAL PROJECT.**

Coordinated by a consortium of 22 partners and involving 15 pilot sites across Europe, ECLIPSE DIGITAL PROJECT is a 24-month project funded under the Digital Europe Programme. It aims to define and demonstrate a common framework for energy applications to foster interoperability and empower consumers in the energy transition.

### **Further information:**

Lola Alacreu (Project coordinator) – [lalacreu.etraid@grupoetra.com](mailto:lalacreu.etraid@grupoetra.com)

Twitter: [https://x.com/Eclipse\\_DigiEU](https://x.com/Eclipse_DigiEU)

LinkedIn: <https://www.linkedin.com/company/eclipse-digital-project>



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