HEDGE-IoT

Holistic Approach towards Empowerment of the Digitalization of the Energy Ecosystem through adoption of IoT solutions

42 PARTNERS

Consortium of entities from 13 European countries: ICT companies, TSOs, DSOs, SMEs, energy stakeholders, research institutions EU-level associations, and legal & regulatory experts.

6 PILOTS

The HEDGE-IoT Framework will be implemented, showcased and validated in 6 Large-Scale field Demonstrators set in 6 European countries featuring different climatic, regulatory and social conditions.

2 OPEN CALLS

HEDGE-IoT will allocate 1.700.000 EUR to fund up to 30 projects, offering new data-driven services and functionalities that complement the HEDGE-IoT Framework.

4 PILLARS

HEDGE-IoT Multi-dimensional framework is comprised in four pillars:
1) Technology Facilitator
2) Interoperability
3) Standardisation
4) Digital Energy Ecosystem Enabling

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The main aim of HEDGE-IoT is to implement a cutting-edge Digital Framework, boosting energy system resilience and flexibility by deploying IoT assets, integrating advanced AI/ML tools, and connecting cloud and edge layers.

This framework seeks to enhance renewable energy source (RES) hosting capacity, unlock new market prospects, standardize IoT, and integrate RES into the energy ecosystem to improve sustainability and inclusivity. HEDGE-IoT will foster scalability through stakeholder collaboration and SME involvement.

1

Boost energy systems with IoT solutions across layers, enabling local intelligence for grid monitoring, self-healing, and energy savings through computational orchestration, while ensuring privacy and interoperability.

2

Develop AI/ML tools for edge, fog, and cloud services to enhance energy system flexibility, resilience, and observability while ensuring regulatory compliance.

3

Establish interoperability among distributed platforms, systems, and edge devices through a decentralized IDS-compliant Framework, ensuring secure integration and communication within the energy ecosystem.

4

Validate HEDGE-IoT solutions in six European countries through large-scale demonstrators, fostering mutual learning and knowledge exchange among stakeholders.

5

Disseminate knowledge on grid digitalisation, particularly from TSOs to lower grid levels, by establishing a Stakeholders' Consultation group involving TSOs, DSOs, and standardisation members.

6

Apply and expand open standards for IoT, interoperability, grid, and market data exchanges, aiming to establish commonly accepted standards while leveraging existing knowledge.

7

Facilitate the market adoption of project solutions, enhancing their commercial viability and supporting the Digitalization of Energy Action Plan.

8

Enrich the HEDGE-IoT Framework with additional data-driven services, particularly from SMEs and startups, through an Open Call campaign aligned with EU sustainability directives.

9

Ensure effective communication and dissemination of project outcomes, while aligning with European initiatives and projects.

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