HEDGE-IoT

Open Call 1

Funding opportunities for SMEs & startups in IoT-driven energy solutions

Co-funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under the Grant Agreement number 101136216. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

Contents

- Key Challenges
- Funding
- Who can apply?
- Important Dates
- Open Call 1 BUCs

HEDGE-IoT

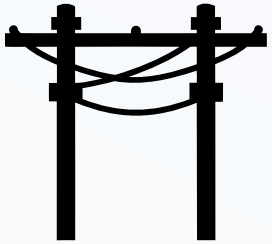
Holistic Approach towards Empowerment of the Digitalization of the Energy Ecosystem through adoption of IoT solutions

01

Key Challenges

Key Challenges

Optimizing energy demand and response



Enhancing grid flexibility and real-time predictive management

Securing IoT-driven energy data and transactions

HEDGE-IoT

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

02

Open Call 1 Funding

Open Call 1 Funding

Up to 12 projects in Open Call 1

Up to 60,000€ per project

70% funding rate

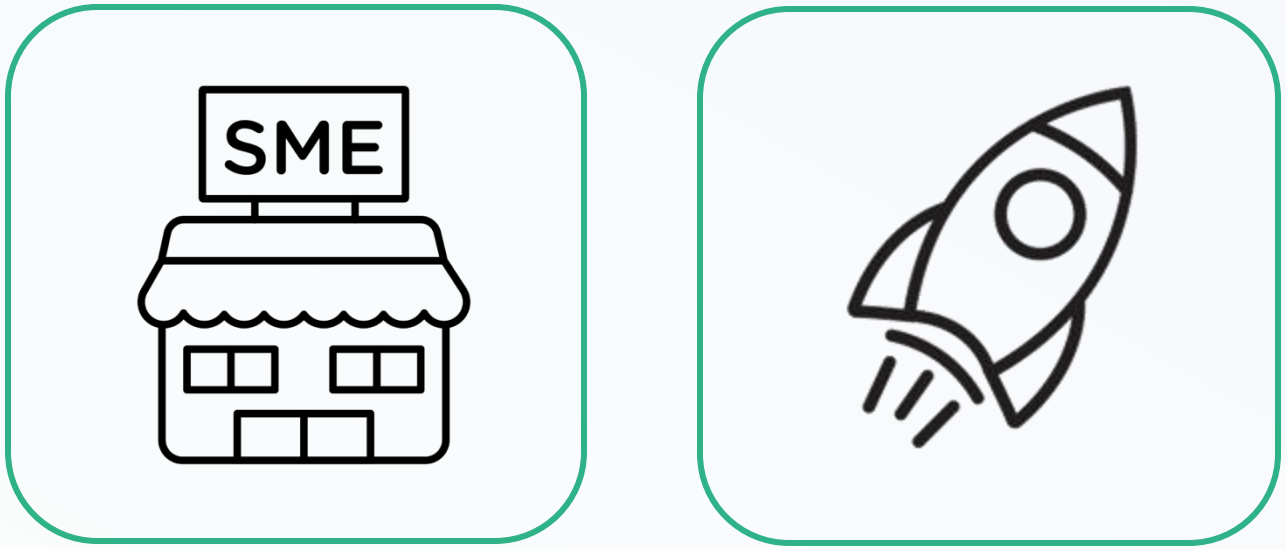
HEDGE-IoT

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

03

Who can apply?

Who is eligible?



The call invites SMEs and Startups to develop innovative IoT-based services and applications that strengthen HEDGE-IoT's technology stack, enabling smarter energy management and more resilient grid solutions.

Apply Now

https://www.f6s.com/hedge-iot-open-call-1/apply

HEDGE-IoT

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

Submissions

- Applications only via the **F6S platform**
- **Multiple submissions allowed**, but:
  - Each proposal must target a **different Business Use Case (BUC)**.
  - If funded under Open Call 1, the same entity cannot resubmit in Open Call 2
- Proposals must be in **English** and follow the provided **Proposal Template**

Additional requirement for successful applicants:

- **Proof of SME status** must be provided before contracting.

HEDGE-IoT

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

04

Important Dates

Open Calls Timeline

- Open Call 1:
  - **Applications Period:** Closes 24 October 2025
  - **Evaluation & Selection:** Nov - Dec 2025
  - **Project Execution:** Opens Feb 2026, Closes July 2026

- Open Call 2: Opens Feb 2026

Find all application documents and FAQs

https://hedgeiot.eu/open-call/

HEDGE-IoT

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

05

Open Call 1 BUCs

Open Call Topics

- 16 topics in total
- 13 topics supporting HEDGE-IoT Demos' activities
- 3 topics of general interest to HEDGE-IoT activities – horizontal topics

HEDGE-IoT Demos

Demo	Scope
Demo 1 - Finland	Next-generation grid automation with IoT and edge/cloud data to improve distribution grid resiliency
Demo 2 - Greece	Leveraging IoT and Edge Computing to foster Local Flexibility Markets
Demo 3 – Italy	Digitalize ECs and EV stations to Enhance Grid Resilience, RES Hosting and Socialize Local Productions
Demo 4 – Netherlands	Enhance local grid flexibility to diverse end users by digitizing energy assets and incorporating SAREFized interoperable grid monitoring and control
Demo 5 – Portugal	Living Lab for Interoperable AI-based Energy Services
Demo 6 - Slovenia	Enhanced Local Flexibility Services for Improved Asset Lifetime Extension Planning

Demo 1 Supporting Open Call Topics (Next-generation grid automation with IoT and edge/cloud data to improve distribution grid resiliency)

i) Enhance Observability and Resiliency of the Grid
ii) Market Integration for Local Flexibility Services
iii) DER Optimization Tools

Tools/infra/data:

- Current and voltage measurement data from the Finnish distribution network
- Network topology information
- Congestion Management planning data
- DER Measurements (e.g., PVs, storage)

Potential Applications:

- Dynamic line/cable rating, anomaly detection, post-fault analysis
- Enhancing DER integration and DSO participation in flexibility market (bidding, activation, etc.)
- DER scheduling and operation optimisation (improve local balancing, asset lifetimes, efficiency)

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

Demo 2 Supporting Open Call Topics (Leveraging IoT and Edge Computing to foster Local Flexibility Markets)

i) **Energy resource forecasting models – Scalable edge-level solutions enabling distributed optimization of DERs**
ii) **Non-Intrusive Load Monitoring for Device-Level Visibility**
iii) **AI-driven predictive flexibility pricing models – Development of dynamic pricing algorithms that optimize flexibility bids based on congestion and market conditions**

Tools/infra/data:

- Submetering data from residential assets, grid local measurements, weather data.
- Edge level devices data, consumer behavior simulated data.
- Energy market data, reference AI models for validation

Potential Applications:

- Edge level forecasting (demand, production) models.
- Identification of active devices within households
- Dynamic pricing and optimal bidding algorithms for DAM and Intraday markets

Demo 3 Supporting Open Call Topics (Digitalize ECs and EV stations to Enhance Grid Resilience, RES Hosting and Socialize Local Productions)

i) DSO Perimeters for flexibility resources pre-qualification

Tools/infra/data:

- SCADA data (grid topology, historical configuration changes(
- GIS data (grid assets geospatial representation)
- Grid and customer-level load and production measurements
- Open data (weather condition, event-based inputs)

Potential Applications:

- Algorithms defining DSO level algorithms for VPPDynamic line/cable rating, anomaly detection, post-fault analysis.
- DSO level grid configurations of future conditions

Demo 4 Supporting Open Call Topics (Enhance local grid flexibility to diverse end users by digitizing energy assets and incorporating SAREFized interoperable grid monitoring and control)

i) **Standardized IoT & Data-Sharing Protocols" – Development of open APIs and middleware that enable seamless integration of smart-grid assets for secure data exchange**
ii) **Standardized DER-Integration Solutions for Smart Grids" – Smart control & monitoring of heat pumps, PV, batteries, V2G chargers and building equipment**

Tools/infra/data:

- Telemetry data, historical and real time data
- Semantic models & device meradata, interoperability middleware
- Open source contextual data feeds (weather forecasts, dynamic grid-tariff signals)
- Security test environmnet

Potential Applications:

- Semantically adapted AI-driven anomaly detection on energy nodes, event based real-time monitoring dashboards, digital Twins of buildings' energy systems
- Knowledge engine based, DAM & intraday forecasting and DER scheduling, standardization of flexibility offers, human-in-the-loop interfaces

Demo 5 Supporting Open Call Topics (Living Lab for Interoperable AI-based Energy Services)

i) Hardware utilization for edge computing and testing facilities for HEDGE-IoT models operational testing
ii) Cross-border flexibility value chain and market integration
iii) Federated Learning (FL) Algorithm Validation in Energy Communities

Tools/infra/data:

- IoT/edge devices and DER high resolution data, covering residential and industrial assets, forecasts and historical logs, categorisation by flexible assets
- Market data (flexibility needs, metering/baselines, bidding & market results, activation setpoints
- SAREF-aligned semantic datasets and models
- FL algorithm baseline, Data Space connectors for data exchanges, computational orchestration layers, AI/ML tools for decentralized forecasting

Potential Applications:

- IoT/edge based energy services (edge offloading, orchestration, AI portability)
- Flexibility services (aggregation, bidding, activation, settlement) for ancillary services and DAM
- Federated level energy services (e.g., short term load, RES forecasts)

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

Demo 6 Supporting Open Call Topics (Enhanced Local Flexibility Services for Improved Asset Lifetime Extension Planning)

i) Load Disaggregation at the Substation Level

Tools/infra/data:

- Active and reactive power measurements at the substation level.
- Weather data
- Publicly available datasets of electricity consumption or generation by the type of DER

Potential Applications:

- Identification of DERs from aggregated demand measurements with no additional hardware
- Definition of minimum data required for the solution

Horizontal Supporting Open Call Topics

i. Integration of Data Space Connectors compliant with the new Data Space Protocol showcasing scalability and technology agnostic connectivity

What we are looking for:

- Integration of Data Space Connector implementations into the HEDGE-IoT Framework (successful data sharing and exchange through the new Connector among HEDGE-IoT users)

ii. AI-Enhanced Data App Discovery & Recommendation Engine

What we are looking for:

- An AI-based chatbox for Apps discovery in the HEDGE-IoT App Store (metadata parsing and utility inference, integration with HEDGE-IoT App Store interface)

iii. Semantic Mapper as a Service: A cloud-native or edge-deployable tool to map proprietary or heterogeneous data schemas to the HEDGE-IoT ontologies

What we are looking for:

- Mapping JSON/XML/CSV to target ontologies (integration with ETS SAREF, SAREF4ENER, compliance with ETSI EN 303 760)

HEDGE-IoT

Thank You!

Co-funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under the Grant Agreement number 101136216. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.