

Trusted AI for Distributed Energy Operations

Call: HORIZON-CL5-2027-02-D3-24

TSE GLOBAL "Conformity for Trust"

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Project Concept: Trusted AI for Distributed Energy Operations

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CALL TOPIC

Large-scale operational validation and upscaling of state-of-the-art (generative) AI tools and models powering a next-generation digital energy system

Funding&Tenders Portal Link

Project proposition

Validate specialised, secure and resource-efficient AI with energy operators in real or representative grid settings.

PRIORITY USE CASES

- **Grid Monitoring**
- **Renewables & Load Forecasting**
- **Balancing & Flexibility**
- **Consumer Empowerment**

AI development environment links to energy systems and energy-saving applications.

What the pilots should establish

01 **Operational value**
How well does the AI support monitoring, forecasting or flexibility under operating conditions?

02 **Trust and control**
Can operators trace outputs, manage risks and maintain appropriate oversight?

03 **Deployment readiness**
How do integration, compute demand and resource use affect replication?

CONSORTIUM STATUS

Concept in formation

PARTNERS SOUGHT

Coordinator, energy-system pilot hosts, AI/digital energy teams and research partners.

TSE Global | Standardization & Regulation Partner

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ORGANISATION
International Conformity Assessment Body, Non-SME, Private Company
Subsidiary of the Turkish Standards Institution

COUNTRY
Türkiye

COORDINATING DEPARTMENT
Project and Business Development Directorate

AI governance & standards

TSE Global developed an AI risk-management programme aligned with the EU AI Act and also delivers AI governance fully compliant with ISO/IEC 42001 AI Management System standard providing responsible, transparent, accountable AI governance within EU Projects.

Audit, inspection & verification

Third-party **audit**, **inspection**, **certification** and **reporting** capability supported by internationally accreditation authorities. Establishing objective **verification**, **traceability** and demonstrable alignment with relevant **EU regulatory and standardization frameworks.**

Energy asset management

ISO 55001 Asset Management; lifecycle cost modelling, maintenance and downtime planning, risk and performance management, change management, resilient infrastructure, resource optimisation, long-term operational continuity.

Sustainability assessment

TSE Global provides LCA/SLCA, carbon and water footprint calculations and sustainability reporting expertise, supporting climate resilience, policy assessment and sustainable transition solutions. Relevant to energy and resource-use impacts.

CURRENT HORIZON EUROPE PROJECT : JUST-CIRCLE

TSE Global's Role: Aligning methodologies and inputs-outputs with standardization frameworks ensuring harmonised, measurable and traceable evidence across the **four pilots**, supporting **exploitation, policy, replication** and **training.**

CORDIS project

TSE Global's Proposed Role

Workflows & WPs to be agreed with the coordinator, AI developers and pilot hosts.

01 DEFINE

Before pilots

- Map AI risks and requirements with technical partners.
- Agree pilot indicators and evidence templates.
- Document roles for human oversight, traceability and security.

OUTPUT | Governance & evidence protocol

02 ASSESS

During pilots

- Review pilot records against agreed controls.
- Check traceability and completeness of pilot evidence.
- Add asset or sustainability indicators where in scope.

OUTPUT | Pilot evidence summary

03 REPLICATE

After pilots

- Train project teams and project stakeholders.
- Turn pilot results into guidance for responsible use.
- Support replication planning across operators and sites.

OUTPUT | Training & replication guidance

TSE Global contributes to **AI governance, verification pathways, pilot evidence, sustainability, optimisation within the framework of ISO 55001 Asset Management standard.**

Seeking a Coordinator and Technical Partners

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Coordinator	Horizon Europe coordination and proposal leadership
Pilot hosts	Grid operators, utilities or energy communities able to host pilots and share operational data
AI & digital energy	Secure AI developers, digital platform providers and system integrators, including edge or federated AI
Research & Architecture	Universities or institutes with grid, AI evaluation, cybersecurity or interoperability expertise

THANK YOU!

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Greenet

The network of Horizon Europe Cluster 5 National Contact Point.





