

## I-ENERGY: Delivering the next-generation Artificial Intelligence services for the Energy Sector

Artificial Intelligence (AI) is expected to radically reshape the energy sector value chain, by improving business processes performance, while increasing environmental sustainability and propagating high social value among citizens. Additionally, a vast amount of energy data is available, coming from several sources including smart grid sensors, simulators and open data sources. However, the energy sector is characterised by uncertain business cases, fragmented regulations, immaturity of standards and lack of high-end ICT workforce of EPES stakeholders. Additionally, the lack of interoperability across data stream providers, of energy data ownership and sharing, and of a holistic, safe and cooperative AI perspective amongst the EPES community actively hinder the effective integration of AI services in the sector.

This publication presents the I-ENERGY modular framework for supporting AI-on-Demand in the energy sector by capitalising on state-of-the-art AI including resources made available by the AI4EU platform, as well as IoT, semantics data analytics adaptive learning and digital twin technologies. The solution, developed in the context of the EU funded I-ENERGY project, will enable AI-based cross-sector multistakeholder analytic tools for integrated and optimised smart energy management, based on interoperable data exchange under respective sovereignty and regulatory principles. The project will also manage Open Calls for the delivery of innovative AI-driven energy services through the provisioning of financial support to third parties.