Blueprint of a Common European Reference Framework for energy saving applications for consumers

The EU funded InterConnect project, which gathers 50 European entities from the Energy and Internet-of-Things value chain, is focused on developing and demonstrating advanced solutions for connecting and converging digital homes and buildings to guarantee a cleaner, secure and affordable electrical system.

Following the adoption of the Digitalising the energy system EU action plan (published in October 2022), the InterConnect project has set as a new goal to contribute to the development of a Common European Reference Framework (CERF) for energy saving applications that allow them to make voluntary reductions in their energy consumption and help them in reducing their energy costs. CERF for energy saving applications will leverage the creation of consumer applications across Europe that will enable improvement of electricity grid resilience and stability through reduced and time-shifted consumer energy use that are encouraged through signals users may receive in their Energy App of choice. CERF for energy saving applications will allow for personal energy bill savings at the same time.

The CERF for energy saving applications blueprint delivered by the InterConnect project in February 2023 proposes a design (or pattern) that can be followed to implement instantiations of the CERF on national levels. The blueprint acts as a guiding principle and consists of technical and non-technical information such as, but not limited to, a system architecture, conditions for the Minimum Viable Product (MVP) characteristics that energy saving applications should fulfil, business use cases, terms of reference as well as interface specifications and an overview of relevant data sources.

The core developments carried out by InterConnect, namely the Semantic Interoperability Framework and the Distribution System Operator Interface, which are already publicly available, will be used to demonstrate the ability to interconnect consumers, grid stakeholders, technology enablers, devices and service providers to realize differentiating Energy Applications.

The InterConnect project will further expand the development and real life testing of the CERF for energy saving applications by dedicating € 2M to project partners' activities as well as to 3rd parties through a cascaded funding mechanism. A first generation of energy saving applications will be tested within the scope of the InterConnect project, in a contained environment in at least 3 EU member states in which existing InterConnect pilots are running. Additional EU member states will be included via the cascaded funding where companies that are familiar with the topic and are already developing energy saving applications will demonstrate their solutions in 7 additional geographies.

The overall ambition of the InterConnect project is to deliver at first stage by November 2023 a Minimum Viable Product (MVP) which will contain a working reference framework for interoperability using currently available data sources, such as DSO and TSO information, and an open source reference design for energy savings applications. The second stage in March 2024 will consist of large-scale demonstration of CERF for energy savings applications in 10 EU member states.

The main activities and pilots currently running can be followed at the InterConnect project website, where a detailed description of how the project is impacting the involved countries is presented.