ENERGY COMMUNITY MEMBERS

The community engagement is the secret power of energy communities. It is necessary to clearly define who the involved prosumers, consumers and service providers are and which features they bring in.

RESIDENTIAL PROSUMERS

DESCRIPTION

The pattern "residential prosumers" addresses small-scale household consumers as members of the energy community. Households can be part of energy communities as prosumers by producing and consuming energy and also providing flexibility.

IMPLEMENTATION REFERENCE

- Floating district developed by residents (Schoonschip Energie Coöperatie)
- Residential prosumer-based communities (Som Energia, Comunidades Energeticas)
- Energy management system for residential consumers (Smartly, EON Solar cloud)
- Crowd balancing platform (Equigy)

LARGE-SCALE PROSUMERS

DESCRIPTION

The pattern "large-scale prosumers" focusses on commercial or industrial consumers, but also entities of a municipality.

Large-scale prosumers can be key members of energy communities as consumers, prosumers, producers and flexibility providers.

IMPLEMENTATION REFERENCE

- Shopping mall as community (Vibeco)
- Island as community (Smart Åland)
- Harbor as community (Hafenstrom)
- Flexibility programs for industries (Entelios, Open Energi, Kiwipower)

LOCAL ENERGY PRODUCERS

DESCRIPTION

The pattern "local energy producers" entails local power plant operators as a core part of the energy community. Typically, the local energy producers would be operators of larger solar or wind power plants, or district heating systems.

In contrast to the prosumer pattern, the local energy producer is a pure producer of energy.

IMPLEMENTATION REFERENCE

- Platform for bringing renewable energy producer and consumer together (Vandebron)
- Community members as energy producers without need to operate energy power plant (Ecopower, Som Energia)

ENERGY SERVICE COMPANY

DESCRIPTION

The pattern "energy service company" (ESCO) addresses the role that energy services companies play by becoming part of the energy community and by fulfilling one or several of the key functions. With the pattern "energy service company" we refer to the energy division of a utility company, as well as to other companies providing energy services (e.g., energy efficiency, energy management), both serving the individual members of the community. In contrast, grid operators are not members of the energy communities, as they, being strongly regulated businesses, are not involved in the communities' day-to-day activities. Grid operators, however, can be partners to the energy community, as they still can profit from the community's activities. This pattern covers the typical ESCO role, as well as other companies offering energy services.

IMPLEMENTATION REFERENCE

- Foster development of energy communities (Green Energy Cooperative) and community energy trading platforms (Quartierstrom project)
- Project development for multi-technology integrated RES systems (Flexens)
-Energy management service to consumers (Tibber)
- Energy services to industries and organizations (Kiwipower, Entelios)
- Energy services for ports (Hafenstrom)

COMMUNITY PLATFORM OPERATOR

DESCRIPTION

A "community platform operator" can be part of the community by offering and operating a platform that allows the coordination between various community members on a day-to-day basis. The platform operator can, for instance, provide a peer-to-peer trading platform, manage an aggregation business, or facilitate the interaction between the community members and external partners (e.g., grid operator). In their activities, community platform operators focus on connecting the members and providing a suited ICT infrastructure (in contrast to generation infrastructure).

By doing the community platform operators they provide a service to the community.

IMPLEMENTATION REFERENCE

- Energy platform for 100% sustainable energy (Vandebron)
- Use green energy from the community (Sonnen Community, Som Energia, Quartierstrom project)
- Energy management and VPP (FlecoPower, Tiko, Cut Energy)
- Blockchain-based flexibility trading platform operator (Equigy)