DEMO 1

Finland

Locations in Eastern Finland, covering JSE's MV/LV distribution network, including 2 primary substations, ~420 secondary substations,and ~5900 customers.

Technology

The Finnish demo integrates ABB's virtualized grid automation platform and Intelligent Electronic Devices (IEDs) to monitor and manage the MV/LV distribution network in real-time. Edge-cloud data exchange is enabled via industry-standard communication protocols like IEC 61850 and 60870-5-104.

Advanced connectivity through 5G and other hybrid solutions ensures low-latency transmission, supporting distributed grid intelligence and proactive asset management across the network.

Key Use Cases

- Distributed grid monitoring and asset management
- Congestion management and grid flexibility
- Real-time data sharing across stakeholders
- Integration of DERs and edge intelligence for resilience

Target Audience/Beneficiaries

- DSOs benefiting from enhanced observability, automation, and grid reliability
- Grid Operators and technical partners using real-time data for advanced grid analytics
- Energy service providers leveraging flexible data sharing for added-value services
- Consumers indirectly benefiting from improved quality of service and fewer outages

HEDGE-IoT Tools Involved

- ABB Edge Platform and SSC600 extensions
- Real-time CM service (IEC61850-based) and anomaly detection modules
- Eclipse Dataspace Connectors and Interoperable Middleware for secure multi-party data sharing

Partners involved

ABB · ENERVA · JÄRVI-SUOMEN ENERGIA · Tampere University · VTT

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