Case Study

Quick-to-install remote access brings flexibility into power grid building

Suur-Savon Sähkö is an energy company group operating locally close to its customers. Suur-Savon Sähkö provides for energy supply, production and distribution in Finnish Lakelands, in the eastern part of Lake Päijänne. The group is one of the major employers in the area, with about 270 energy field professionals.

Challenge
Suur-Savon Sähkö has statutory responsibility for securing the supply of the energy it sells in its distribution area. Therefore, the starting points for all technical solutions of the distribution network are reliability, security and safety. For data connections of the power grid control system the company primarily employs its own fiber optic network. However, in a new construction site optical fiber is not always available or it takes a long time to obtain it. Thus, a reliable wireless remote access was needed in order to speed up the deployment.

Solution
Järvi-Suomen Energia, a power grid company owned by Suur-Savon Sähkö uses Tosibox in controlling circuit breakers. Company uses Tosibox with 3G modem because of the rapid deployment and the security. Tosibox Lock is installed in the apparatus box along with other needed components. Finally the system is tested. This ready-made package can be installed into the field very rapidly. Later, when a fiber optic connection is built into the location, Tosibox Lock may be utilized as a backup connection. The connections have been very reliable. In data connection disturbance cases the automatic reconnection technology of 3G Modem has worked well. Data connection outages have been restricted to situations, where there has been a longer failure in the mobile network.

“Tosibox enables a secure and quick-to-install remote connection in our new construction sites. The deployment of the sites is speeded up and thus we can more flexibly answer to the development needs of the power grid. Tosibox really provides Plug&Go remote access!”

Pentti Ollikainen, Technical Expert, Suur-Savon Sähkö Oy
Suur-Savon Sähkö remote access solution for power grid control

a) Optical connection
3G used as backup

b) 3G connection only

Suur-Savon Sähkö Central Control Room

Tosibox Master Key

Optical to Ethernet Converter

Control Unit

Tosibox Lock with 3G Modem

20 KV Circuit Breaker

Tosibox Lock with 3G Modem

Control Unit

20 KV Circuit Breaker

internet