

**RADIUS**  
Radio Network Technology

*NetMan-G NetMan-S*

"RADIUS NetMan system gives us the tools we need to shorten our outages and minimize the time it takes to find faulty sections of the network. At our latest outage, we got 98% of our customers back within 10 minutes. This compares very favorably with the past, when we considered ourselves lucky to manage the job in one hour."

Per Linblad, Network Manager

## Sweden's Vattenfall Chooses RADIUS and Cooper's NOVA for Major DA Project

Vattenfall, one of the largest energy groups in the Nordic countries, started the first large-scale investment in modern distribution automation in Europe with its GotCom project. The goals of the project included improved reliability, efficiency and profitability. Vattenfall is a global energy company with operations in the Americas, the Far East and Europe.

The project, begun in 1998, involves complete automation of the distribution system of Sweden's largest island, Gotland.

Lying off the east coast of Sweden, Gotland covers an area of 3,140 square kilometers. Its permanent population of 58,000 swells by another 650,000 tourists in the summer. Visby, Gotland's largest city with about 22,000 inhabitants, is listed by UNESCO as a world heritage site.

Vattenfall required a cost-effective system that could be integrated into its existing SCADA system, which demands little maintenance and which delivers high reliability.

It required a wireless communication system for remote monitoring and programming. All remote units were to possess intelligent software with auto-sectionalizing and restoration algorithms embedded. Most important, it was to be expandable for future growth, as well as compatible with existing equipment.

RADIUS NetMan network management system was selected. The remote terminal units (RTU's) controlled both underground and overhead equipment, primarily through air-break switches.

The RADIUS NetMan system offered these benefits:

- Complete system for distribution automation
- Rapid and secure communication
- All units are store and forward capable
- Digital radio network architecture
- Report by exception for instant updating
- Handles both pole top and underground applications
- Supports a wide variety of SCADA protocols
- Built-in test routines
- Unmatched price-performance ratio

Although Swedish utilities had not used reclosers on their systems in the past, Vattenfall used this project as an opportunity to introduce Cooper Power Systems' NOVA reclosers to their system. The reclosers protect the main 35 kV distribution line, which covers the entire island. The NOVA reclosers are completely integrated in the NetMan system, and are easily accessed from the SCADA headquarters.



Used in a three or more recloser scheme, NOVA reclosers offered these benefits:

- Improved system reliability by clearing momentary faults without locked system outages
- Protects system from fault damage
- Complete flexibility in time current curve setting and coordination
- Vacuum interrupters and solid insulation offer the longest life with no maintenance
- Sectionalizing and alternate source feed capabilities reduce outage size

RADIUS, with headquarters in Kariskrona/TelecomCity, Sweden, and Cooper Power Systems, with headquarters in Waukesha, Wisconsin, were chosen for their expertise in defining and supplying network solutions with complete system integration. The partner companies have supplied diverse automation solutions to utilities around the world.

### **Distribution Automation Solutions from Cooper Power Systems**

- Easy integration into existing systems
- Interrogation and programming via personal computer
- User-friendly Microsoft® Windows® based application solutions
- Communications capability for SCADA systems
- Variety of protocols utilizing radio communications
- Solutions with a wide range of products: relays, reclosers, regulators, three-phase switches, capacitors, fault indicators, etc.

***Contact your Cooper Power Systems Representative,  
or call 1-877-CPS-INFO for more information.***

**COOPER** Power Systems

Cooper Power Systems  
2300 Badger Drive  
Waukesha, WI 53188

[www.cooperpower.com](http://www.cooperpower.com)