

ABB Inc.

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Overview:

ABB is a leading global supplier of power and automation products, systems and services. The company's Power Products (PP) and Power Systems (PS) divisions serve electric, gas and water utilities, as well as industrial and commercial customers with a broad range of offerings for power transmission, distribution and power plant automation.

PP products include a broad array of high- and medium-voltage equipment. PS provides turnkey solutions including IT systems from the company's Network Management operations that enable today's energy markets and utilities to control and manage the physical grids. ABB Network Management's IT systems support: Central Market Operations; Power Generation Resource Management; Transmission and Distribution Grid Management Systems and Outage Management Systems.

Operations:

ABB's Power Products and Power Systems divisions had revenues of \$9.7 billion dollars in 2004 and currently employ 40,500 people. Globally, the ABB Group of companies employs over 106,000 people in around 100 countries, and posted revenues of \$20.7 billion dollars in 2004.

Key Personnel

- Americas, Russia, China and Taiwan:
 - Gordon Woolbert, Sr. Vice-President and General Manager, Network Management
 - Rafael Ochoa, VP, Sales, Marketing and Business Development, Network Management
- Europe, Africa, and other areas:
 - Göran Sjöstedt, Sr. Vice-President and General Manager, Network Management
 - Man-Yan Ng, Vice-President, Marketing & Business Development, Network Management

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SCADA/EMS/GMS/DMS/OMS-Related Products:

ABB Network Manager's system is a platform product that offers stand-alone or fully integrated monitoring and control systems for Central Market, Generation, Transmission, Distribution and Outage Management Dispatch centers. Network Manager is a modular system that can be tailored to meet the needs of each company, from Independent System Operators (ISOs), generation companies, and distribution utilities, to large integrated utilities requiring varying degrees of integration of their generation, transmission and distribution operations.

Network Manager combines proven applications that have evolved over ABB's thirty-year history with EMS and SCADA systems with a modern IT environment to support expanding operation and control requirements. It supports high-availability and disaster recovery features in a real-time performance environment and incorporates cyber security tools to meet regulatory and corporate IT security measures.

Network Manager offers the communication infrastructure for:

- Substation and poletop RTU Monitoring and Control using modem (e.g. bit based protocols) and IP (e.g. DNP protocols) based communications
- Secure ICCP for communications services between Control Centers
- Message-oriented middleware integration for communicating transactions across the corporate network
- Other point-to-point and file based data transfer using CIM (transmission and distribution) and utility specific data formats

Network Manager is a control center solution, supporting a safe and efficient energy system operation. Network Manager is also an energy information system, providing decision makers with reliable process information. Its modular functionality can be tailored to the needs of each company, from small distributors to large power utilities. It also provides a smooth migration path, allowing the addition of new functions when needed to fulfill future requirements.

Network Manager's open and versatile platform allows for easy integration of utility information systems while maintaining IT security levels. It provides an optimal solution for coordinated monitoring and control, from power generation to transmission and distribution. Its integration capabilities make it a seamless part of an enterprise's total IT solution.

Network Manager/Generation is the solution for optimizing total generation and meeting power contract agreements. It performs real-time control of dispersed generation systems while maintaining reserve margins. It also provides for scheduling of a variety of generation resources

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including thermal, hydro, etc., as well as it integrates with function modules for wholesale trading and minimizing financial risk. The main features of this system are: Supervisory monitoring and control; Optimal use of generation resources; Generation control tuned to market demands; Storing of operational results and contractual agreements in a data warehouse; Savings in fuel consumption; Reducing need for generation reserves; and, interacts with wholesale trading

Network Manager/ Transmission is the optimum solution for transmission network operations in a deregulated market as well as for combined network and power generation operations in a traditional market. It provides functions and tools for the analysis and optimization of day-to-day operations. It enables operating costs to be reduced while increasing system security. The main features of this system are: Supervisory operation and control; Accurate scheduling – loadings and generation; Statistical information - data warehousing; HV network monitoring in real time; Security analysis of operational states; Enhancement of operations and optimization; and, interfaces market operations.

Network Manager/ Distribution provides functions that enhance operation of medium- and low-voltage power distribution networks. It makes work scheduling easier and improves customer service by providing accurate and prompt information about maintenance and outages. The main features of this system are: Real-time monitoring and control; MV network operations and analysis; Operational information in data warehouse; Optimal network utilization and loading; Outage management including trouble call interface; Work management for smooth scheduling; and, crew and resource management

Representative Customers

Alberta Electric System Operator
(Power Pool of Alberta, Canada)
California Independent System
Operator (USA)
New York Independent System
Operator (USA)
Exelon (USA)
Salt River Project (USA)
Three Gorges (China)
TransGrid Power (Western Australia)
American Electric Power (USA)

Comision Federal de Electricidad
(Mexico)
Saabruecken (Germany)
China Light & Power(Hong Kong)
PEPCO (USA)
Sydkraft (Sweden)
ENEL (Italy)
Tri-State G&T (USA)
CENACE (Ecuador)
ITAIPU (Brazil/Paraguay)
NYSEG (USA)
Silicon Valley Power (USA)