



Meter & Load
Management

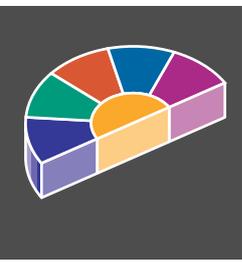
Meter and Load Management comprises electricity metering products and integrated systems for automatic meter reading, and load management.

Meter and load management solutions for a steady revenue stream



ABB Network Partner





The total proposition

Panorama is the standard for a comprehensive range of integrated solutions for efficient and reliable management of power networks. Using innovative information technology, Panorama delivers total control of the power process, from generation to consumption. The Panorama standard covers six application areas, each offering specific solutions.



Station Automation & Protection

Station Automation and Protection includes control, monitoring, and protection for power plant, transmission, and distribution applications. Solutions range from single function protection and control units to fully integrated, comprehensive, high-performance substation automation systems.



Network Management

Network Management enhances operation of interconnected power networks. It provides integrated solutions that optimize energy supply while maximizing reliability on both transmission and distribution networks.



Business Management

Business Management provides the tools and solutions to help energy companies grow profitably in today's changing market place. Systems for wholesale and retail energy supply and transportation provide the foundation for success in the competitive environment.



Meter & Load Management

Meter and Load Management comprises electricity metering products and integrated systems for automatic meter reading, and load management.



Consulting & Services

Our comprehensive range of consulting and other services includes pre-studies and situation analysis, technical specifications and advice, feasibility studies, training, installation, commissioning, maintenance, repair and help line.



Communications

Communications offers solutions for all communications requirements in the transmission and distribution networks of power utilities and industries.

Secure revenue through sophisticated meter data collection

ABB serves customers in power generation, transmission, distribution and numerous other areas. Electrical engineering expertise built up over one hundred years has enabled us to develop optimized systems, products, and services for the management, automation, control, and protection of power networks.

We have developed the Panorama standard to serve all players in both deregulated and regulated power markets. Panorama ensures all our systems, products and services within network management, automation, control, and protection can be fully integrated.

Within the Meter & Load Management area of Panorama, we offer systems solutions and individual products that can be integrated into both ABB and third party systems.

Accurate and effective tools for tracking power usage

Metering is a key application for power companies. While protection, control and monitoring systems guarantee supply, meters and how they are configured to forward information, guarantee both income and a correct supply corresponding to the load. With reliable metering systems and accurate metering information, power companies can be assured of detailed load and usage information to provide greater customer satisfaction.

Our business has evolved from simple metering to a revolutionary world of energy and information management systems. We seek to develop and perfect advanced energy and information management technologies that deliver lower operating costs and new sources of revenue for our customers.

ABB offers systems integration and advanced meters

Our systems solutions include automatic meter reading systems (AMR), home automation systems, and load management systems.

Our AMR systems, using either electronic or electromechanical meters, are characterized by



an open systems architecture, building block platform, real time response and high data transfer rate.

ABB's home automation metering systems offer integral compatibility with protocols that access wide- and local area networks, such as CEBus. Electronic meters and load controllers are designed to operate as integral components of a system, making them ideal in any home automation program.

The ABB system for improving load management processes offers hierarchically structured direct control, or indirect strategies with multiple tariff structures. This centralized load control can help to reduce peak loads or smooth consumption profiles via dedicated metering terminals or local control units.

For all applications, our key products include electronic and electromechanical meters, and servers, all available in both IEC and ANSI standard versions.

We have also developed an extensive range of software applications to gain maximum benefit from modern information technology.

Communications is the backbone of any metering system. Our products support multiple communications technologies to ensure maximum flexibility and meet a wide variety of requirements.

The meter is the key to tracking power usage. ABB has the right solution for you.



Communications is the backbone of state-of-the-art metering systems.

Metering systems provide the customer information you need

The power industry is facing radical change – openness, competition and deregulation, are rapidly becoming the norm. Information and control systems will play a new role in this development.

Metering solutions are becoming crucial

To obtain the maximum financial benefits from systems investments, power companies require more information on loads throughout the system.

Electricity meters used to be simple devices for recording energy usage for billing purposes. Now, modern all-electronic meters have become information terminals providing important data on system status as well.

When a market is deregulated, energy sales and trading agreements tend to become more short-term. When payments for power are exchanged every business day, customer and metering information must move at the same speed to ensure power companies have a positive cashflow. Accurate metering data is vital for the correct accounting and billing of contractual agreements. At the same time, flexible tariff structures are needed to compete successfully in the supply market.

The driving force behind remote metering and two way communication is the desire to increase capital turnover, for both commercial and residential billing. A common standard for metering, meter data collection, communication and reporting is imperative if the advantages of the open electricity market are to be maximized.

Automatic Meter Reading systems offer many advantages

Our Automatic Meter Reading (AMR) systems, using either all-electronic or electromechanical meters, deliver lower metering function costs, and quicker, more accurate billing, for improved cashflow.

They are characterized by an open systems architecture, a building block platform, real time response and high data transfer rate. As two

way, secure, and reliable communication is paramount, we have included this in our AMR systems solutions.

A metering system is more than a meter

ABB supplies AMR servers which connect flexible communication servers with a powerful relational database that can be used to assimilate data, support metering functions, perform groupings or aggregations of meters for analysis or billing, and to forward metering information into the energy provider's corporate network.

For communications, our servers utilize both wide- and local area networks including telephone, cellular, CDPD, and other public access wireless communications media, and closed power line carrier networks.

Small systems servers can store data from 2 to 1,000 metering points. Larger servers are sized to accommodate a higher number of metering points with a potential capacity of over 1 million points.

Designed to take full advantage of the many features of our Alpha meter range and its communications options, our AMR servers are also compatible with other meters with standard telecommunications capabilities.

Improved load forecasting

The ABB system for improving load management processes offers hierarchically structured direct control, or indirect strategies with multiple tariff structures. Centralized load control can help to reduce peak loads and smooth consumption profiles.

Our load management systems are highly flexible. They can work with distributed intelligence at control, substation, and consumer level. All components include extensive functionality, such as load control security and time dependent control.

Load management products and systems include load management master stations, local control units, audio frequency transmitters, coupling devices, and load control receivers.



Electronic meters are now modern information terminals providing important data on system status.

The meter is the key in all applications

Our broad range of products enables us to create the right solution for any need.



Reliable meters are the key link in the data value chain. They supply the information needed to secure income and handle local control. Which is why ABB is firmly focused on the meter and what the meter drives, to help optimize income and load management.

A complete family of advanced function electronic meters

While metering has traditionally been driven by electromechanical technology, our premium line is all-electronic. By adopting a broader approach using the latest know-how and technologies, our electronic Alpha meters set a new direction.

Our electronic meters are designed to work together for maximum value, extending beyond basic functions such as voltage and current sensing, analogue-to-digital conversion, and digital signal processing. These enhanced capabilities mean the Alpha meter effectively replaces such devices as the voltmeter, ammeter, distortion indicator, watt meter, phase rotation indicator, phase angle meter and circuit wiring check indicator.

Adding basic function metering option boards converts our basic single-phase and polyphase meters into load profile and/or four quadrant meters.

These fast and easy to install boards create a totally modular metering system. And by adding a communications board, the meter can also interface with any sophisticated communications system.

Metering software

Our software packages provide dynamic graphic interpretation of the data gathered by our electronic meters.

The software analyzes service data collected by probing the meter, or data previously saved to disk. Real time images can be generated on-site or accessed with input data from remote communications interfaces. Similarly, digital snapshots can be saved on-site or remotely.

Another software package provides the fast and user friendly facility to read, program, and perform diagnostics on electronic meters. Load profiles from each meter can be charted to provide an instant and powerful presentation of relevant information for analysis and comparison purposes.

Electromechanical meters

We continue to maintain and develop a competitive range of electromechanical meters. On the basis that each meter is now an information node, we have designed our electromechanical product line to integrate different communications technologies.

Meter design range:

- IEC CONFIGURATION
- ANSI SOCKET CONFIGURATION
- UNIVERSAL SWITCHBOARD CONFIGURATION
- UNIVERSAL IEC-ANSI CONFIGURATION

ABB has the systems integration know-how for all metering applications



ABB can design, install, and commission metering and load management systems, large or small, anywhere in the world.

Electricity is generated and distributed in all 140 countries around the world where ABB is present. These countries represent a tremendous potential market for our metering and load management projects, and one we have been able to approach successfully over many years.

When you choose ABB as your systems integrator for metering or load management systems, you gain access to engineers who have extensive experience and value close cooperation. By working closely with our customers, we can offer advice and suggestions that will boost all your power processes.

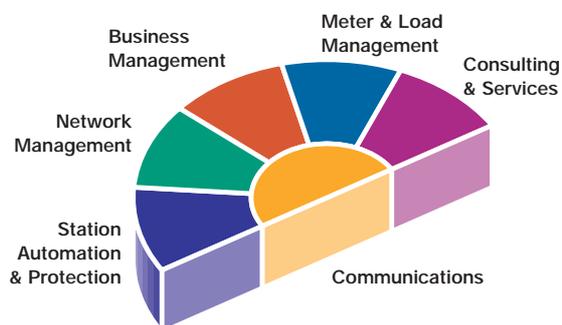
Having installed millions of meters and a countless number of systems, we are ready to give advice, supply meters and modules, and

complete systems, that make data collection, analysis, and handling much more efficient.

By leveraging our total capabilities and technology, we can drive this business worldwide with local expertise based on common standards, synergies, economies of scale, and efficiency.

Meter and Load Management Systems:

- AUTOMATIC METER READING SYSTEMS
- HOME AUTOMATION SYSTEMS
- LOAD MANAGEMENT SYSTEMS



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