

EnergyAxis® System
Technology to Empower Utilities



ELSTER 



Discover the Advantage of Intelligent Two-Way Communications

- Cost-effective automated meter reading
- On-request and scheduled meter reads
- Billing data directly from the meter
- Metering functionality changeable on command

Elster Electricity offers all of this and more with the EnergyAxis[®] System—an intelligent, two-way communications metering automation system that makes on-request meter reads and server-initiated commands a reality. With the system's advanced radio communications technology, utilities can now unlock the meter and all of the valuable information it collects.

The Power of Two-Way Communications

Unlike other systems that only collect energy reads from data pulses, the EnergyAxis System's powerful RF communications, coupled with Elster's new, innovative, electronic single phase REX[™] meter, offers a major advance in network communications and automated meter reading. It enables you to read meters; change energy, demand, or time-of-use rates; and start or stop load profile interval recording. You can initiate service connects or disconnects, or make on-request reads at any time—all on command. To further enhance customer service capabilities, the system is designed to automatically receive neighborhood power outage or restoration data, local voltage conditions, outage counts, and other metering information.

Built on 900 MHz unlicensed RF technology and entirely meter-based, the EnergyAxis System economically supports targeted deployments of hundreds or thousands of meters up to full-scale installations. Its flexible communications architecture assures greater wireless coverage through the implementation of an intelligent mesh network in which individual REX meters can function as repeaters. Because each meter can be designated to both receive and transmit messages from other meters, the EnergyAxis System can extend communications distances and fill in areas where obstacles may exist.



EnergyAxis® System Architecture

- 900 MHz unlicensed communications
- Controlled mesh network
- Peer-to-peer hopping technology
- Multiple repeater levels

How the EnergyAxis® System Works

EnergyAxis System's advanced architecture uses Elster's A3 ALPHA® meter as the host for local data collection from the REX meter network. Collectors are equipped with both WAN and RF LAN option boards and manage sub-networks of up to 1,024 REX meters. The A3 ALPHA meter collectors store the data from network meters and upload it periodically to Elster's Metering Automation Server (MAS) via a public network WAN. Because collectors are also system meters, capital expenses, installation, and maintenance costs are reduced.

The system's communications network uses two-way spread spectrum frequency-hopping technology to provide secure, reliable communications between meters and collectors. This technology enables individual meters to be designated as repeaters, creating a dynamic path that optimizes signal reliability. Communications distances between meters and collectors are thus increased, and the number of collectors required is dramatically reduced, improving system economics.

Customer Focused Innovation

Elster Electricity, LLC, formerly ABB Electricity Metering, is a world-class provider of electricity metering products, communications solutions, and metering automation systems. The diamond in our logo symbolizes quality, strength, trust and service. Our strength is derived from a superior understanding of the changing needs of the marketplace, and the ability to respond with multi-faceted solutions that provide a valuable return on our clients' investments.

Our EnergyAxis System with new, intelligent two-way communications reflects a wealth of knowledge and experience gained by more than a century of dedication to the electricity metering industry. It is a system that is certain to redefine automated meter reading, and prove its value as a powerful, cost-effective tool for increasing productivity, reducing costs, and improving a utility's bottom line.

Contact us today, or visit www.elsterelectricity.com for more information.



Utility Company



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Apartments



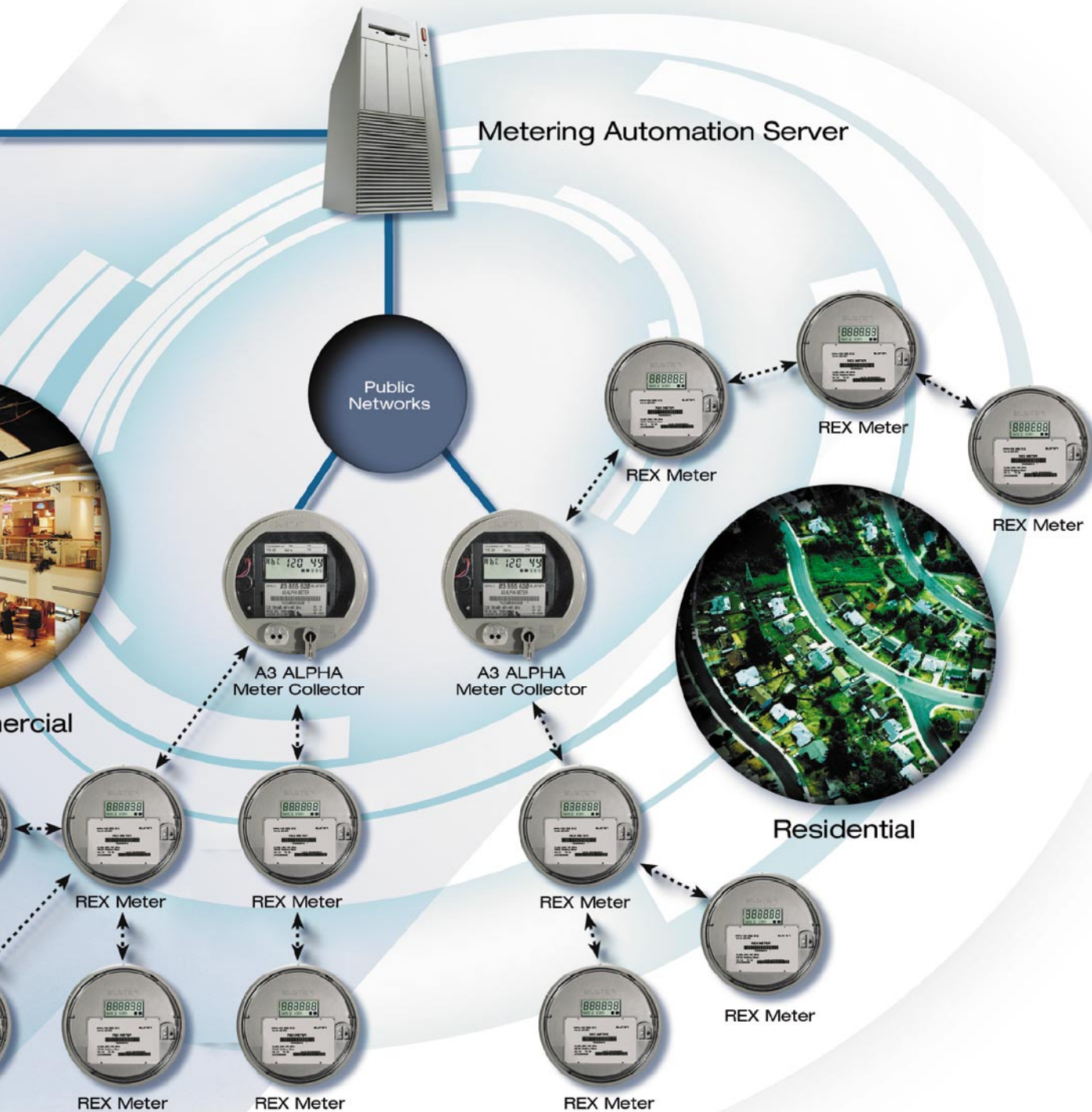
REX Meter



REX Meter

Flexible Metering

- On-request data access
- Remote selection of meter function
- Daily/weekly/monthly collection of meter data
- Multiple metering options
 - Energy measurement—delivered, received, sum, or net
 - Critical tier pricing
 - TOU energy—4 tier energy, 2 tier demand, 4 season
 - Demand metering—total and 1 tier or 2 tiers
 - Load profile data
- 200A remote disconnect option



Utility Applications

- Scheduled billing reads for customer selected billing dates
- On-request reads for improved customer service
- Remotely selectable rate options for energy, demand, TOU, critical tier
- Inventory reduction – one meter does all
- System-wide or targeted AMR for
 - High turnover
 - Hard-to-access
 - Dangerous locations
 - Remote connect/disconnect/read
- Virtual connect/disconnect
- Load profiling on any meter to support
 - Rate analysis
 - Load forecasting

Utility Applications (Cont.)

- Distribution operations
 - Outage and restoration notification
 - Extent of service restoration data
 - Local voltage data
- Tamper detection and prevention
 - Cumulative outage count
 - Reverse power indication
 - Summed energy
- Power quality monitoring
 - Outage counts
 - Voltage

Customer Applications

- Flexible billing dates
- Flexible rate options
- On-request billing
- On-request energy information
- Energy usage analysis
- Locally viewable energy and rate data

Meter Readings When You Need Them

Locked gates, unleashed pets, and indoor meters reduce operational efficiencies, increase metering costs, and reduce utility revenues. The EnergyAxis System eliminates these barriers along with the associated problems of estimated bills or rescheduled meter reads.



High turnover areas like apartment complexes, universities, and military housing are costly to serve, requiring repeated trips to obtain move-in and move-out meter reads, install meters, or to disconnect and reconnect services. The on-request reading function and remote operation of the REX meter's optional disconnect switch can improve customer service and reduce operational costs.

Rapid Change Requires Intelligent Meter Products

With the utility industry experiencing unprecedented change, market pressures have made sophisticated pricing methods for electricity a growing necessity. The EnergyAxis System's advanced features offer optimum metering and billing flexibility.

At the heart of the system is Elster's new single phase, residential electronic REX meter with built-in EnergyAxis System communications. Innovative in design and multi-tasking in function, the REX meter provides highly accurate kWh consumption, kW demand, time-of-use metering, critical tier pricing, and load profile interval data—all on command. These features reduce costly site visits and eliminate the need for new metering hardware. Utilities can adjust prices daily, a distinct advantage during peak energy demand periods.

The unique design of the REX meter and the system's intelligent two-way network architecture enables automatic meter self-registration within the network for true "plug and go" capability. This eliminates the need for on-site programming, making installation and operation both easy and economical. Should local conditions change, meters will reregister via alternate network paths.

Elster's A3 ALPHA® Meter Collector and REX™ Meter



Improving Customer Service

With the EnergyAxis System, the utility company isn't the only winner. Flexible meter reading allows utilities to offer each customer a choice of billing dates. The system's advanced two-way communications enables customer-billing questions to be resolved quickly, because service representatives can initiate on-request meter reads while taking the call. Service connects and disconnects, as well as final billing, will go more smoothly and your customers will appreciate the fast response. If the system's full disconnect feature is not required, remote meters can be "virtually" disconnected, and the meter can be monitored by the utility for unusual energy consumption.

Discover the value of the diamond



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