

Proven results...
Unsurpassed interoperability...
Fast, secure and adaptable network...

Only EnergyAxis®
brings it all together for the Smart Grid



elster



Others promise...We deliver

Proven, fast and interoperable
Smart Grid solutions for
electric, gas and water

Urban, suburban, rural
Smart Grid solutions



Most flexible WAN

Grid
modernization

Renewables &
distributed generation

Partnering with the world's best

Scalable & secure

While many others continue to promise Smart Grid technologies and systems that work reliably in the field and integrate easily with complex utility operations, they fall short of expectations.

Elster's EnergyAxis® System delivers a proven two-way communications network and Smart Grid solutions field-tested in real-world utility environments. For Demand Response, Grid Modernization, Outage Detection/Restoration, Revenue Protection, and a host of other utility requirements, no solution can integrate with your operation more effectively. Our solutions can be deployed today and are designed and architected to expand for future Smart Grid requirements. Simply put, EnergyAxis works.

EnergyAxis at a glance:

- ▶ Proven: more than 70 deployed systems, over seven years of successful operation
- ▶ Unsurpassed interoperability and system flexibility
- ▶ Utility-grade quality; auditable and traceable meter data
- ▶ Improved operational efficiency of electric, water and gas services
- ▶ Lowest cost of ownership and operations
- ▶ Industry-leading sustainability and conservation capabilities
- ▶ Fastest 900MHz mesh network in its class

EnergyAxis unifies the Smart Grid with field-proven solutions

**Choosing the right Smart Grid solution is critical.
You need a vendor that can actually deliver what they promise.**

That is why electric, water and gas utilities worldwide trust Elster to design, deploy and support their Smart Grid systems. EnergyAxis technology delivers proven performance that satisfies utility needs today and is future-proofed for tomorrow.

Our customized solutions seamlessly integrate with your utility enterprise systems, distribution network and into your customers' premises. To make it easy, we:

- ▶ Integrate our proven head-end management system with legacy and enterprise platforms
- ▶ Partner with industry-leading software, hardware and communications systems companies
- ▶ Use standards such as IP, SOA and NERC CIP to assure interoperability and security
- ▶ Deliver turnkey services and solutions
- ▶ Mitigate risk throughout the entire process
- ▶ Accelerate your ROI

Demand response

Empowering consumers to conserve and manage their energy use through in-home displays, smart thermostats and appliance control devices linked to the meter, which support time-of-use and peak pricing programs.

Grid modernization

Improving overall grid reliability and performance by enabling utilities to cost effectively place communicating sensors and controllers at distribution system locations that couldn't previously be monitored.

Outage management

Minimizing field response time and improving customer satisfaction by collecting and reporting outage and restoration information as it happens.

Voltage conservation

Enabling utilities to implement voltage conservation initiatives while maintaining the required level of service by collecting voltage measurements from strategic feeder locations and providing alerts if voltage levels exceed thresholds.

Unifying solutions at a glance:

- ▶ Demand response
- ▶ Grid modernization
- ▶ Outage management
- ▶ Voltage conservation
- ▶ Renewables and distributed generation
- ▶ Multi-utility: electric, water, gas
- ▶ Power quality monitoring
- ▶ Revenue protection



Renewables and distributed generation

Facilitating the interconnection and control of renewable energy sources such as solar and wind. Ready to serve developing technologies such as plug-in hybrid electric vehicles.

Multi-utility solutions

Integrating other utility services such as natural gas and water; and providing features such as usage monitoring and leak detection.

Power quality monitoring

Enabling the utility to take proactive action to improve the quality and reliability of utility service delivery by monitoring and reporting power quality events such as voltage sags, surges and momentary outages.

Revenue protection

Providing remote connect/disconnect, pre-pay, tamper detection, and other applications that are proven to reduce non-technical losses and cut utility operating expenses; auditable billing and meter registers that are 100% traceable from the meter to the system head-end and back to the meter.





Innovations that improve utility performance

What sets EnergyAxis apart from the competition is its ability to provide unifying solutions for the Smart Grid. To do this, we open EnergyAxis to a host of partner technologies, manage the entire process, then deliver a powerful and innovative Smart Grid solution custom-matched to your requirements and adaptable to the future.

While other solution providers sell proprietary technologies or protocols, EnergyAxis is engineered on open standards, interfacing with a range of powerful third-party technologies, to provide you with the widest choice of communication paths possible, from IP, cellular, WiFi or whatever system your utility wants to use.

Our experts can help define and realize the most economical solution available. The end result: immediate and measurable success for your Smart Grid initiatives.

Distributed intelligence

EnergyAxis pushes intelligent devices further out onto the network, embedding communications and Intelligence into meters, gatekeepers, grid sensors and control elements. This increases network efficiency and improves security and reliability.

Security

The EnergyAxis System's comprehensive security protects your network, keeping utility and customer data safe from intrusion better than any system in the industry.

Automated network management

Our RF mesh network is self-configuring...self-managing...self-healing...EnergyAxis automates key time-and-resource consuming processes for your utility.

Unified communications network

Energy Axis provides a comprehensive portfolio of communications options integrated into a field proven, secure smart grid network infrastructure. Supporting a large variety of both public and private WAN technologies as well as the industry's most proven 900 MHz mesh LAN technology, EnergyAxis provides a solid platform that utilities can rely on to meet today and tomorrow's smart grid needs.

Innovations at a glance:

- ▶ Distributed intelligence
- ▶ Security
- ▶ Automated network management
- ▶ Unified communications network
- ▶ Reliability
- ▶ Interoperability
- ▶ Scalability
- ▶ Auditability

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800.338.5251



Reliability

With over 170 years of experience working in real-world utility environments, EnergyAxis System components are proven to last—even in the most extreme conditions.

Interoperability

EnergyAxis is the most interoperable Smart Grid communications network available. Our open standards-based solutions are designed to work with a myriad of components and applications. We partner with more than 40 smart grid technology providers and apply relevant technologies to meet your needs.

Scalability

The architecture of the EnergyAxis network and software provides the ultimate in scalability. Designed to support millions of network elements, with scalability proven in highly successful large scale deployments, EnergyAxis enables you to meet your utility needs today and in the future with confidence.

Auditability

EnergyAxis ensures direct traceability of the meter data – key to both Sarbanes-Oxley compliance and creditability with consumers.

Seamless integration—from the field, to your back-office operations

Everything you need to make your Smart Grid initiative a success.

EnergyAxis delivers fully functional Smart Grid solutions that enable your utility to operate at its highest potential. From the management system software to the widest selection of distribution network and in-premise devices, EnergyAxis solutions are field-proven and offer the functionality, reliability and security that can meet and exceed the needs of any utility.

EnergyAxis is designed for residential, commercial and industrial applications. EnergyAxis is scalable to multi-million meter deployments while being cost-effective for smaller utilities or strategic deployments.

As your source for the entire development process, we bring the right people, technologies and strategic partners together to achieve your system goals, while providing rapid return on your investment.

EnergyAxis Management System

Designed for security, scalability and interoperability, the EnergyAxis Management System is ideal for smart grid applications. Proven by years of exceptional performance in real world integrated utility environments, our state-of-the-art head-end system enables utilities to measure, manage, and control the widest selection of network elements available today.

System vitals at a glance:

- ▶ EnergyAxis Management System
- ▶ Systems integration
- ▶ Gatekeepers
- ▶ Measurement, sensing and control elements
- ▶ Flexible multi-technology architecture
- ▶ Fastest AMI communication network
- ▶ HAN and in-premise devices

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Customer
information system

Billing/settlement
systems

Meter data
repository

Systems integration

Our standards-based, open architecture head-end system is designed to seamlessly integrate with all of your back-office business and IT systems such as Meter Data Management, Outage Management, Customer Care and Billing, Workforce Management, Prepay and Demand Response.

Gatekeepers

Gatekeepers manage and serve as access points to the EnergyAxis 900 MHz mesh local area networks, and are available in both meter and non-meter platforms, with battery and solar power options. Providing robust LAN network management as well as routing, prioritization, and management of network element data, gatekeepers enable the utility to implement a highly scalable, secure, and cost-effective smart grid communications infrastructure.

Network elements

The Industry's widest variety of system-enabled and commercially available meters and modules for electric, gas and water: including residential and C&I meters, integrated service disconnect/reconnect switches, and low voltage and medium voltage transformer monitors from Elster and other respected industry providers.



Load management system

Work order management & inventory

Outage management system

Rate research

Flexible multi-technology architecture

EnergyAxis is designed to work with various communication network infrastructures including both point-to-point public and private networks, as well as the EnergyAxis mesh local area network. Structured to allow seamless integration of existing and emerging technologies for communication with network elements, EnergyAxis provides the ultimate in utility choice while mitigating risks of stranded assets as technology advances.

Fastest AMI mesh communication network

With 900 MHz mesh communication speeds up to 142 kbps, EnergyAxis offers the fastest AMI network in its class.

HAN options and in-premise devices

We integrate multiple HAN technologies and third-party manufacturers, and will continue to leverage our open standards-based design to expand functionality and communications support for load control devices, programmable thermostats, in-premise displays and more.

EnergyAxis— The right choice for conservation and ROI

By assuring accurate and timely data from the field, EnergyAxis solutions can pinpoint and diagnose potential losses, boosting your revenue and protecting your assets.

EnergyAxis solutions deliver the enhanced functionality you need to serve your customers more effectively, allowing you to manage precious resources more efficiently, while reducing operating expenses. We can help you validate the ROI for implementation of your EnergyAxis Smart Grid solution.

Lowest system energy consumption

EnergyAxis consumes less energy during operation than other AMI/Smart Grid networks. Due to highly efficient radio design, EnergyAxis residential smart meters consume as little as one quarter of the energy required in some competing smart grid solutions. In fact, the energy savings across a large population of meters, over the system life cycle, can translate to many gigawatt hours of avoided system losses. This ensures that achieved savings are not consumed by the system itself.

Sustainability

We understand the ramifications of sustainability from an environmental standpoint and an ROI perspective which is why EnergyAxis was the first to the field with demand response, CPP, voltage conservation and other energy efficient solutions.

Renewables and distributed generation

EnergyAxis is ready to facilitate the interconnection, monitoring, and control of alternative and renewable energy sources as well as distributed generation.

Hybrid electric vehicles

We anticipate that hybrid electric powered vehicles will penetrate the marketplace in significant numbers in the near future. EnergyAxis is poised and ready to support this important technology.

Efficiency and conservation at a glance:

- ▶ Lowest system energy consumption
- ▶ Sustainability
- ▶ Renewables and distributed generation
- ▶ Hybrid electric vehicles
- ▶ Consumer-driven innovation



Backed by the global strength of Elster

Elster is the world leader in unifying Smart Grid solutions for electric, gas and water utilities. With more than 170 years of experience measuring precious resources and energy, we understand how to adapt technologies and solutions to evolving market requirements.

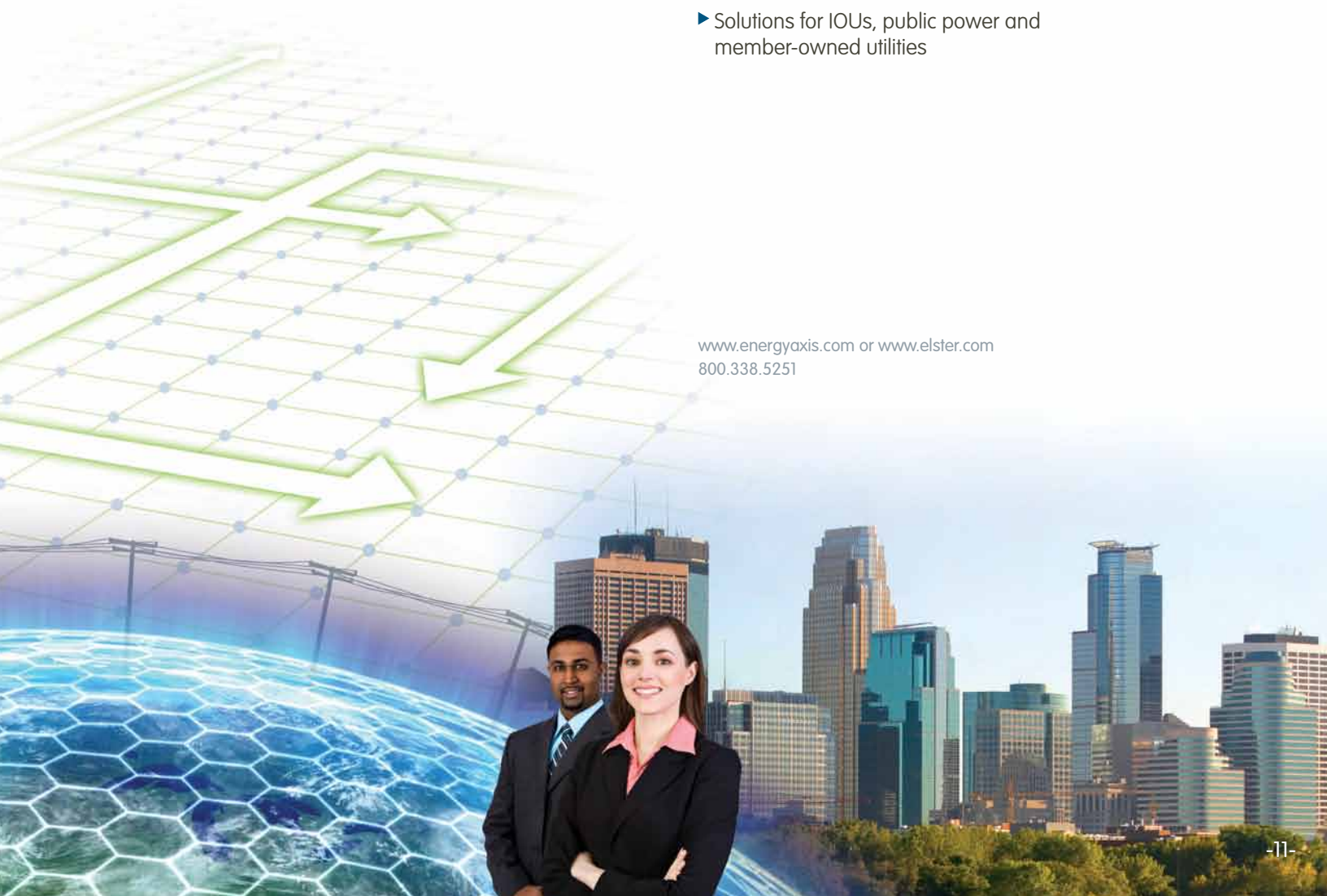
Our organization has \$2 billion in annual revenue, has deployed over 200 million meters worldwide, maintains a workforce of more than 7,000 employees, and is dedicated to developing, integrating and delivering utility-grade solutions.

Elster provides world-class solutions and advanced technologies to help utilities more easily, efficiently and reliably obtain and use advanced Smart Grid intelligence to improve customer service, enhance operational efficiency and increase revenues.

Elster and EnergyAxis: Solutions for success

- ▶ Solutions that anticipate and adapt to the future
- ▶ Dozens of successful AMI, Demand Response and Grid Modernization deployments
- ▶ Utility-grade quality
- ▶ Integration and deployment
- ▶ Partners for success
- ▶ Lowest cost of ownership
- ▶ Risk mitigation
- ▶ Solutions for IOUs, public power and member-owned utilities

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Partner with the most proven
Smart Grid technology provider
in the world.



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