Itron® Total Grid

Simple, flexible, scalable.

ITRON TOTAL GRID: SIMPLE, FLEXIBLE, SCALABLE.

Itron Total Grid is an end-to-end smart grid solution as a service that offers a complete suite of advanced grid-facing functionality over a standards-based, IPv6 network that allows utilities to achieve benefits now and into the future. This multi-service network allows the utility to leverage the most advanced technology today while having the flexibility to adapt to needs as they arise.

Proven benefits to utilities of all sizes

One key benefit of Itron Total Grid is that the utility can free up their staff to focus on core business and integration of the system. Utilities can pace and price smart grid rollouts according to their business needs, minimizing operational expense and risk. Utilities can experience a more immediate return on investment (ROI) with Itron Total Grid and will not have to wait 3 to 5 years to see operational efficiencies. Further, there is no upfront software license and maintenance fees and no expenses for the Itron application or hardware. Instead, these fees are included a simple, recurring managed service fee.

Proven system operations through managed services

With Itron Total Grid, Itron fully supports the installation, daily operations and maintenance of a dedicated server as well as the delivery and routine backup of meter data. Because Itron is handling all the IT offerings, there is a lower risk to the utility along with a robust system and system security requirements. System back-ups and built-in redundancy help provide rapid problem resolutions that maximize system availability. Utilities are guaranteed performance and service levels.

This structure leads to a lower Total cost of ownership for the utility - utilities only pay for what is needed as they develop the system. Resources and capacity within the system are optimized in order to avoid up-front, emergent and on-going infrastructure costs.

The secure IT infrastructure offers a fault tolerant architecture with intrusion protection. The system is ISO 27001certified with guaranteed service levels. All data centers are located in North America.

From an IT operations standpoint, Itron Total Grid provides administrative and system monitoring along with back-up support and disaster recovery. Itron will apply software updates and performance monitoring. IT Operations is ISO 9000 certified.

System configuration and management also includes robust system and data level security; network performance monitoring and exception management; data import/export monitoring; and data exception management and resolution

Proven Hardware Design

At the core of Itron Total Grid is the key component of any advanced metering or smart grid initiative - the OpenWay® CENTRON® C2SOD meter. Rather than simply inserting a network communication card into a standard meter, Itron developed an advanced meter where calculations and usage data are determined within the meter itself, allowing utilities to leverage time-based rates, demand response, home networking and many other smart grid applications.

The Cisco® 1000 Series Connected Grid Router (CGR) delivers unified security, network management and quality of service to ensure reliable two-way communications from your operations center to various smart grid endpoints. Modular in its design, the CGR enables multi-service capabilities for advanced metering infrastructure (AMI), distribution automation (DA) and workforce enablement on a single, IPv6-based smart grid network.

Proven Network Communications

Itron wraps network infrastructure, system operation and data delivery into a customized offering based on specific utility needs, then bundles it into a predictable cost model to minimize operating expense and risk for the customer. The OpenWay platform offers multiple IP-based communications options—RF mesh and cellular—and features an advanced IPv6 architecture developed jointly by Itron and Cisco. Together with the cellular networks, this architecture enables OpenWay to support multiple smart grid applications with "plug-and-play" capability over an interoperable, secure, enterprise-class network.
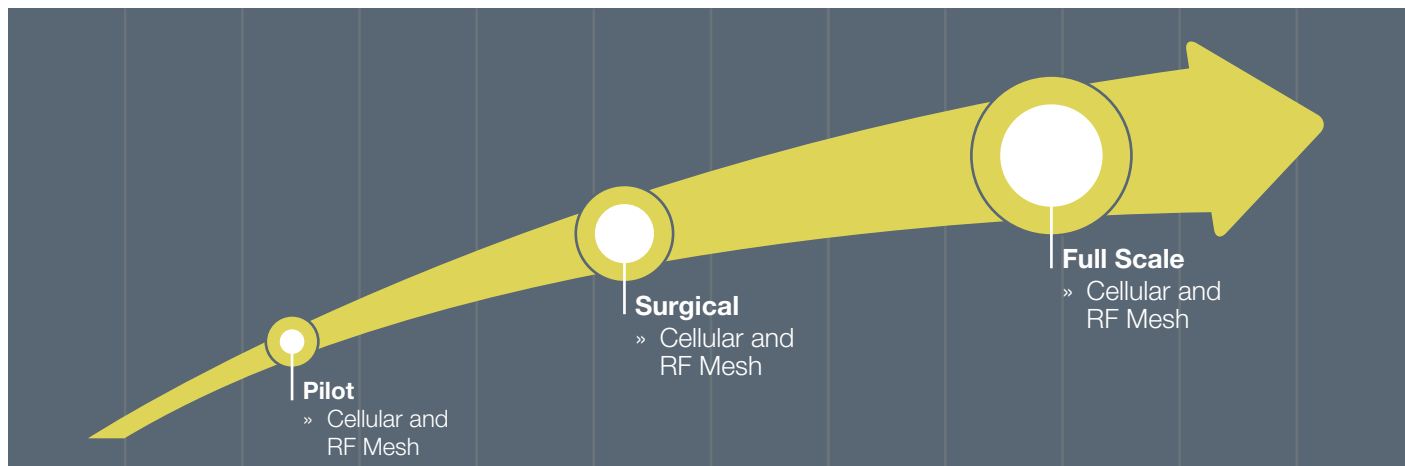
Proven Meter Data Management

Energy data drives your business and with the emergence of smart metering and the smart grid, deploying a robust meter data management solution is essential to a utility's success. While collecting meter data can be efficient and automatic, putting that data in the hands of people who can leverage its value—across the entire enterprise—is often difficult and error-prone.

Based on Itron's proven OpenWay Collection Engine, Itron Total Grid provides to the utility consistent, meaningful data to upstream utility applications. This information is a critical component to any smart metering or smart grid initiative—especially when implemented prior to a large-scale residential rollout.

Because Itron Total simplifies the IT integration of AMI data and facilitates the distribution of meter data across the utility, you can rest easy knowing that your data is in the hands of those who need it most, when they need it. Features of the meter data management system include:

» 24/7 operation of data collection system

» Daily data collection for all meters

» Meter events (including outage) and alarms delivered continuously via file

» Voltage and energy readings

» 15 minute intervals for C&I meters

» Hourly intervals for residential meters

» Basic data quality checks

» Meter readings export daily to billing system

» Supports monthly cycle billing, short read and cancel/re-bill requests

» MultiSpeak interfaces and/or standard XML API's to integrate to utility systems

» Data stored online for 3 years

» Read rate and network reports issued daily and weekly

» Market leading security and encryption for the application, the network, and the meter

Pilot
» Cellular and
RF Mesh

Surgical
» Cellular and
RF Mesh

Full Scale
» Cellular and
RF Mesh

Proven Flexibility in Deployment Options and Contract Terms

Itron Total offers flexible starting points to align with a utility's business objectives for both cellular and RF Mesh: pilot, surgical and full scale. Utilities can start with limited installations such as installs on high-value or hard to read customers.

Contract terms are based on meter volume blocks and implementation periods. Customers can add additional modules at any point during an existing contract period. Price for additional modules will be based on price at contract length of existing contract.

Proven Additional Features

Additionally, as part of Itron Total Grid, utilities have access to an array of optional add-on features from Itron's broad solutions portfolio that can be added with flexibility and ease.

Analytics

Itron Analytics offers a comprehensive suite of energy management and load control solutions. Through Itron's analytic software package, power quality (including voltage monitoring, outage reporting and feeder voltage profile), transformer load management (based on IEEE C57.91-1995) and energy theft are offered as optional components. By combining flexible communications with devices that target a broad spectrum of electric loads, Itron's solutions maximize control of energy and capacity. Intelligent dispatch of load over existing networks ensures value creation and business transformation for utilities.

Enhanced Security

Itron Total Grid capitalizes on the success of the OpenWay platform. The smart grid is a complex system of systems which requires multiple layers of security controls to protect its mission of reliable energy distribution. These security controls are very diverse, ranging from physical fences and security cameras to encryption algorithms and digital certificates. Adding to this complexity is the fact that the smart grid will be comprised of both old and new technologies, so determining the specific security controls required—and where to place security controls—is a challenging task. Itron has a strong history of understanding a utility's security needs and can help customize a system no matter the number of endpoints ensuring that the information flow throughout a smart grid network is ready for the needs of tomorrow.

Consumer Engagement

Consumer engagement is a key component to smart grid success. Consumer understanding, involvement and participation in the smart grid will be critical to achieving many of the benefits for consumers, utilities and society as a whole. Itron understands the central role consumers will play in the smart grid. The Itron Total Grid solution is designed to empower consumers to better understand and manage energy and water usage.

Advanced AMI

Itron's advanced networks possess the flexibility to communicate using multiple protocols and communication types. These networks have standardizations of technologies to expand the capabilities of emerging communications standards including prepayment, home energy management, dynamic pricing and enhanced data quality.

Field Deployment

Itron Total Grid offers field deployment management for Itron's next-generation endpoint installation solution and leverages decades of experience to deliver innovative management applications in support of smart metering installations and maintenance activities.

Proven System for Today's Utility

In today's evolving utility landscape, efficiency and accuracy are paramount concerns when deploying Itron smart grid solutions. An increasing amount of data needs to be collected and managed prior to being consumed by the utility. At the same time, qualified human resources are becoming increasingly scarce. Utilities need a proven leader in AMI, network connectivity, and data management.

Itron Total Grid can do just that – giving utilities a subscription based service with a secure IT infrastructure, along with expert AMI and IT operations.

Itron Total Grid is an end-to-end smart grid solution as a service that offers a complete suite of advanced grid-facing functionality over a standards-based, IPv6 network that allows utilities to achieve benefits now and into the future. This multi-service network allows the utility to leverage the most advanced technology today while having the flexibility to adapt to needs as they arise.

Join us in creating a more **resourceful world**.
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