

Simplify grid modernization to help increase efficiency and lower costs.

Verizon Grid Wide Utility Solutions



Leveraging smart grid technology is a natural, evolutionary step for utilities delivering electric, water and gas to their customers. The historical model of unnecessary site visits, manual meter reads or rereads, manual billing estimates and lack of real-time visibility into outages and quality of supply is in the past. Modernizing your grid by tapping into the inherent, built-in capabilities of the Verizon Grid Wide turnkey solution can help drive incremental revenue, reduce operating costs, increase efficiency and improve customer service.

But building a smart utility infrastructure with powerful, reliable tools that connect and manage thousands of endpoints is complicated and costly. It often means investing in data centers, communication networks and equipment, not to mention training and staffing a network management team.

Reduce the complexities of grid modernization without relinquishing control.

Now, for the first time, utility and communications technology are more aligned to deliver superior value. Verizon has invested heavily in the right technology to offer you a simplified and scalable smart grid modernization solution. We've combined a best-in-class smart metering application suite with our best-in-class network and cloud

into an integrated platform that gives you complete visibility and control over your smart grid devices.

Grid Wide Utility solutions from Verizon offers you:

- A single platform of integrated technologies, including affordable smart meter hardware and software; reliable 4G LTE and Private IP network communications; a commercially proven smart grid platform and cloud; and Verizon management services.
- Turnkey acquisition and integration, from device to network connectivity to fully managed, cloud-based applications.
- An end-to-end platform as a service for more cost-effective information technology (IT) and operational technology (OT) management.
- Simplified billing and support.

By integrating all of the technologies you need for successful grid modernization, we've saved you the complexities and cost of building your own solution. Now, you can more easily and affordably deploy, integrate, provision,

Grid Wide Utility solutions from Verizon are scalable, so your smart grid program has the longevity to perform well into the future.

By integrating key network, application and data acquisition hardware, Verizon has saved you the complexities and cost of building your own solution.

configure, monitor, manage and control your smart devices. No capital investments in head-end platforms, management software, networks or communications equipment like routers, firewalls and servers. No time spent staffing and training an IT/OT team. No communications management or repairs.

Verizon takes care of all that.

Verizon Grid Wide Utility Solutions

Verizon Grid Wide is an Internet of Things (IoT) platform that offers electric, water and gas utilities complete, fully integrated grid modernization solutions for smart metering, demand response, meter data management (MDM) and distribution monitoring and control (DM&C).

Grid Wide Smart Metering

Traditional private communication technology networks have been inefficient and costly for connecting smart meter networks. Not only that, but utilities in the industry have to deal with proprietary products and services that

only offer fragmented solutions based primarily upon connectivity.

Verizon has simplified smart metering by integrating all of the essential hardware, software and affordable 4G LTE components into a single turnkey solution. With the cloud-based Grid Wide Smart Metering solution from Verizon, you get an integrated, secure communications network and advanced metering platform that is completely under your command and control. This solution offers a complete suite of remote meter provisioning, configuration, monitoring, control and management functions. In addition, it also includes an optional MDM service that can be used to generate accurate billing-determinant feeds.

The Grid Wide Smart Metering solution from Verizon can help you with:

- **Meter reading and control.** Obtain billing and operational meter data; manage service connects and disconnects; and perform over-the-air meter programming.
- **Outage and restoration notifications.** Accurately pinpoint outages in near real time, lower service restoration times and increase overall customer satisfaction.
- **Actionable insights.** Access scheduled and on-demand data in industry-standard formats; monitor consumption and quality-of-supply information; and detect events and failures in near real time.

Grid Wide Demand Response

Demand response programs are critical tools used by today's electric-system planners and operators to balance supply and demand. Our optional Grid Wide Demand Response service supports a wide variety of demand response programs that include offering time-based rates such as time-of-use pricing; critical and variable peak pricing; and real-time pricing, as well as critical peak rebates. It also includes direct-load control capabilities that can be used to intelligently cycle electric motors like pumps, chillers, air conditioners and water heaters on and off during periods of peak demand.

Grid Wide Demand Response from Verizon offers you:

- **Load control.** Dynamically shape load across your distribution network zones to remove peaks and brown-out conditions.
- **Consumer alerts.** Notify customers when their energy usage exceeds a certain level during critical peak periods.

Grid Wide Meter Data Management

Billing data collected from a meter has to be validated and verified to remove anomalies created by quality-of-supply issues and to account for standard customer-usage patterns. Our optional Grid Wide MDM service comes pre-integrated with our Smart Metering solution to deliver an end-to-end meter-to-cash platform.

Verizon Grid Wide Meter Data Management offers you:

- **Validation, estimation and editing (VEE).** Automatically validate billing information, flag any inaccuracies and estimate or edit missing or bad billing data.
- **Billing data management.** Manage and store billing data for historical use and analysis.

Grid Wide Distribution Monitoring and Control

Having near real-time voltage information and other key quality-of-supply data empowers utilities to quickly make adjustments to changing loads, generation issues and equipment failures. Our DM&C solution presents you with a clearer view into your grid operations, offering invaluable information that can be integrated into automated control systems like switches, cap banks and voltage regulators. Today, Verizon can offer you DM&C capabilities and we continue to invest heavily in our Distribution Automation solutions.

Grid Wide Distribution Monitoring and Control offers you:

- **Grid monitoring and control.** Collect and use near real-time operational data to improve service reliability and quality of supply, while driving proactive maintenance versus reactive fault repair.

- **Fault location, isolation and service restoration (FLISR).** Quickly identify issues to decrease the duration and the number of customers affected.
- **Asset management.** Monitor equipment and other assets to keep them running optimally, extend asset lifespan and upgrade based upon service versus time.

Why Verizon

Verizon Grid Wide is a complete utility solution that resides on assets fully owned and operated by Verizon. We've taken the complexity—and cost—out of building your own smart grid solution by bringing together essential smart metering technologies, best-in-class Verizon cloud management services and IoT-based applications into a single, integrated platform.

At the backbone of it all is the nation's largest and most reliable 4G LTE network, keeping you securely connected to your smart grid data and devices. Our network was rated number one in overall network performance for the sixth consecutive testing period among the four national wireless companies in the United States by RootMetrics in its National RootScore® Report.¹

In fact, 98% of the Fortune 500 rely on our services and technologies.² More businesses choose Verizon than any other wireless

carrier.³ And we offer complete solutions, with expertise in cloud, machine to machine (M2M) and IoT. Our M2M services lead the industry, and our Grid Wide Utility solution received the Frost and Sullivan 2015 Best Practices Award.

More coverage, fast speeds and reliable connections. So you can connect what's important, with help from a trusted partner. Verizon.

Learn more.

Learn how to simplify your grid modernization efforts with Grid Wide Utility solutions from Verizon. Contact your Verizon business specialist or visit **verizonenterprise.com/gridwide** for more information.

1 Rankings based on the RootMetrics® U.S. National RootScore Report: 1H 2016. Tested with best commercially available smartphones on four national mobile networks across all available network types. Your experiences may vary. The RootMetrics award is not an endorsement of Verizon. Visit www.rootmetrics.com for more details.

2 Verizon internal research.

3 Results based on an independent research study of 7,414 business locations using corporate-liable wireless service. Telephone interviews were conducted between 2Q2015 and 1Q2016 with the employee most knowledgeable of telecommunications service.