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  - Advanced Residential Metering
  - Advanced Commercial + Industrial Metering
  - Smart Residential Metering
  - Smart Commercial + Industrial Metering
  - Communication Modules
  - Meter Installation + Programming
  - Distribution

- **Data Collection**

- **Meter Data Management**

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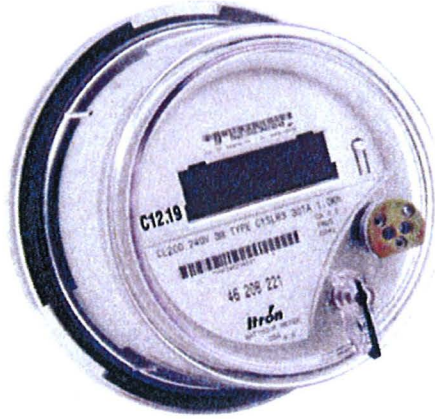
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CENTRON® R400 ⚡

✉ 🖶

The CENTRON R400 meter is a solid-state, single-phase residential electricity meter that provides utilities with unparalleled digital accuracy, reliability, serviceability and cost-effectiveness. It is also one of the most adaptable meters on theresidential market, providing an array of communications and application options to meet current and future business needs.

Features + Benefits

The CENTRON R400 meter was engineered specifically for the widely varied needs of the residential market. The CENTRON R400 C1S, the basic platform for all CENTRON meters, is a solid-state electricity meter that measures single-phase energy consumption. The CENTRON R400 is a breakthrough metering platform designed to grow and change with the utility industry. With its low starting watts and low watts lost, the CENTRON R400 meter captures more energy consumption than was measured in the past by electromechanical meters.

When you deploy the CENTRON R400 meter, you can:

- Measure the energy usage of your residential customers more accurately and reliably than ever before, at a cost that makes sense in the residential market

- Bill residential customers for the energy they are actually consuming.

- Deploy a metering platform that will be ready for an automatic meter reading (AMR) system when you are

- Reduce operational costs by updating aging electromechanical meters that are quickly becoming more difficult and costly to maintain

- Reduce cases of energy theft and revenue loss due to meter tampering. The CENTRON meter tamper resistance features include measuring energy even if the meter is inverted and detecting when the meter is removed from a live socket

- When you are ready to deploy an AMR system, the CENTRON meter's flexible format allows the communications functions to be installed without disturbing the finely-tuned metrology. Options are available for network communications, PLC and an array of radio frequency (RF) protocols

- Adapt meters easily and cost-effectively to meet the needs of your customers. The modular architecture of the CENTRON meter allows new snap-in personality modules to be installed in the meter without disturbing the finely calibrated metrology board in the lower, measurement portion of the meter. Optional snap-in personality modules include demand, time-of-use (TOU), load profile and various communication protocol options

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  - Smart Commercial + Industrial Metering
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  - Meter Installation + Programming
  - Distribution

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- 🔴 **Meter Data Management**

- 🔴 **Analysis Software**

- 🔴 **Sensing + Control**

- 🔴 **Professional Services**

Product News

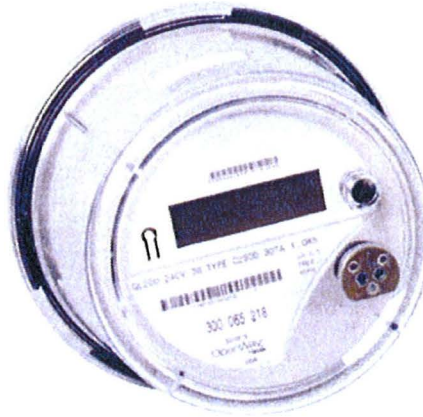**Itron Technology Selected to Streamline PSNH...**

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Itron's New Bridge Meter Streamlines...

CENTRON® Bridge Meter ⚡   ✉ 🖨   CONTACT ITRON SALES

Product Images

The CENTRON Bridge meter is the bridge between Itron communication architectures that enable AMI and smart grid functionality. The meter's adaptability allows it to be incorporated alongside existing Itron electric meters with a mobile collection system, delivering advanced metering benefits associated with interval data, remote service switch and demand reset. When prudent for the utility, the CENTRON Bridge can easily migrate to a full smart grid solution, offering demand response and distribution automation benefits. With CENTRON Bridge's versatility and proven operational benefits, utilities can address current business challenges and see an immediate return on investment, all while readying for a full smart grid solution as the need develops.

Enabled to leverage field assets across two different data collection solutions, a utility can protect and extend its original investment.

Features + Benefits

Advanced AMR Features via FCS & 900MHz

Service Switch - Now you can operate the Service Switch with your Mobile Collector or SRead Handhelds from a safe distance

Demand Reset - No more need to set a calendar reset in the meter or having to physically reset demand

Interval Data - Up to 40 days of interval data (hourly) is available

Transisiton to OpenWay - When ready to go AMI, just drive the route and schedule when you want the meters to switch to OpenWay operation

Enhanced Security (Authentication & Encryption) - From securing the reads to making sure the right person is operating the service switch

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Mobile and Handhelds - Choiceconnect

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AFFIDAVIT OF MICHAEL COIT

I, Michael Coit, being duly sworn, do hereby depose and state as follows:

1. I am employed by Eversource Energy Service Company as a Senior Engineer, Substation and Meter Engineering. I am an electrical engineer with a BSEE from the University of New Hampshire. I have worked in the electric utility industry for over 26 years, mostly in revenue metering, including the last 12 years as a Meter Engineer with Eversource Energy.

2. In the course of my employment I am, and have been, closely involved on a first-hand basis in the development and implementation of Public Service Company of New Hampshire d/b/a Eversource Energy's ("Eversource") Automated Meter Reading ("AMR") project which involves the replacement of approximately 550,000 electric meters with new meters designed to transmit their billing data via a relatively low power radio signal, and the implementation of a new meter data collection system using mobile (drive-by), rather than manual, methods for meter data collection. Eversource has not developed or deployed, and is not at this time intending to develop or deploy, a distributed fixed network communications system capable of communicating with the new meters.

3. As a result of my duties relating to Eversource's meters and the AMR project, I am familiar with the specifications and uses of the new meters Eversource is installing.

4. The new meters referred to in the complaint are manufactured by Itron, a leading technology and services company with extensive experience manufacturing and supplying metering equipment for the utility industry. A substantial majority of Eversource's new Itron meters – approximately 490,000 of the approximately 550,000 total – are the CENTRON C1SR R400 model. The CENTRON C1SR R400 meters do not have a ZigBee chip or module, which might have the potential to provide the meters with gateway capabilities. The CENTRON C1SR R400 meters register only the total amount of electrical energy consumed and only report that value, along with information identifying the meter and some status information, to mobile collectors in Eversource's vehicles. These meters do not, and cannot, serve as communications gateways or portals to electrical appliances, equipment or devices nor communicate with, individually monitor, or control such appliances, equipment or devices. I am not aware of any hardware, firmware or software which could provide the CENTRON C1SR R400 meters with gateway communications. To my knowledge, Itron does not offer such options for this type of meter and, in any event, no such hardware, firmware or software, if it exists, is installed in Eversource's CENTRON C1SR R400 meters.

5. The remaining Itron meters being installed by Eversource are the CENTRON Bridge model meter. These meters do have a ZigBee chip or module installed. The CENTRON Bridge meter does provide some functions that are more advanced than the CENTRON C1SR R400 meters, but those are limited to the ability to remotely (from a nearby vehicle or location) reset the demand component and the ability to remotely (from a nearby vehicle or location) disconnect or reconnect electrical service via a switch in the meter. The meters do not serve as communications gateways to electrical appliances, equipment or devices nor do they communicate with, individually monitor, or control such appliances, equipment or devices.

Should a willing customer install equipment capable of communicating with a meter, such equipment could not communicate with Eversource's meters because they are not configured to allow such communications.

    6. I am aware that Itron manufactures and sells an OpenWay CENTRON meter. The OpenWay CENTRON meter could, potentially, act as a gateway to customer devices or communicate with customer devices. I am also aware that the OpenWay CENTRON meter is essentially the same hardware as a CENTRON Bridge meter and both show the term "OpenWay" on their faces. However, the important difference is in the firmware that controls how the meter operates and the firmware in the CENTRON Bridge meters is limited in the manner described above. Further, because Eversource does not have the communications infrastructure in place to communicate with its meters via a fixed network, an essential part of an Advanced Metering Infrastructure ("AMI") system, it has no reason to order or install any OpenWay CENTRON meters configured to operate as part of an AMI system. Upon completion of the AMR project Eversource will not have any meters that are configured to communicate with customer devices.

    7. I have read the definition of "smart meter gateway device" in RSA 374:62. As I have described, Eversource's meters simply do not perform the functions listed in that definition.

    8. Prior to signing this affidavit I consulted with representatives of Itron concerning the specifications and capabilities of the CENTRON C1SR R400 and CENTRON Bridge meters and confirmed that they do not communicate with customer devices.

Dated this _____14th____ day of ___May____, 2015

_____
Michael B. Coit

STATE OF NEW HAMPSHIRE
COUNTY OF Hillsborough

Sworn to and subscribed before me this 14th day of _May_, 2015.

_____
Notary Public/Justice of the Peace
My Commission Expires:

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  - Advanced Commercial + Industrial Metering
  - Smart Residential Metering
  - Smart Commercial + Industrial Metering
  - Communication Modules
  - Meter Installation + Programming
  - Distribution

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- ● **Meter Data Management**

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Gartner Positions Itron as a Leader in Magic...

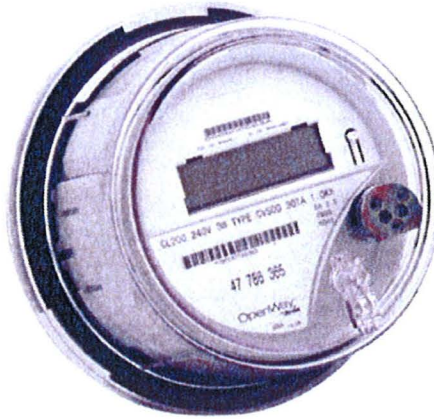**Itron Brings Edge Intelligence with ITRON...**

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In the Field

DTE Energy

OpenWay® CENTRON® ⚡

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A key component of any advanced metering or smart grid initiative, the OpenWay CENTRON meter is a truly smart device used to collect, process and transmit vital energy information to utility systems. Rather than simply inserting a network communication card into a standard meter, Itron developed an advanced meter where calculations and usage data are calculated within the meter itself, allowing utilities to leverage time-based rates, demand response, home networking and many other smart grid applications.

Features + Benefits

Fully compliant with the ANSI C12.19 and C12.22 standards for storage and transport of register data over a network the OpenWay CENTRON provides a secure and reliable open-standards approach to data collection and communications between the meter and network. In addition, each OpenWay CENTRON meter comes factory-equipped with a **ZigBee® radio chip** to provide a built-in communications pathway into the home for data presentation, load control and demand response. ZigBee also provides a communication channel with 2.4GZ OpenWay Gas Modules.

The OpenWay CENTRON also provides robust data storage capability to support a variety of data-intensive applications, as well as the most advanced feature set available to support smart grid initiatives. By providing full two-way communication, an optional load-limiting remote service switch, outage and tamper detection, and remote upgrade capabilities through the network, the OpenWay CENTRON meter is truly a smart meter that provides a foundation for smart grid initiatives.

OpenWay CENTRON distinguishes itself from all other Advanced Metering Infrastructure (AMI) meter offerings in the marketplace by providing:

- Time-of-use and critical peak pricing data
- Two channels of 15-minute load profile data
- A two-way, unlicensed RF module and adaptive-tree radio frequency local area network architecture
- ZigBee radio for interfacing with home area networking and load control devices
- Bi-directional metering for distributed energy resources and co-generation opportunities
- A remote service switch with load limiting capabilities to support many new services, such as prepaid metering
- Tamper detection including meter inversion, meter removal and reverse

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energy flow

- Non-volatile memory and voltage monitoring

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Our Leadership		Water	Partners (A-Z)	Itron in the News	Itron Access
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ZigBee® Alliance

Utility Industry

Members of the Alliance are using ZigBee standards to deliver innovative solutions for utilities both inside and outside the home.

Alliance membership contains an impressive collection of the world's leading smart metering and smart grid solution experts, along with the leading silicon and communication protocol specialists. This enables us to deliver standards well suited to the needs of the utility industry and the consumers they serve.

ZigBee Smart Energy 1.x

ZigBee Smart Energy is the world's leading standard for interoperable products that monitor, control, inform, and automate the delivery and use of energy and water. It is used to deliver innovative solutions for smart meters and the home area network (HAN) that allow consumers to know and control their energy use by connecting them to the smart grid and helps create greener homes by giving consumers the information and automation needed to easily reduce their consumption and save money.

ZigBee Smart Energy is widely deployed and delivering benefits to consumers today.
- 70+ million ZigBee electric meters being deployed by dozens of utility companies in the USA
- Major deployments in California, Texas, Oklahoma, Maryland, Michigan, Washington, DC, and Virginia
- An additional 40 million meters (from utility RFPs) in the USA are in various stages of business case development and rate approval with local regulatory bodies
- State of Victoria in Australia upgrading all its meters

ZigBee Smart Energy continues to develop and Alliance members are currently working on requirements for the UK market.
- UK DECC announced SMETS 2 which cites ZigBee Smart Energy 1.x
- Enhancements include enhanced support for tariffs, pricing, prepayment and

tunneling of DLMS/COSEM

Rooftop Solar
provides renewable
energy coincident
with peak demand.

Programmable
Communicating
Thermostats
respond to pricing signals
and grid disturbances.

Plug-in Hybrid Vehicles
draw energy from its roaming
plug-in location. It can store
energy for utility or home use.

Fixed Electricity
Storage Batteries
stores off-peak power to use
during peak periods and back up.

Smart Appliances
Respond to grid disturbances
and shifts consumption
during peak demand periods.

Neighborhood Area Network

Recently, the ZigBee Alliance announced that its members are working to create a standard for Neighborhood Area Network (NAN), the utility last mile that connects devices outside the home such as smart meters, distribution automation devices and data aggregators.
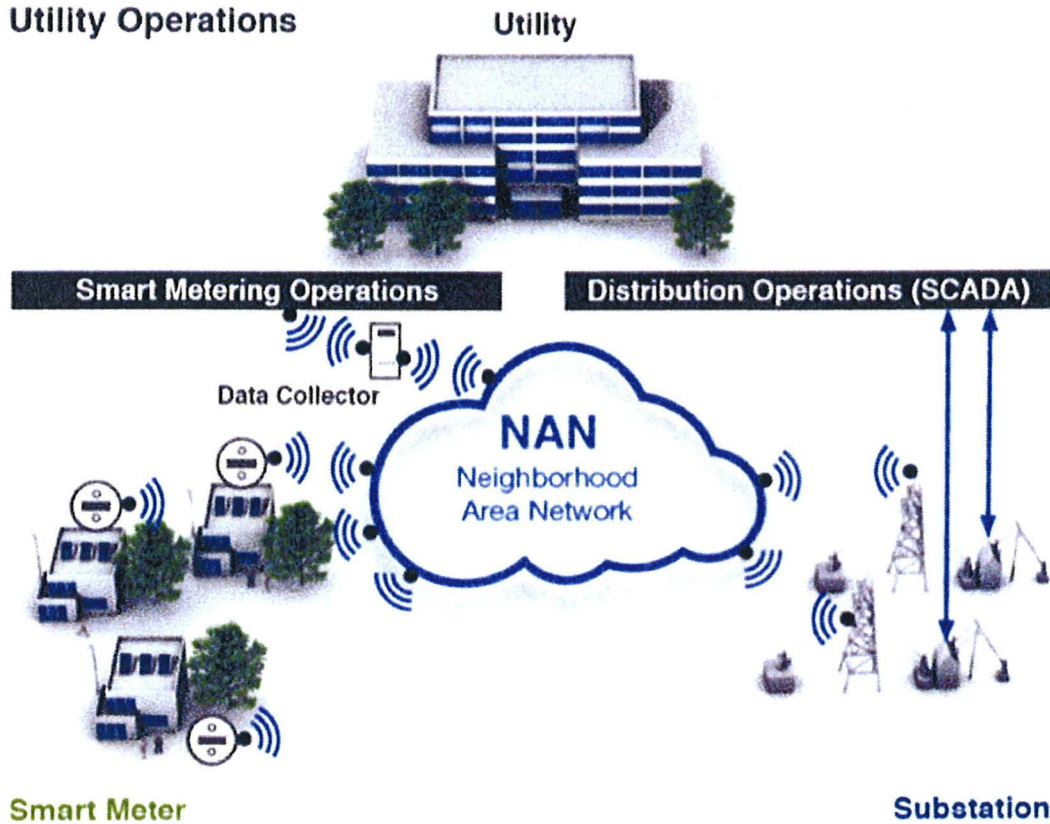
The work is based on market requirements from utilities and the need for standards-based interoperable NANs. Open global standards provide utilities with wider choice of product features, increased price competition, reduced supply risk and flexibility in selecting vendors all while assuring that products will interoperate seamlessly. Currently, only 3% of NAN communications is standards based. Pike Research estimates that by 2015, 70% will be standards-based and 85% will be standards-based by 2020.

The NAN standard will defined for Layers 1 through 4 of the ISO OSI communication stack. This provides a harmonized transport network supporting different IP-based applications and will create an interoperable standard by defining optional features of other standards including IEEE 802.15.4g and IETF transport protocols such as RPL, UDP and TCP.

The ZigBee Alliance is well positioned to create a market relevant NAN standard. Alliance membership represents a broad ecosystem of manufacturers from radio to meter device manufacturers and Alliance members are recognized experts in smart meter and smart grid with experience creating standards that are well accepted by utilities. ZigBee Certified is a mature testing and certification program that ensures

products built using ZigBee standards function as expected and products from different manufacturers interoperate with each other to help guarantee seamless interoperability in the NAN.

Details of this ongoing work are available to members of the ZigBee Alliance. If you are interested in participating in this important standards development activity, please join the Alliance today.

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Itron Technology Selected to Streamline PSNH Operations

Itron's advanced metering solution creates efficiencies and improves customer service

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LIBERTY LAKE, Wash. — Jan. 7, 2014 — Itron, Inc. (NASDAQ: ITRI) announced today that it has been selected to implement an advanced metering system for Public Service of New Hampshire (PSNH), a subsidiary of Northeast Utilities (NU). PSNH will utilize Itron technology to automate meter data collection, streamline billing operations and enhance customer service.

The New Hampshire deployment includes the installation of about 550,000 advanced electricity meters, including approximately 60,000 new Itron Bridge meters, along with mobile collection technologies and supporting data collection software. With the Itron solution, PSNH will replace manual meter reads with mobile data collection, increasing efficiencies and reducing operational costs.

The Itron Bridge meter provides access to more detailed consumption data, including hourly interval data, tampers and alerts, to improve customer service and extend the value of their Itron mobile solution. With the Itron Bridge meter, PSNH will also enable advanced capabilities for some of its key commercial customers, including mobile demand resets and remote meter service switch operations.

"PSNH looks forward to significantly improving our operational efficiency and customer service with Itron's mobile solution. And, with the Bridge meter, we can benefit immediately from its advanced capabilities," said Daniel Comer, Director of Meter Reading and Field Operations at Northeast Utilities.

As a part of this deployment, PSNH's parent company Northeast Utilities (NU) will also migrate all of its operating companies to Itron's Field Collection System (FCS) software for metering data collection. New FCS users include PSNH, Connecticut Light & Power (CL&P), Western Massachusetts Electric (WMECO) and Yankee Gas. NU companies NSTAR Gas and Electric currently utilize FCS.

"Northeast Utilities has a longstanding relationship with Itron, having successfully collaborated for more than 15 years. PSNH will benefit from Itron's partnership with NU and their broader experience with the utility industry to position them for a successful implementation," said Al Nosenzo, NU's Manager of Meter Operations.

"Itron is proud of the relationship we have formed with Northeast Utilities. We look forward to working with the PSNH team members to help achieve their operational and customer service goals," said Lou Gust, Itron's vice president of Sales and Marketing electricity in North America. "Utilities today require flexibility and that's exactly what we are delivering to PSNH. All of its customers will benefit from advanced metering functionality in a mobile environment today, and the Bridge meter solution will provide advanced capabilities to enhance service to many of their key commercial customers."

About Itron:

Itron is a world-leading technology and services company dedicated to the resourceful use of energy and water. We provide comprehensive solutions that measure, manage and analyze energy and water. Our broad product portfolio includes electricity, gas, water and thermal energy measurement devices and control technology; communications systems; software; as well as managed and consulting services. With thousands of employees supporting nearly 8,000 customers in more than 100 countries, Itron applies knowledge and technology to better manage energy and water resources. Together, we can create a more resourceful world. Join us: www.itron.com.

For additional information, contact:

Sharelynn Moore
Vice President, Corporate Marketing and Public Affairs
(509) 891-3524
sharelynn.moore@itron.com

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- **Electricity Meters + Modules**
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Field Collection System (FCS) ⚡ ✉ 🖥

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Field Collection System (FCS) is the premier data collection engine for handheld and mobile AMR systems. FCS collects data from multiple meter types and provides accurate, reliable meter data to meter data management and customer billing applications.

Features + Benefits

FCS is Itron's next generation walk-by and drive-by meter data collection system designed specifically for large electric, gas and water utilities. FCS is a state-of-the-art Microsoft Windows-based software solution that uses web services, client/server architecture to provide superior flexibility and ease-of-use. FCS is compatible with Itron collection devices currently on the market, including optical and water probes, and integrates easily with third-party software applications for billing, meter data management and data analysis.

FCS combines the speed and performance in handheld and mobile route processing that you came to expect with yesterday's mainframes with the ease of maintenance and upgradeability of today's Windows-based world. The architecture supports horizontal scaling allowing utilities to grow by adding additional PCs, rather than requiring bigger, more expensive servers. Data collector communications uses TCP/IP technology allowing utilities many options for exchanging route data including LAN, wireless WAN, broadband modem, and telephone modem support for handheld offices and locations. FCS also supports two powerful database platforms: Oracle and Microsoft SQL Server.

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RouteSmart Technologies, Inc., is an Itron integration partner and leading provider of route-optimization software and logistics professional services for the public works and utility meter reading industries.

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