



**BORDER
STATES**

Greenville Utilities

RFQ 25-10

Border States Proposal for Advanced Metering Infrastructure

March 11, 2025

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Cover Letter

Thank you for the opportunity to respond to Greenville Utilities RFQ 25-10.

On behalf of the employee-owners of Borders States, we are pleased to submit our proposal that outlines our ability to efficiently and cost-effectively serve Greenville as your primary provider of Advanced Metering Infrastructure.

Border States and Greenville have had a successful business relationship for over 25 years, and we look forward to continuing that relationship.

Border States
2400 38th St S
Fargo ND 58104

Summary of Expertise

Border States, the project lead, United Systems & Services (USS), and Itron will combine our expertise to employ a joint delivery model. We believe Greenville Utilities' next AMI technology must deliver a new level of visibility and control of the grid to enable safety, reliability, and a clean energy future. An AMI platform capable of real-time situational awareness and control is essential for utilities to thrive during the present clean energy transition focused on grid reliability.

Border States is the locally authorized Itron partner (45+ years) for electric and gas solutions. USS is the locally authorized Itron partner (25+ years) for Itron water solutions with overlap in the gas solutions. Itron will cloud host their Gen5 AMI solution that is built on decades of experience in the electric, gas and water utility sectors.

Statement of Commitment

We are committed to working together to meet GUC's needs with exceptional service while achieving total cost savings. We appreciate the opportunity to provide this proposal, and we look forward to more discussions and working with you to make your strategies successful.

Contact Information

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Insurance Acknowledgement Statement

As the project lead, Border States maintains commercially appropriate insurance coverages.

Please see **Appendix 1** for the signed response Acknowledgement, E-Verify, and Proposal Signature forms.

Company Background and Relevant Experience

Company Overview

Border States was founded in 1952 in Grand Forks, North Dakota, and has grown from the original two employees to over 3,450 employee-owners. We are a 100% employee-owned company. From our Branch Support Center (corporate office) in Fargo, North Dakota, and over 130 branch locations in 31 states, Border States serves customers in its core markets of utility, construction and industrial.

Founded in 1977, United Systems serves over 1,500 utility customers throughout the Eastern United States from their headquarters in Benton, Kentucky. USS is privately held with the majority owner being Scott Waldrop. Scott has been at USS for over 30 years and is the son of the original founder, Victor Waldrop. USS' focus is helping utilities and local governments in the effective use of technology.

Itron has been a trusted technology company since they were founded and incorporated in 1977 in Spokane, Washington. Itron is a publicly traded company with its headquarters in Liberty Lake, Washington. Their AMI meters provide the highest data rates, lowest latency, 99.5% meter reading success and are highly secure. They serve over 8,000 customers in 100 countries and their most recent annual sales exceeded \$2 billion. Itron holds a unique advantage in providing electric, water and gas metering products.

Itron has a long history of participation and leadership in the standards organizations that have shaped the past, present, and future of utility AMI, Smart Cities, and IoT solutions. Itron's membership in industry standards organizations spans multiple generations of metering and communication technologies and computing platforms.

Border States and USS have been valued distributor partners to GUC. Our local branches, sales teams and application engineers have dutifully supported your distribution product needs. This includes automated meter reading (AMR) support for Itron meters and supply continuity to ensure GUC's inventory demands are continuously met. We will provide the same level of service excellence for your AMI project, meeting or exceeding your expectations.

Relevant Project Experience

Border States and USS have both implemented numerous Itron AMR installations over the past 20 years. Border States is approaching the final stages of an Itron Gen5 AMI electric and water project with Shakopee Public Utilities (Shakopee, MN) that started in 2023. This Gen5 project was a joint endeavor with Border States, USS, and Itron that we would mimic for our proposed project delivery to Greenville Utilities.

USS has extensive project experience delivering over 100 Itron AMI systems in the last 20 years. As Itron's largest water/gas distributor, USS's projects are scattered over their 22-state footprint. Some of their Itron projects in the southeast included Eastside Utility District, Consolidated Utility District, and Gaffney Board of Public Works to name a few. Other Gen5 projects included: City of Northbrook, City of South Elgin, City of Arlington Heights, City of Rockford, and City of Crystal Lake.

Itron is a global market leader in metering systems for utilities – electric, gas and water. It is their core business. The proposed Itron network technology manages more than 40 million IPv6 communications devices that support a wide range of applications for multiple Itron utility and smart city customers. World-class energy, gas, and water deployments based on this platform include Florida Power & Light,

Commonwealth Edison (Chicago), Consolidated Edison (New York City), Singapore Power, and DEWA (Dubai). Municipality and cooperative utilities include CPS Energy, Sacramento Municipal Utility District (SMUD), City Utilities of Springfield, and Choptank Electric Coop. And the network supports iconic smart street light/smart city projects in Paris, London, Chicago, and Copenhagen.

A major portion of the behind-the-scenes setup, as well as in-person training for the utility, is provided by Itron. Border Still will take the project management lead with Itron's vast experience and fine-tuned methodologies behind us.

Additional relevant project experience is woven into each of the following sections.

Many utilities have worked through public concerns related to deploying 'Smart Meters'. Itron offers an extensive list of resources that may be helpful as Greenville Utilities prepares its own customer response. Xcel Energy is using the same Itron Gen5 AMI system we are proposing to GUC. Their webpage offers links to educate customers and address their concerns. The Smart Energy Consumer Collaborative is another online resource that provides a wealth of information.

Itron links:

<https://na.itron.com/consumer-resource-center> (educational materials)

<https://na.itron.com/radio-frequency-resource-center> (RF concerns)

Xcel Energy links:

<https://wi.my.xcelenergy.com/s/our-commitment/clean-energy-technology/agis-smart-meters>

[https://www.xcelenergy.com/staticfiles/xcel-responsive/Info%20Sheet%20Advanced%20Grid%20Safety%20and%20Security.pdf](https://www.xcelenergy.com/staticfiles/xcelresponsive/Info%20Sheet%20Advanced%20Grid%20Safety%20and%20Security.pdf)

Smart Energy Consumer Collaborative links:

<https://smartenergycc.org/>

<https://smartenergycc.org/education/> (educational materials)

<https://smartenergycc.org/radio-frequency-and-smart-meters-fact-sheet/> (RF concerns)

Project References

City Utilities (Springfield, MO)

2014-2023

121,000 electric, 92,000 gas, and 90,000 water endpoints.

Gainesville Regional Utilities (Gainesville, FL)

2022-2025

100,000 electric, 40,000 gas, and 74,000 water endpoints.

Shakopee Public Utilities (Shakopee, MN)

2023-Present

20,000 electric and 11,000 water endpoints.

Please see **Appendix 2** for complete details on the above references.

Additional references can be provided upon request.

Technical Approach and Solution Design

AMI System Design and Scalability

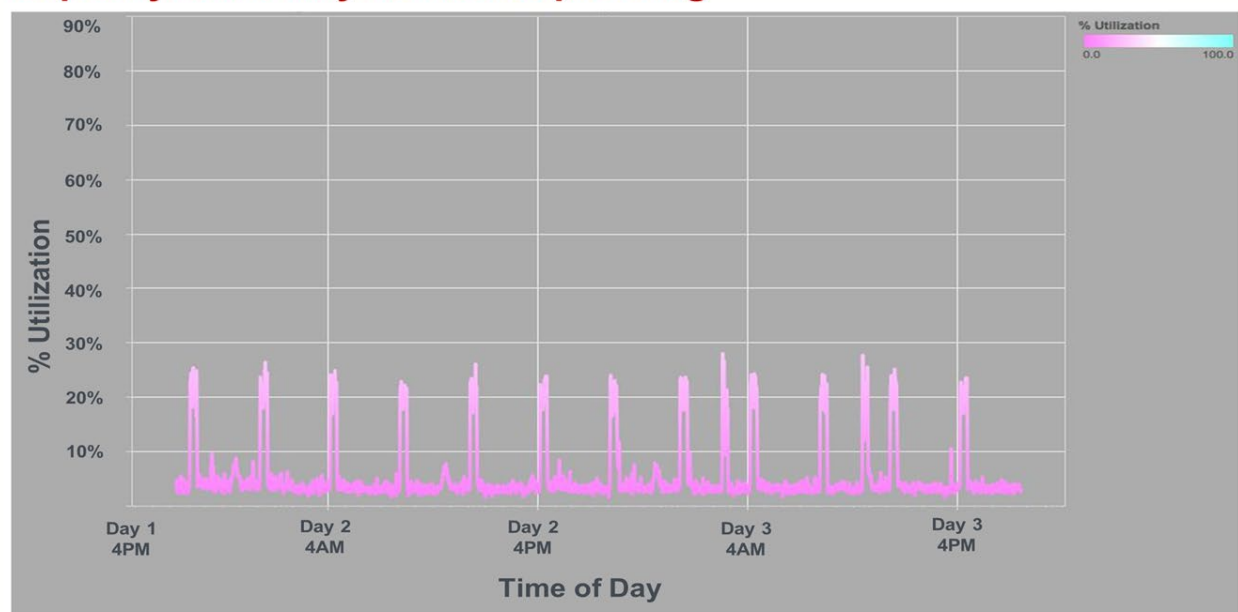
The heart of our proposed AMI solution on the Gen5 network is the cloud-based Utility IQ headend (UIQ) using a SaaS model (Software-as-a-Service). Itron's proposed SaaS headend deployment model shifts risk and skill requirements to Itron. In this way, GUC leverages Itron's considerable experience to reduce deployment risk, speed the deployment, and deliver maximum flexibility while maintaining long-term ownership and capitalization.

Itron's solution has a powerful and flexible RF mesh network well-suited for diverse service territories like Greenville. Access Points (AP), Relays and optional devices like SocketAPs, Streetlight MicroAPs, and Fiber MiniAPs drive network traffic that can include meter reads, firmware upgrades, meter configurations and future applications such as load control, distribution automation, or intelligent street lighting across the mesh. The Itron network supports electric, gas and water meters on the same network. APs route traffic from the mesh to the headend via Ethernet or cellular IP connections. Relays extend the reach of the mesh. SocketAPs and Streetlight MicroAPs provide cellular egress to isolated groups of meters. The Fiber MiniAPs provide backhaul for limited groups of meters when a direct connection to fiber is available. In addition to the mesh network, gas-only and water-only areas can be bolstered by cellular endpoints that have the same capabilities as their mesh endpoint counterparts. Cellular Gen5 electric meters are on Itron's roadmap for release in 2026. Itron uses mesh as the primary "last mile" technology but also has two decades of cellular communication experience. Itron's solution will leverage the cellular Verizon/AT&T canopy that blankets the city (and beyond) today. The initial propagation study will determine which network devices and cellular endpoints are best suited in each region.

The Itron mesh operates on unlicensed 902-928 MHz band using FHSS (Frequency Hopping Spread Spectrum) technology. At the network level, the Itron mesh provides multiple communications paths and automatically re-routes traffic around obstacles and/or noisy RF areas. Capacity is managed automatically by the network to ensure that the broad set of applications continues to operate.

AMI uses only a portion of the bandwidth available on the Gen5 network. The following diagram is an example of AMI 'traffic' leaving room for SCADA and additional applications to use the network.

Capacity is the Key To Future-proofing



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Using Itron's unique "Gear Shifting" technology, integrated meters negotiate modulation for throughput from 100-600 kbps or optionally up to 1.2 or 2.4 Mbps. Link speeds increase as packet success rates increase and decrease as needed to reach out to hard-to-reach endpoints. The higher speeds will deliver best-in-class performance for the majority of Greenville's endpoints. Lower speeds provide reliable communication across greater distances.

Itron's Gen5 network provides a true multi-application, high-performance, and scalable solution. As GUC's needs grow, the network can easily scale to meet future requirements. Itron has a proven track record of system scalability with more than 40 million GenX devices deployed around the world and performing to stringent requirements. Itron has demonstrated the scalability of more than 5.5 million connected devices on a single network, which includes the largest smart streetlight project in North America with over 460,000 controls currently deployed.

Network: The ability to horizontally scale is one of the key benefits of the Itron solution. At the network level, additional Access Points can be strategically added for additional capacity. The use of spread spectrum technology coupled with mesh networking allows for very efficient spectrum re-use.

Back-office: Back-office software is also readily horizontally scalable, allowing additional components to be added to cater to larger numbers of devices. For example, multiple instances of the module responsible for meter data collection (Global Meter Reader, GMR) can be deployed to cater to millions of devices.

Backward Compatibility: Nearly every customer using this platform has seamlessly integrated multiple hardware generations over time with no stranded assets or forced upgrades. Itron has many customers that have second-generation hardware operating in mixed networks with third, fourth, and fifth-generation hardware. Customers like Florida Power and Light have had Itron hardware in the field for over ten years, and do not plan to retire the older hardware.

The Itron RF mesh network is designed to allow utilities to implement advanced technologies quickly and easily. This includes enabling the control, management, and monitoring of electric vehicles (EVs) in residential, commercial, and fleet applications.

Itron provides a comprehensive solution for residential EVs via the IntelliSOURCE DERMS platform. Using AMI interval data, vehicle telematics, and/or DI grid analytics, Itron empowers utilities and consumers to orchestrate and optimize the vehicle charging experience for TOU, charging levels, and grid balancing. Control of the storage battery, inverters, and vehicle charging can be done over the WiFi built into the Gen5 Riva meter.

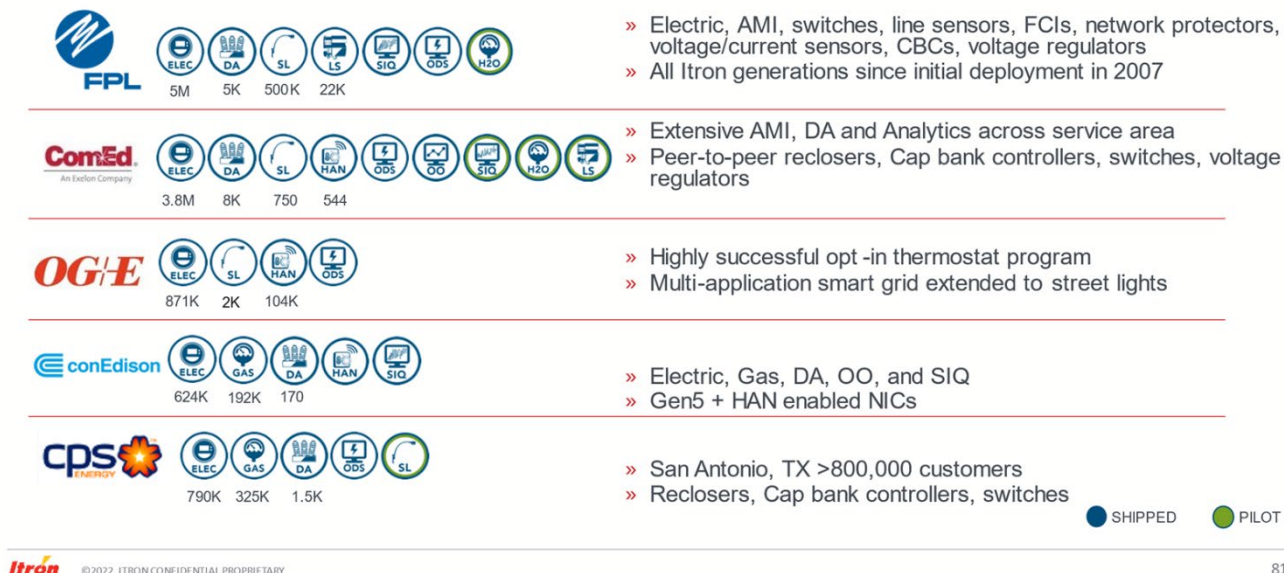
For fleet applications, the Itron Fleet Energy Resource Management (FERM) platform provides advanced fleet charging management from the perspective of the impact on the grid, supporting optimization of grid resources and use of available energy while ensuring the fleet owner benefits from optimal TOU pricing.

The next phase of the EV evolution is vehicle-to-grid (V2G) and vehicle-to-home (V2H) technology. Itron is developing solutions utilizing the Riva metering and Itron Gen5 RF mesh to bring these features to the market.

The following diagram shows applications that some larger utilities have implemented over the past several years using their Itron network.

MULTI-GENERATIONAL, MULTI-APP CUSTOMERS

Example deployments supporting core smart grid, grid management and smart city applications



Network Infrastructure Deployment

Itron's network design team has a proven track record of providing accurate and comprehensive network coverage designs. These designs are **right the first time**, which allows GUC to be confident in project costs without later additions of network equipment.

The design group will take data provided by GUC for meter locations, overhead distribution infrastructure locations and locations of available existing backhaul communications and provide an initial network design. This initial design will be the basis of Border States' proposed system cost and will provide a

“not-to-exceed” framework for GUC’s AMI system coverage. Initial proposed locations will be validated in the deployment process by field site surveys which ensure proper mounting and communications availability.

The project typically begins with the setup of the contracted hosted software solutions in Itron’s secure cloud and integration of these applications with GUC’s back-office tools (CIS/OMS/MDM, etc. See next section for more details). Border States and Itron will work with GUC to select an appropriately sized initial Systems Acceptance Test deployment area. We would look for a contiguous area with electric, water and gas meters and deploy the appropriate network gear to cover this area of around 500-1000 of each commodity type.

In this process, GUC personnel, or the contracted installer, would be trained to properly install Access Points (APs) and Relays. Typical network designs call for APs and Relays to be installed 25-30 feet above ground level on GUC’s existing overhead infrastructure. This allows easy mounting using standard utility bucket trucks and allows for safe future access in the communications area of your poles. APs and Relays weigh less than 10 pounds so can be managed by a single installer in the air. Each site will typically require less than 1 hour for “start-to-finish” installation.

When Systems Acceptance Testing is complete, GUC will then begin system rollout.



Typical Mounting of Cellular-backhaul Access Point with Battery Backup

Although a design has not yet been conducted, based on your meter population, Itron anticipates needing approximately 30 Access Points and sufficient relays to meet your contracted coverage requirements. With these low quantities of gear, your network deployment can be completed relatively quickly.

Most utilities choose to deploy this gear system-wide regardless of the timeline of their meter deployment. GUC can decide to deploy by route, area, section, or other subset of your population but will want to have the network infrastructure over that whole area prior to deploying endpoints. Electric endpoints are best deployed nearest the APs first so the mesh can form as you move further away. Gas and Water endpoints in co-located areas would be deployed either at the same time or after electric meters in each area. Cellular Water or Gas (as needed) for areas with no electric meters would typically be deployed at the end of the project.

Integration Strategy

Integration Capabilities

The Itron headend system, UtilityIQ, exposes functionality via a well-documented set of web services and Java Messaging Service (JMS) queues that allow integration with enterprise applications. Any authorized back-office application can call the web services to act such as a remote disconnect command, an on-demand read, or an on-demand ping. This capability allows Itron to integrate directly with other utility back-office systems, such as:

- Asset Management System
- Customer Information System (CIS)
- Load Profile Analytics and Business Intelligence (BI) Systems
- Meter Data Management System (MDMS)
- Outage Management System (OMS)
- Prepayment System
- SCADA
- Work Order Management System
- and many others

Itron's integration methods have successfully and completely integrated many varied back-office environments/architectures for large and small deployments in production today.

Integration Approach

With most implementations, customers provide an 'integration abstraction layer' between the headend system (UtilityIQ) and the utility's back-office systems (MDM, CIS, etc.). This is usually implemented by a commercially available enterprise service bus (ESB) that brokers and/or orchestrates service calls from the utility's back office to/from UtilityIQ. This provides an isolation layer, allowing one side of the integration to be changed or updated without affecting the other. In addition, it provides a layer for 'translating' output data from the headend system to a format acceptable to other back-office components.

Formats and Protocols

To support integration with utility back-office systems, UtilityIQ provides extensive webservice APIs based on industry-standard and widely used XML 1.0 and SOAP 1.1, transported over HTTPS. In addition, JMS messaging is available for the delivery of read data and events. UtilityIQ web services and JMS message queues (or direct Tibco EMS 6.1 message queues) are easily integrated with external back-office systems.

Integration Options

UtilityIQ integration options include:

- Extensive web services
- Industry standard Java Message Service (JMS) messaging interfaces using the Tibco Enterprise Messaging Server 6.1. Customer integrations can use JMS or native Tibco messaging client libraries such as .Net/C#, Java, etc.
- Bulk file transfers using FTP or SCP

- Email notifications using SMTP
- Time synchronization using SNTP
- Enterprise monitoring using SNMP v2 or v3

MultiSpeak Support

Itron also has ‘standards-based integration’ components available as an option. These components expose a MultiSpeak 4.1 integration interface API to back-office components (MDMS, CIS, OMS), and a CMEP (California Meter Exchange Protocol) export format. Itron’s MultiSpeak Adapter currently is used for NISC MDM and CIS integrations and could be used for other MultiSpeak back-office applications. These interfaces have been pre-tested with several MDMS and OMS vendors to provide a fully functional end-to-end system with little or no custom development.

Successful System Integrations

UtilityIQ has been successfully integrated with many leading meter data management (MDM) products, including:

- Itron Enterprise Edition (IEE MDM)
- Ecologic Analytics
- EnergyICT
- MeterSense
- NISC
- Oracle Utilities Meter Data Management, and
- Siemens/eMeter EnergyIP (now OMNETRIC)

UtilityIQ has also been integrated with various Customer Information, Asset Management, Load Profile Analytic, Work Order Management, and SCADA systems. For example, AMM has integrated with CIS from SAP, Oracle, and Customer One; and OMS from ABB/Ventyx, Oracle, and GE PowerOn. UtilityIQ’s AMM component is integrated with the NISC MDMS and CIS at Choptank Electric Co-op using the Itron MultiSpeak adapter.

Integration Support and Tools

Itron utility customers have three options when implementing system integration:

- Itron Professional Services can perform system integration
- Itron Professional Services can support a third-party System Integrator
- Itron Professional Services can support the utility’s own IT professionals with system integration

With the last two options, Itron’s Professional Services team works with the System Integrator or the utility’s IT staff to build, test, and finalize the interfaces between the AMI software and the utility’s back-office systems. Itron will advise on best practices and business processes to take maximum advantage of AMI system capabilities.

Itron provides the services of a Solution Architect to co-develop an integration plan for any system integrations. This includes the AMI headend to MDMS or CIS platforms, OMS, DMS, GIS, etc. The integration plan specifies the roles, responsibilities, timelines, and technical requirements.

To facilitate interfacing, Itron provides Web Services Description Language (WSDL) XML documents to vendors of external systems. Itron also provides a WSDL dictionary to assist in developing publish/subscribe interfaces. During implementation, Itron deployment personnel work with the utility’s project team to provide training and assistance to enable them to develop and modify APIs.

Project Management and Implementation Strategy

Phased Rollout Plan

Border States has successful experience taking the Itron Gen5 system from pilot all the way through successful full meter deployment. There are many factors that can influence this process from the team with boots on the ground installing the meters (whether that is a subcontractor or the utility itself) to your customers and the communication strategies that allow this process to move effectively. When partnering with Border States we are dedicated to working with you side-by-side from sharing best practices and experiences to leveraging our teams and partnerships to tackle any unexpected roadblocks along the way.

Border States' project team is setup to be extremely adaptable to work with Greenville to support and build a project plan that best suits your project needs. Our most recent project deployed a combined meter count of over 30,000 electric and water meters on the Itron Gen5 system without any service disruptions for a utility transitioning from Itron AMR to the Itron Gen5 network. We feel confident in our partnership with Itron and USS that we can develop a detailed phased project plan for a successful outcome based on the project management framework detailed in this RFQ.

The following is a sample 8-year deployment model.

Greenville U.C. 8-Yr Delivery Model



Border States' project manager will be available directly to Greenville from start to finish and, in combination with our partners, will be able to coordinate and work with all applicable stakeholders associated with the project. One of the standard activities you can expect throughout the project lifecycle is regularly scheduled project update meetings to review progress, track action items (active and

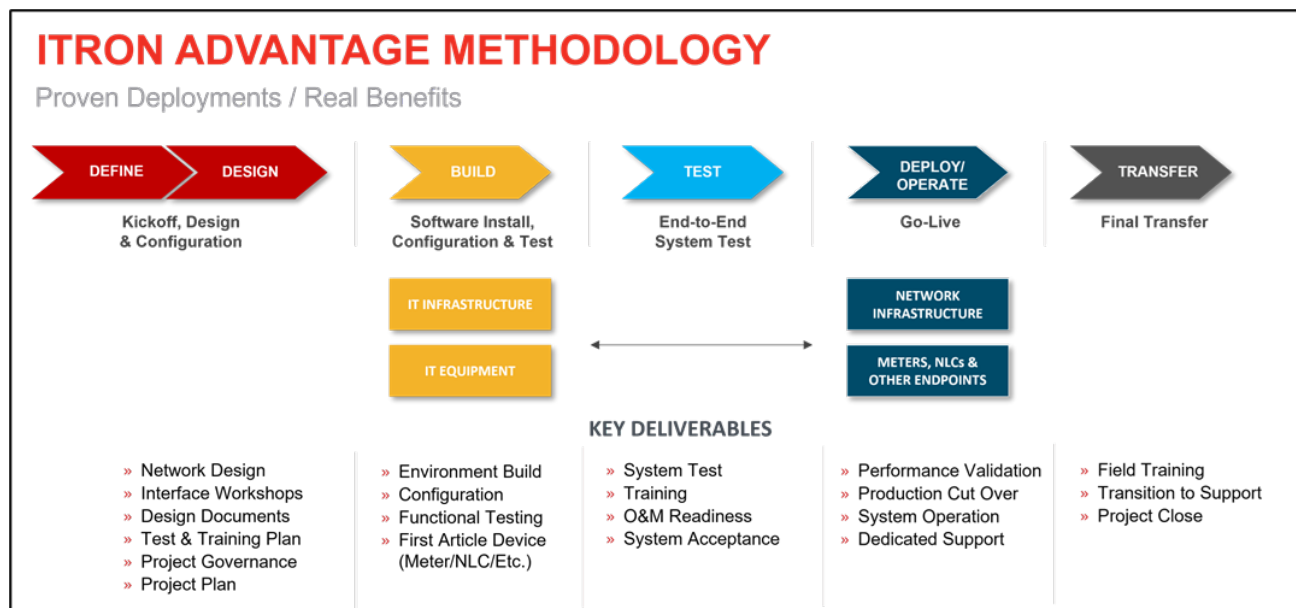
resolved), and coordinate all project activities such as workshops, training sessions, and any additional relevant project activities.

For any phased approach with the Itron Gen5 solution we recommend the following approach for installation including a pilot deployment. This approach has yielded the best results from experience in building the network and seeing the best performance for all devices communicating as quickly as possible. Please note a different approach would be developed for any water or gas only territories and this is with the assumption that all back-office integrations have been completed, and the environment is live and ready.

- 1) Network Equipment Installation
- 2) Electric Meter Deployment in a designated area
- 3) Water & Gas module installation

As described in the 'Network Infrastructure Deployment' section, GUC can decide to deploy by route, area, section, or another subset of its population. Options are available to validate phase by phase. Since the headend would already be in place at this point, it will be monitoring endpoints as they join the network, and it will show progress for GUC personnel to monitor. When the entire network is installed, an option is available to have Itron run an optimization to fine tune the network. Final system acceptance testing would be completed after completion of network optimization.

Itron does adhere to a formal project approach referred to as the Itron Advantage Methodology which a formal Project Management Office (PMO) supports to establish the project framework and to support any adjustments to the project.



Itron Advantage mitigates the risks associated with any scale by tightly controlling project tasks, deliverables, and variables. The process ensures that each task and deliverable is identified, documented, assigned, tracked, and managed to a successful conclusion, and that appropriate resources are made available as needed throughout the project. Focus remains on mitigating risk, stakeholder communication, task execution and accountability, and closely managing change.

Itron has gained the experience, and the expertise needed to manage even the most complex large-scale solutions. For example, the team has extensive experience with setting up complex IT systems, integrating with back-office business systems and third-party components along with guiding customers with updating and automating associated business processes.

The Itron Advantage methodology is inherently flexible, allowing for customization as appropriate. While this template version of the Itron Advantage methodology reflects the best practices and lessons learned from our extensive global experience, our expectation is that, early in the project, we will adapt this baseline template into a set of detailed plans that are specific to Greenville AMI project and its unique requirements. As such, the content here should be viewed to represent Itron's experience and expertise and is not intended to be prescriptive or to conflict with Greenville's requirements as expressed in a future RFP.

The following are key activities that help ensure successful solution implementation:

- Workshops for reviewing system capability and establishing project processes for solution implementation (Workshop examples: Meter Specs, ENV Build, Network Design, Integration, Meter/Network deployment)
- Capturing Greenville's business requirements
- System build coordination (ENV and Network)
- System configuration / integration
- Testing and Training execution
- System go-live transition

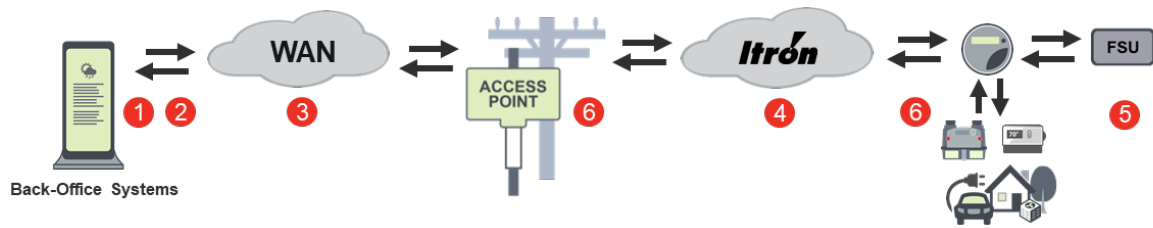
Detailed information about each project phase and its associated activities and deliverables are available upon request.

Data Security and Compliance Strategy

Security Framework and Protocols

Itron's multi-layered security leverages proven industry-standard methods such as public key infrastructure and a certificate hierarchy to provide authentication, authorization, network admission control, encryption, integrity checking and auditing across millions of endpoints in the field and back office. The Itron system is designed to mitigate system-level threats, RF attacks, denial of service attacks and threats to privacy and confidentiality.

Itron Multi-level End-to-End Security



- 1 Application traffic flowing across the network
- 2 Firmware upgrades sent from back office
- 3 Wide Area Network Backhaul
- 4 Network communications within Itron RF mesh
- 5 Access by any device, including external tools
- 6 Local tamper or hacking

End-to-end app-layer protection
(AES-256, HMAC SHA-256)

Firmware code signing
(RSA-2048)

IPSec protection over WAN

Link Layer security
(EC based certs, HMAC SHA-256)

PKI-based authentication and authorization
(EC based certs)

Crypto module taken offline upon unauthorized physical access

The Itron AMI system baseline security capabilities include all functions to authenticate (who and what is allowed onto the system), authorize (given your role, what can you do) and encrypt (prevent snooping of content) communications across the proposed Itron system. These capabilities span from the applications in the back-office to every device in the field.

Itron Baseline Security Capability	Why is This Important?
Secure manufacturing process	Protects against tamper, device cloning and unauthorized production
Hardware-based secure boot loader in every device from birth	Ensures field devices reject unauthorized firmware
Hardware acceleration for cryptographic algorithms on every device	Ensures security operations do not hinder network performance
HSM protected firmware signing	Prevents malicious code from being issued
Public Key Infrastructure (PKI) for entire network using X.509 certificates	Leverages industry's most stringent and proven practices and technology
Unique certificates per device from birth	Prevents device cloning and spoofing
Encrypted communication between back-office applications and endpoint (AES 256 encryption)	Ensures privacy of data exchanged
Mutually authenticated communication between back-office applications and endpoint (keyed-HMAC)	Prevents unidentified entities from communicating with each other
Authorized communication between back-office applications and endpoint (role-based privilege encoded in PKI certificates)	Restricts operations for both devices and applications based on their roles in the system

Itron Baseline Security Capability	Why is This Important?
Integrity check for all communication between back-office applications and endpoint (keyed HMAC with SHA-256)	Prevents tampering of data in flight
Dynamic, distributed, automated negotiation of all encryption and integrity check keys (symmetric keys)	Avoids the complexity and operational expense of centralized management
Unique negotiated keys (symmetric keys) for each association between back-office and endpoint	Prevents single-device attacks from turning into widespread disruption
NIST approved crypto and key exchange algorithms	Leverages industry's most stringent and proven technology
Authenticated links (at data link layer) between neighboring devices	Prevents unidentified devices from injecting spurious routing information to disrupt network communications
Utility specific, cryptographically secure device enrolment	Prevents non-Itron- manufactured devices from joining utility's network
Connection refusal without confirmed device ID	Prevents back-office from communicating with unauthorized devices
Support for standard firewalls in back-office	Allows only permitted traffic types between specified entities
Support for standard firewalls in Access Points	Prevents non-permitted traffic from entering or exiting the Neighborhood Area Network (NAN)
Secure over-the-air upgrades and patches	Prevents malicious code from being distributed in the network
Support for IPsec with IKE on WAN links	Protects communications across public networks
Uses Transport Layer Security (TLS) in back-office for secure communication between servers	Prevents malicious snooping or attacks within the utility's back-office
Security event logging in all devices	Enables detection of suspicious incidents and forensics to complete response
Centralized collection and reporting of security alerts and logs	Accelerates detection of suspicious incidents
Centralized Authentication and Authorization Service (CAAS) for user log in to applications	Securely and simply manages user access to multiple applications
Role-based access for users into back-office applications (principle of least privilege)	Prevents unauthorized activities
Support for standard password aging and rotation in CAAS	Enforces best practices for securing user access to systems
Field tool with FIPS 140-2 level 3 compliant smart card chip storing PKI-based credentials	Prevents unauthorized or non-utility field tools from accessing utility's device
Field tool, use of smart card PIN	Prevents hacking of user credentials to use field tool
Field tool, restricted number of allowed connections based on utility security policy. Additional connections recharged by network administrator	Limits damage a compromised field tool or disgruntled employee can perpetrate

Future-Ready Security Capabilities

Itron has a policy regarding AI and has taken precautions to ensure that any use of AI is authorized as per the AI policy. AI-driven threat detection is not currently in use in a substantive way; however, future applications may consider including this functionality. AI is currently being used to analyze data from the Itron SIEM to look for correlations. However, notification based on this analysis is not in use.

Training and Knowledge Transfer Plan

Initial Training Program Structure

Training Approach

Itron provides comprehensive training and technical support with all new Itron AMI/IEE MDM solutions and has extensive experience training utility personnel in their use. Itron can provide training both as a primary contractor or as a subcontractor. Our approach and deliverables are similar in either case.

Training is a key component of Itron's delivery program and an integral part of Itron's standard implementation methodology. Training helps ensure that your operations and administrative personnel are all knowledgeable and prepared to perform their functions, and that they can work effectively and efficiently with the new solution to realize its maximum potential value.

Itron provides training on a "train-the-trainer" basis, wherever possible. This means that, after initial training, the training and support materials are sufficient for Greenville personnel to implement further training to people within your organization. Greenville can also contract with Itron to conduct further training sessions.

Instructor Experience

The Itron training staff has many years of implementation and training experience. Instructors are usually the same individuals who are implementing the Itron solution. Whenever possible, our instructors incorporate their experience with past projects alongside training specific to the utility's purchased solution. This includes information on best practice deployments, lessons learned, and recommendations pertinent to the customer's environment and business practices.

The training sessions will be conducted in English.

Customer Training Plan

Itron will develop a Training Plan that documents the details of the proposed training program. Itron works with Greenville to plan the logistics and content for training users on the delivered system. This plan is subject to review and approval by Greenville.

Once the Training Plan is complete and the solution is designed, Itron prepares utility-specific content from existing training materials. Business scenarios identified in the Solution Design are often used as a basis for the training materials.

Training Schedule

It is important to deliver the appropriate training at the proper time during the project. When delivered too early, learning can be lost before it is used. When delivered too late, the utility loses opportunities for efficient operations.

Itron recommends delivering initial training just prior to User Acceptance Testing of the system's core software components. This allows Greenville personnel to begin putting their training into practice almost immediately.

Further training then takes place upon deploying subsequent deliverables, to teach how to support associated use cases. Itron will work closely with the utility to agree on the exact approach for the training sessions and to plan the logistics. Itron will provide each course one (1) time.

A typical new AMI customer should expect about 5 days of instructor-led training if they are SaaS/Managed. Professional Services may include another 2–5 days of ad hoc training for field

personnel, depending on the division of responsibilities between Itron and the customer (if the customer is installing network gear, etc.).

Training Environment

Training is typically conducted onsite at the customer's designated location and combines classroom-type instruction and hands-on training. Therefore, the designated training environment must include workstations with access to the Itron solution applications.

Pupils perform hands-on training by accessing a "sandbox" training environment that does not affect the production system. The training room should include a video/PC overhead projector, screen, and whiteboard.

Remote web-based training is also an option, where needed, for experienced Greenville personnel. Itron can also provide additional follow-up training, such as refresher training or training on API development, on a time-and-materials basis.

Staffing and Staff Preparation

Itron supports all training sessions with the appropriate training materials and is responsible for creating all training materials that will be used by Itron's trainers when they deliver training to Greenville's nominated training personnel. In turn, Greenville is responsible for ensuring that all the attendees have the appropriate backgrounds, experience, and expertise that is appropriate for their targeted training program.

Target Audiences

Itron can tailor the training program as needed to accommodate a wide range of utility personnel. The following table summarizes the usual target audiences for AMI training.

Target Audience	Description
IT Staff	These are your IT personnel responsible for maintaining the system, including the database, web services, and client installation.
System Administrators and System Configuration Personnel	These are the system administrators and system operators who need to understand how to setup and configure the solution's software and hardware components in a manner that supports Greenville's operational requirements and use cases.
Application Operators (system end users)	These are the system users who will be responsible for day-to-day operations of the Itron solution.
Read-only users	These are high-level users, such as Managers, who may not directly use the system, but still require a firm understanding of its dashboards, reporting, and system capabilities.
Network Operation Engineers	These users have expertise on the utility network capabilities and provide expertise on the interfaces between the various data systems on the WAN and LAN network.
Distribution System Operators	These highly technical personnel manage the smart grid's distribution system infrastructure and operations.

Metering, Accounting, and Billing Staff	These users are responsible for rate parameters, rate configurations, and end-customer billing.
Field Service and Maintenance Staff	These users are meter installation, field service, and maintenance (meter shop) technicians.
Meter Operations / Outage Dispatchers	These users support meter operations, access, and maintenance and/or manage the utility's primary work order system to manage service outages, and to route and dispatch crews for surveying and maintenance activities.
System and Application Support	These IT personnel provide support for IT, network, and data, including system integration and system issues.
Future System Trainers	Itron's approach is to "train-the-trainer." Training and support materials are designed so that, after initial training, your trained personnel can implement further training within your organization. However, Greenville can also contract with Itron to conduct additional follow-up training sessions.

Proposed Curriculum

For software, Itron provides system administrator and application user training. For hardware, Itron provides installation, field service, and maintenance training. Itron's proposed training program includes training in the following areas:

- Meter installation and commissioning
- Using the headend system
- Operation and maintenance of all installed equipment and components
- Product technical training (product knowledge, installation, and maintenance)
- Product database and system administration training
- Product instructor training (train-the-trainer)
- Any project-specific training requirements
- Final handover of entire operations to Greenville personnel

Itron will tailor a training program according to Greenville's AMI system needs and business objectives. Other optional training sessions are also available. Itron and Greenville can agree on any other appropriate training topics when developing the project's Training Plan.

Example of the training courses provided to Shakopee Public Utilities:

Course	Brief description	Intended audience
AMI.101 – Intro to the UIQ Suite	This course provides an overview of the capabilities of the INSI Advanced Metering Management (AMM) software, including key terms and concepts, how to monitor and manage electric and gas meters, access points, and relay devices. An overview of Home Area Networking (HAN) is included along with discussions of metering and system integration basics.	All utility company users involved with a INSI Smart Grid project, including managers/executives
SEC.101 – Intro to GenX Security	This lecture course covers the fundamentals of the INSI hardware and software security solution. In this course you will learn the ways that hackers attack and friendlies can misuse the system and how INSI addresses these concerns with a layered security approach.	Anyone with an interest in INSI technology and how it addresses customer security concerns.
TLS.210 – Communications Tester	This course provides a hands-on laboratory of managing communications Network Interface Cards (NIC) using Field Service Units (FSU) and Communications Tester. It focuses on deployment, configuration and management of the FSU hardware.	Utility Field Engineers, Utility staff who manage and maintain field devices, and Back-office personnel in charge of endpoint management
AMM.200 – AMM System Operator	This course provides information about how to use the Advanced Meter Management (AMM) system to manage Smart Grid devices. It describes the user interface and device states, and how to perform day-to-day operator tasks such as searching for devices, viewing device status, checking device connectivity, provisioning devices remotely, and generating reports. Home Area Network (HAN) messaging is also discussed.	AMM users, system testers, MDM integration, IT staff
FWU.200 – Firmware Upgrader	This course provides an overview of the capabilities of the Firmware Upgrader (FWU). Learn how to use the Firmware Upgrader. Learn the principles of the firmware upgrade process as well as how to configure, schedule and run firmware upgrades.	This course is intended for network managers, operators, or any user involved in the installation, operations and maintenance of the INSI Smart Grid solution.

AMM.250 – AMM System Manager	This course describes how to configure the Advanced Meter Management (AMM) software used to effectively monitor and manage your INSI' Smart Grid devices. Details about meter programs, scheduling meter reads, managing background jobs and schedule and read events are covered. Importing device and location information, viewing, creating, and editing data export jobs, monitoring network and device events, generating reports, and performing user administration tasks round out the course.	Application Support Personnel
SEC.200 – FSU-SAM	This course provides an overview of the capabilities of the Secure Access Manager (SAM) used in conjunction with the Field Service Unit (FSU). It includes an overview of INSI's basic field security technology and tools. Students will learn the features, benefits and limitations enforced using the tools. Students will also learn how to use install, configure and use SAM.	This course is intended for network engineers, operators, managers any user involved in the installation, operations and maintenance of the INSI Smart Grid solution.
MPC.200 – Meter Program Configurator	MPC (Meter Program Configurator) course reviews the principles of meter programs and the use of the product on creating and performing over the air meter program updates.	This course is intended for network managers, operators, or any user involved in the installation, operations and maintenance of meters.
NC.200 – Network Center	This course provides an overview of the capabilities of the INSI Network Center software, including key terms and concepts, how it's used to baseline performance of neighborhood area networks (NAN) devices, to perform basic troubleshooting tasks, and how to interpret the data and results in associated reports.	This course is intended for system administrators, network engineers, support personnel and any user involved in the operations and maintenance of the INSI Smart Grid solution.

Knowledge Transfer and Documentation

A key component of Itron's training approach is mentoring and hands-on knowledge transfer. Our solution experts will provide your operations personnel with invaluable mentoring and support throughout the project. This happens as Itron first runs and then transfers the system to Greenville.

Knowledge transfer begins just after contract signing, beginning with baseline training for the Greenville project team. Initial training focuses on basic system operation to provide an understanding of how the base solution works. Comprehensive system training continues throughout project implementation.

During the Deploy/Operation phase, Itron personnel will operate the solution, and Greenville staff will act as "second seat" to Itron and gain the experience needed to take over full operation. Greenville staff will work with Itron solution experts to operate the system, to manage data flow and requests, and to perform security and maintenance updates on the system applications. This level of support helps ensure that your utility staff are knowledgeable and skilled with the solution and are ready to operate and manage the system effectively.

Itron also supports business process development throughout the project, so your new business processes are efficient, making the most of your Itron solution. Then, during the project's Transfer phase, as Greenville personnel take over full system operation, Itron will continue to provide additional system operations and maintenance training to ensure long-term system performance.

Itron has used this approach effectively with many successful projects.

Data Analytics and Predictive Capability

Data Management and Analytics Approach

Itron has developed many specialized analytical tools to help our utility customers realize the full potential of their AMI solutions. Itron Analytics applications can support any leading AMI or AMR system. However, some system integration is required for third-party data collection systems. Furthermore, each application's analysis capabilities may vary depending on the data capture and logging capabilities of the metering devices that reside in the system.

Itron provides two levels of analytical tools:

Operations Optimizer (OO) is a modular high-performance back-office data analytics platform that supports analytics applications. The platform ingests data from AMI and AMR data collection systems and other utility data sources to derive intelligent insights about your system so you can proactively manage and optimize your electricity, gas, and water operations.

Each OO application focuses on a different aspect of your AMI operations. The system uses algorithms and machine-learning tools to score and rank data to identify nuanced conditions that may require investigation and remediation. Conditions appear in prioritized lists and intuitive map views, each of which can drill down to detailed information. Guided and automated workflows help your team quickly investigate and remediate each issue.

Outcomes include grid optimization, grid stability, improved operational efficiency, reduced technical and non-technical losses, and many cost savings opportunities. Operations Optimizer supports both Itron and third-party AMI and AMR data collection systems.

Like smartphones, Itron's innovative **Distributed Intelligence (DI)** platform provides single-purpose applications (apps) that run directly onboard enabled AMI smart meters. These apps

perform real-time analysis and provide insights at the edge of the grid—an innovation that Itron calls edge processing. DI apps return near-real-time alerts and other data to user-facing back-office applications, which display conditions in prioritized lists and intuitive map views and provide detailed information.

Itron's DI apps currently run on many smart meters based on Itron's leading CENTRON metering platform. DI apps can also run on third-party AMI endpoints enabled via Itron Riva network interface cards (NICs).

These two levels of applications allow utilities and smart cities to monitor, study, and remediate many practical operational use cases accurately. Combined, these analytical tools are the most powerful, as each system can use its unique strengths to enhance the other.

Delivery Model

Itron provides access to the Itron Analytics Platform through a secure cloud services platform via subscription-based Software as a Service (SaaS). Itron hosts the solution in an Itron data center, and the customer's organization performs daily operations remotely via an encrypted internet browser connection. Authorized users can access the Itron Analytics Platform from the office or the field using mobile computing devices that support standard internet browsing.

Licensing

SaaS is an upfront annual contracted service. Pricing is based on offering the Itron Analytics Platform as a base toolkit, with a modest additional fee for each analytics module. Pricing is based on the number of endpoints processed by the software on a "per endpoint, per month" basis. The SaaS contract includes the software, its associated hardware infrastructure, and software maintenance for its duration.

Load Forecasting

Itron has a proven forecasting solution named MextrixIDR that is used and deployed in many ISOs in North America, as well as globally. This platform can provide short-, medium-, and long-term system forecasts plus the ability to forecast load reduction potential. MextrixIDR is a module that is available and be used to forecast the capacity of a future event. MextrixIDR is priced as a stand-alone module.

Future Technology Adaptability

Itron is building on 30 years of experience with machine learning (ML) to ramp up its capabilities further using rapidly developing AI technologies. As a leader in delivering grid edge intelligence solutions, Itron already features a diverse portfolio of ML and AI products, with more than a dozen applications in use by its customers and ongoing development to further incorporate AI and ML models into Itron's solutions. These applications support:

- Advanced transient waveform analysis to remotely identify common grid anomalies
- Automating meter data management processes
- DER/EV/PV detection, planning, and load management
- Energy forecasting
- Grid asset location, transformer, and phase mapping
- Grid planning and grid optimization
- Load disaggregation
- Pipe asset management for city water mains

- Theft detection and revenue assurance
- Transformer load monitoring and management

Itron continues exploring new ways to merge its existing intelligent connectivity with technologies that will expand the use of AI and ML in its grid edge intelligence solutions to further enhance their performance. When selecting the appropriate use of AI and machine learning for each solution, Itron first focuses on practical business use cases. Itron then carefully evaluates the architectural implications to determine which technologies will deliver the maximum value. Itron then creates products that:

- Improve operational efficiencies
- Enable near real-time rule-based automation
- Enhance quality of service
- Increase safety
- Enable proactive maintenance, and
- Drive sustainability for utilities and cities around the globe.

Appendices

Appendix 1 – Acknowledgement, E-Verify, Proposal Signature

Appendix 2 – Project References

Appendix 3 – Project Team Resumes



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**BORDER
STATES**

RFQ Acknowledgement and Signature Form

RFQ No.: 25-10, Advanced Metering Infrastructure (AMI) Vendor Selection

The undersigned having carefully examined the location of the proposed work, the local conditions of the place where the work is to be done, the Invitation, the General Conditions, the Specifications and all of the documents for this project, proposes to enter into a contract with Greenville Utilities Commission in Greenville North Carolina perform the work listed in this RFQ, including all of its component parts, and to furnish any and all required labor, materials, equipment, insurance, bonding, taxes, transportation and services required for this project in strict conformity with the plans and specifications prepared, including any Addenda, within the time specified. [As noted in GUC's 'Questions & Answers', some of the above items do not apply to this RFQ.](#)

Addendum Acknowledgement:

The following addendum (addenda) is (are) acknowledged in this RFQ: [Questions & Answers](#)

Acknowledgement and Signature:

1. No Proposal is valid unless signed in ink by the person authorized to make the proposal.
2. I have carefully read, understand and agree to the terms and conditions on all pages of this RFQ. The undersigned agrees to furnish the services stipulated in this RFQ.

Respondent's Name and Title:

Company Name: [Border States - Jimmy Woods, Account Manager](#)

Address: [120 Saxe Gotha Road, West Columbia, SC 29172](#)

Telephone: [803-227-0671](#) Fax: _____

Email: jwoods@borderstates.com Cell Number: [803-600-2883](#)

Contractor License # (if applicable): [---](#) Expiration Date: _____

Federal Tax Identification Number: [45-0275004](#)

Authorized Signature: [Jimmy Woods](#) Date: [03/07/2025](#)
[Jimmy Woods \(Mar 7, 2025 14:43 EST\)](#)

Decline RFQ:

We **do not** wish to submit a RFQ on this Project. Please state your reason below. Please also indicate if you would like to remain on our Supplier list.

Reason: _____

Company: _____ Address: _____

Name: _____ Signature: _____ Date: _____

E-Verify Form

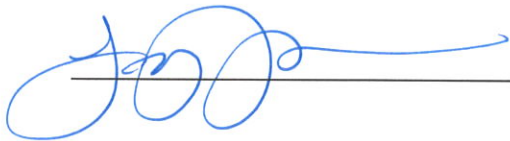
Letter of Compliance to E-Verify for Greenville Utilities Commission. Please complete the form below.

1. I have submitted a bid for contract or desire to enter into a contract with the Greenville Utilities Commission;
2. As part of my duties and responsibilities pursuant to said bid and/or contract, I affirm that I am aware of and in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):
3. X After hiring an employee to work in the United States I verify the work authorization of said employee through E-Verify and retain the record of the verification of work authorization while the employee is employed and for one year thereafter; or
4. I employ less than twenty-five (25) employees in the State of North Carolina.
5. As part of my duties and responsibilities pursuant to said bid and/or contract, I affirm that to the best of my knowledge and subcontractors employed as a part of this bid and/or contract, are in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):
6. X After hiring an employee to work in the United States the subcontractor verifies the work authorization of said employee through E-Verify and retains the record of the verification of work authorization while the employee is employed and for one year thereafter; or
7. Employ less than twenty-five (25) employees in the State of North Carolina.

Specify subcontractor: _____

Border States Industries, Inc. (Company Name)

By: Talia Nelson (Typed Name)

 (Authorized Signatory)

HR Director (Title)

3/10/25 (Date)

It is certified that this proposal is made in good faith and without collusion or connection with any other person bidding on the same above listed items. It is also certified that this proposal is made in good faith and without collusion or connection with any GUC employee(s).

Certified check or cash for N/A or bid bond for N/A attached.

Firm Name: Border States Phone: (262) 347-2112

Address: 2400 38th St S

City Fargo State ND Zip Code 58104

Fax (____) _____ E-mail ariebe@borderstates.com

Authorized Official Alan Riebe Title Technical Sr Sales Engineer

Typed Name


Alan Riebe (Mar 10, 2025 22:20 CDT)

Signature

03/10/2025

Date

Your Proposal should be received no later than March 11, 2025, 2:00PM (EST)

Appendix 2 – Project References

Customer
City Utilities of Springfield

Region
Springfield, MO, USA
Itron Solution
Gen5 AMI Smart Grid
Project Timeframe
Q4 2014 – Q3 2023
Hardware
121K electricity meters, including Itron CENTRON singlephase and polyphase meters, as well as Aclara and Landis+Gyr meters with embedded Gen5 NICs 92K Itron 200G, 300G, and 500G ERT gas modules installed on American, Rockwell, Actaris, and Dresser meters. 90K Master Meter IMU water modules with integrated Gen5 comms, with the interpreter-registers installed on existing and new water meter brass. Network Interface Cards (NICs) Access Points (AP) Relays
Software
UtilityIQ AMI headend suite of applications: Advanced Metering Manager (AMM) data collection system Network Center (NMS) network management system Meter Program Configurator (MPC) Firmware Upgrader (FWU) Outage Detection System (ODS) Operations Optimizer (OO): Revenue Assurance (analytics)

Itron Services

Project Management
Field Engineering
Field Network Management
Preliminary and final network design
Site survey through optimization
System Design
Smart Meter and AMI Network Deployment Support
System Configuration
System Integration and Integration Support
Interface Development
Testing and Test Support
Application Management
Technical/Operational Support
Data Center Management Services
Data Collection
Remote Service Management
Event and Alarm Handling
Power Outage Notification
Training
Customer Support and Maintenance

Integration

UtilityIQ AMM with CIS+: CIS+ is a legacy system that is no longer supported, and that CU maintains themselves.

UtilityIQ AMM with MV-90: Allows MV-90 to consume data from specific meters read by AMM.

Itron Outage Detection System (ODS) with Service Restoration System (SRS): SRS consumes the outage and restoration messages sent from ODS. SRS is CU's internally written system that functions as their outage management system (OMS).

Itron Operations Optimizer (OO) to CIS: OO receives data exports from AMM, but it is also integrated with the CIS mentioned above to generate and complete work orders.

IT Environment

Itron provides the solution's UtilityIQ AMI headend system via cloud-based Software-as-a-Service (SaaS). The SaaS subscription includes Customer Support and Maintenance

Contacts

(Itron) Nangy Gul

Enterprise Client Executive

Phone: 916.740.5158

Email: ngul@itron.com

(Itron) Derek Clayton

Portfolio Account Manager

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Email: dclayton@itron.com

Bethany Creed (CU)

Supervisor, AMI Operations

Office: 417-831-8385

Email: Bethany.creed@cityutilities.net

Kimberly Crawford (CU)

Director, Customer Operations Excellence

Office: 417-831-8369

Email: Kimberly.crawford@cityutilities.net

Customer

Gainesville Regional Utilities

**Region**

Gainesville, FL, USA

Itron Solution

Gen 5 IoT AMI Network

Project Timeframe

2022–2025

Hardware

100K Gen5 Riva CENTRON Electricity Meters (95K singlephase, 5K Poly)

40K Gen5 500G ERT Gas Modules

74K Gen5 500W ERT Water Modules

Relays

Access Points (APs)

Network Interface Cards (NICs)

Software

UtilityIQ Headend Suite: Advanced Metering Manager (AMM), Meter Program Configurator (MPC), Firmware Updater (FWU), Outage Detection System (ODS), and Network Center

Itron Enterprise Edition Meter Data Management (IEE MDM)

Itron Services

Itron Professional Services included: Project Management; Field Network Management (includes preliminary and final Network Design and Site-Survey through Optimization); System Design, Application Configuration, Application Management and Data Center Management services (SaaS); Onsite and Online Training; Deployment Support; and Ongoing Customer Support and IT System

Maintenance.

Integration

Primary integration activities focused on implementing the Itron SAP AMI Integration Module (ISAIM), as the customer utilizes SAP.

IT Environment

GRU accesses the solution's UtilityIQ AMI headend system and IEE meter data management system via cloud-based Software-as-a-Service (SaaS). Ongoing software maintenance and support are included in the SaaS subscription fees.

Contacts

(Itron) Rusty Agi

Water, Gas & Public Power
Portfolio Account Manager
Mobile: (678) 644-1662
ragi@itron.com

(GRU) Chad Parker

Title: Director of Energy
Measurement & Field Operations
Phone: 352-393-6452
Email: parkercd@gru.com

Customer

Shakopee Public Utilities

**Region**

Shakopee, Minnesota, USA

Itron Solution

AMI Essentials

Project Timeframe

2023 – Present

Hardware

20,000 Gen5 CENTRON Electric Meters
11,000 Gen5 500W ERT water modules
11 Access Points
15 Relays

Software

UtilityIQ Headend Suite: Advanced Metering Manager (AMM), Meter Program Configurator (MPC), Firmware Updater (FWU), and Network Center.

Border States Services

Project Management
Meter Deployment Management and Installation Services

Itron Services

Field Network Design
Technical Support
Equipment Training
Application Training
Software Integration Service

IT Environment

Shakopee Public Utilities uses Itron's Software-as-a-Service (SaaS) hosting model which provides them with access to Itron applications running on a private cloud infrastructure. With SaaS, Itron manages and controls the underlying cloud infrastructure, including back-office network, servers, operating systems and storage.

Contacts

(Border) Ethan Sweet

Account Manager

Phone: 218-330-7625

Email: esweet@borderstates.com

(SPU) Sharon Walsh

Director of Marketing/Key Accounts

Phone: (952)-233-1531

Email: swalsh@shakopeeutilities.com



Jimmy Woods

Account Manager - Utilities

CONTACT



803-600-2883



West
Columbia, SC

WORK EXPERIENCE

Border States (2000-Present)
Account Manager

Motorola (1990-2000)
Communications Specialist/Sales

Kodak/Carolina Eastman (1979-1990)
Office Services/Communications

EDUCATION

Midlands Technical College
Communications Network Management

BACKGROUND

Jimmy is currently an Account Manager with Border States serving utilities throughout eastern South Carolina and North Carolina for 25 years. Jimmy supports AMR/AMI Metering customers with solutions from Itron, Brooks and other metering related products. He is a lighting specialist. He was the Clean Energy Director for Shealy Electrical Wholesalers (acquired by Border States in 2016) for nine years and is a NABCEP PV Associate. Jimmy helped develop solutions for the EV Charging Industry for electric utilities in the Carolinas.

QUALIFICATIONS

- Electrical Metering
- Power Distribution Systems
- EVSE
- Technical Sales
- Lighting Solutions

CONTACT

Email: jwoods@borderstates.com



Alan Riebe

Technical Sr Sales Engineer

CONTACT



262-347-2112



Pewaukee, WI

WORK EXPERIENCE

Border States (2003-Present)
Technical Sr Sales Engineer / Application Engineer

Medical College of Wisconsin (2002-2003)
Engineering Tech

Johnson Controls Inc (1988-2002)
Sr Application Engineer

EDUCATION

University of Wisconsin - Platteville
Bachelor of Science in Electrical Engineering

BACKGROUND

Alan is part of the Technical Solutions team at Border States as the Technical Sr Sales Engineer for Itron solutions. Alan has a bachelor's degree in electrical engineering with over 35 years of industry experience including 22 years at Border States working with metering systems and power distribution equipment such as reclosers, switchgear and voltage regulators.

QUALIFICATIONS

- Electrical Metering
- Power Distribution Systems
- Electrical Engineering
- Technical Sales
- Technical Support

CONTACT

Email: ariebe@borderstates.com



RYDRE TORGERSON

PROJECT MANAGER

CONTACT



218-820-0034



Baxter, MN

WORK EXPERIENCE

Border States
2023 – Present
Project Manager - Utility

EPSCO (Electric Power and Safety Company)
2019 – 2023
Project Manager / Program Manager

EDUCATION

Minnesota State University - Moorhead
Bachelor of Science in Project Management

BACKGROUND

Rydre Torgerson is the project manager working with our utility solutions team at Border States to support AMI projects. Rydre has a bachelor's degree in project management with five years of experience leading technical services projects ranging from arc flash study solutions to comprehensive AMI projects. Rydre has most recently been involved with leading the project effort for a full AMI solution project for Shakopee Public Utilities in Minnesota.

QUALIFICATIONS

- AMI Implementation
- Project Management
- Stakeholder Management
- Work Order Management Systems
- Water & Electric Meter Installations

CONTACT

Email: rtorgerson@borderstates.com



Greg Koubsky

Technical Application Engineer

CONTACT



(320) 267-5245



Albertville, MN

WORK EXPERIENCE

Border States (2018-Present)
Technical Applications Engineer

Connexus Energy (Summer 2016)
Planning Engineer Intern

Lexis Nexis (Summer 2014)
Data Analytic Intern

EDUCATION

Saint Cloud State University
Bachelor of Science in Electrical Engineering

BACKGROUND

Greg is part of the Technical Solutions team at Border States as a Technical Application Engineer for partners, such as Itron. Greg has a bachelor's degree in electrical engineering with nearly 7 years of industry experience at Border States working with local Municipal and Cooperative utilities and IOUs. He specializes in medium voltage (15-35 kV) equipment, such as, regulators, reclosers, breakers, and controls. Greg has worked with utilities on nearly a dozen AMR/AMI implementations during his time at Border States.

QUALIFICATIONS

- Electrical Metering
- Power Distribution Systems
- Electrical Engineering
- Technical Sales
- Technical Support

CONTACT

Email: gkoubsky@borderstates.com



Will Taylor

Director of Sales

WORK EXPERIENCE

United Systems (14 years)
Director of Sales

EDUCATION

Middle Tennessee State University

BACKGROUND

Will Taylor serves as the Director of Sales for United Systems. Will is responsible for the entire USS sales team in their 22-state region, while also managing relationships with key accounts, RFP response, contract negotiations, and assisting Region Managers in their duties.

Will is a graduate of Middle Tennessee State University and has over 25 years of experience in the utility industry. He previously held the highest level of water treatment and distribution licenses and has worked in management roles at 2 different utilities. Will has been with USS for 14 years and has overseen the implementation of over 75 AMI systems.



Jack Merrell

Region Manager

WORK EXPERIENCE

United Systems (2 years)
Region Manager

EDUCATION

University of Northern Florida

BACKGROUND

Jack Merrell serves as a Region Manager for United Systems. Jack’s duties include managing the Account Managers while also maintaining relationships with current/prospective customers, RFP responses, and overall direction of the sales team in North Carolina.

Jack is a graduate of the University of North Florida and has over 30 years of experience in the utility industry. Prior to joining USS in 2023, Jack served as an Account Executive with Itron for 25 years. Jack has delivered countless AMI projects in his 25 years including: City of Baltimore, City of Cleveland, and City of Detroit.

Alex Appleton

Manager of AMR/AMI Project Delivery Team

WORK EXPERIENCE

United Systems (13 years)
Manager Of AMR/AMI Project
Delivery Team

EDUCATION

Bachelors of Science (Telecommunication Systems Management)

BACKGROUND

Alex Appleton serves as Manager of AMR/AMI Project Delivery team for United Systems. As an Itron certified project manager, Alex holds certifications in MVRs, FCS, Temetra, Choice Connect, Gen 5 and Cellular AMI solutions. Alex and his team work directly with utilities and third-party vendors to ensure the seamless implementation of Itron solutions. His responsibilities include but are not limited to budget compliance, project planning and implementation, training, and network configuration.

Alex holds a Bachelor of Science Degree, with an emphasis in Telecommunication Systems Management. Since joining the United Systems' team in May 2012, Alex has overseen the successful implementation of over 80 AMI networks and hundreds of AMR mobile projects. With 13 years of experience, Alex has extensive knowledge of utility operations and the implementation of Itron EMR, AMR, AMI and water loss solutions.



Bryson Smith

Account Manager

WORK EXPERIENCE

United Systems
Account Manager

EDUCATION

Cumberland University - Bachelors of Science in Business Administration

BACKGROUND

Bryson Smith serves as an Account Manager at United Systems, where he is responsible for expanding Itron's presence in North Carolina, including creating new accounts, ordering for existing customers, and assisting accounts with their services.

Bryson is a graduate of Cumberland University and holds a Bachelor of Science in Business Administration with minors in Marketing and Management. He is dedicated to helping utilities solve complex issues using advanced technology solutions.



David Tawes

Account Manager

WORK EXPERIENCE

United Systems
Account Manager

EDUCATION

East Carolina University

BACKGROUND

David Tawes serves as an Account Manager at United Systems, where he is responsible for expanding Itron's presence in North Carolina, including creating new accounts, ordering for existing customers, and assisting accounts with their services.

David is a graduate of East Carolina University and has over 25 years of experience in the utility industry, serving in various roles including treatment, distribution, field operations, while most recently serving as Water Director at Chowan County, NC.

Itron Project Team

It takes a qualified and cohesive team to deliver an integrated AMI solution. Itron's Solution Delivery organization has more than 185 team members focused on the project management and technical support of our utility solutions. Itron's delivery teams consist of dedicated program managers, business and technical consultants, field engineers, network designers, and trainers specializing in all aspects of project design, management, and implementation.

Itron will assign a formal project team upon completing a SOW and a Project Plan. The SOW provides detailed information on the specific tasks and deliverables associated with each role. Together, these documents identify resources required for the project and the timeframe each will be required.

Itron will then schedule the appropriate available resources from our Solution Delivery organization. The Itron Project Manager assigned to this project is responsible for managing all Itron resources and the associated project work schedule. The designated Itron team resources are thoroughly trained on our products—both at a business and technical level—to effectively implement and deliver solutions and services to our customers.

