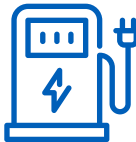# Itron

WORKING TOGETHER TO INCREASE EV ADOPTION

SUMMARY

Seeking to accelerate customer adoption of electric vehicles (EVs) in your service territory and to implement rates and programs to ensure that EV charging aligns with periods of low-cost generation and grid capacity surplus wherever possible? Itron understands the current and future challenges of the consumer and commercial transition to electric transportation as it relates to grid infrastructure and the utility business model. Itron also understands that the future of residential, commercial, and fleet customer programs depends on the participation of consumers and the community and the availability of the right technology solutions.

Itron has partnered with the industry's leading EV telematics and EV service equipment (EVSE) vendors to develop a comprehensive solution that expands the device ecosystem of Itron's industry-leading Demand Response Management System (DRMS) platform – IntelliSOURCE® Enterprise™ – to include residential EVs. This comprehensive EV connectivity is complemented by IntelliSOURCE's proven program management capabilities that have been honed over 20 years of delivering turnkey demand response (DR) programs. IntelliSOURCE® has been employed by some of the largest and most innovative utilities in the country to provide CIS/GIS integration, enrollment management, customer engagement, utility reporting, and customer support.

Our solution offers the opportunity to seamlessly integrate residential EVs into your existing portfolio of residential demand response programs under a single, proven platform.

**WORKING TOGETHER TO INCREASE EV ADOPTION**

DER OPTIMIZER

In parallel with our expanding EV connectivity, we have developed a new suite of modules (known as DER Optimizer or DERO) that are designed to enable utilities to strategically grow their managed EV charging programs in scope and sophistication over time to include EV detection, optimized control, and integration of EV charging and management into grid planning:

» Our DERO-Detect module analyzes AMI data to detect households with EV charging.

» Our DERO-EV Connect module establishes direct connections with EVs to collect accurate data on charging sessions (both home and away) and battery state-of-charge.

» Our DERO-Group Control module enables optimization and control of EV charging schedules to deliver aggregate and locationally targeted firm load reductions for DR.

» Our DERO-Grid Planning module overlays EV charging data onto grid data – namely AMI data, grid topology data, and grid asset data (e.g., transformer-rated capacity) to provide distribution planners with visibility into the impacts of EV charging on grid congestion.

OVERVIEW OF ITRON'S SOLUTION
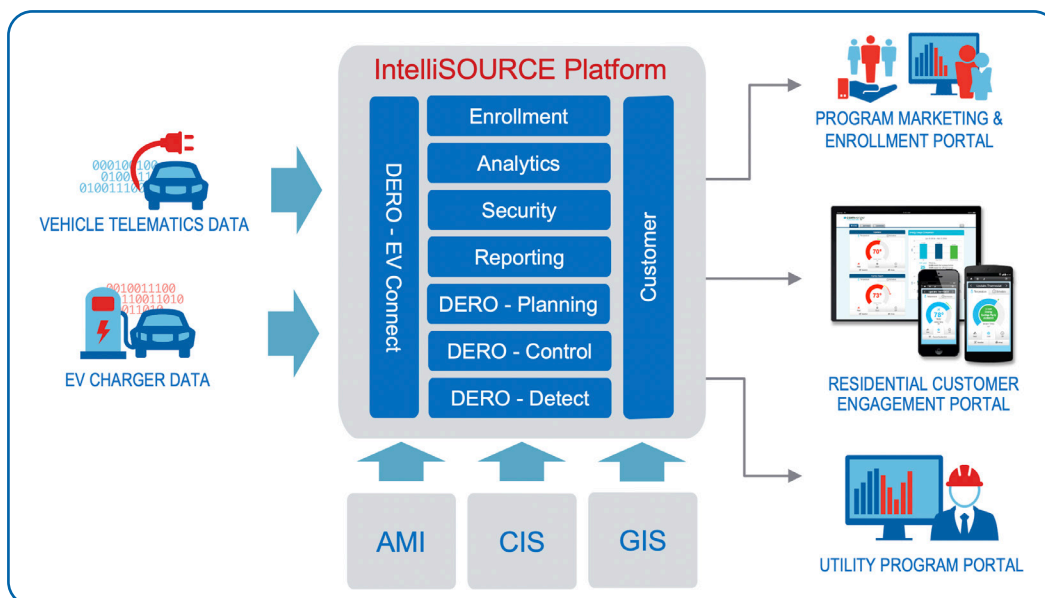
THE ITRON ADVANTAGE

Apart from continual expansion of its device ecosystem, a central focus of DER Optimizer is to integrate the platform with other parts of Itron's product portfolio. This began with a focus on integrating DER Optimizer with Itron's AMI network head end systems and network-network-enabled devices such as load control switches and DER gateways. These integrations make the deployment and operation of legacy DR programs more efficient and cost-effective.

Going forward, our focus is on integrating DER Optimizer with our ecosystem of Distributed Intelligence (DI) applications and implementing architectures to support real-time DER analytics and optimization. Where Itron AMI networks and DI-enabled devices are deployed, DER Optimizer is designed to employ a "hybrid" architecture where much of the sensing, computing, and control actuation is done autonomously at the grid edge, with higher-level orchestration and coordination done in the back office. Itron strongly believes that in order to achieve low latency, real-time DER management and optimization at scale – whether for distribution grid reliability, DER hosting capacity, or decarbonization – solutions must adopt this kind of "hybrid" architecture. In that respect, Itron is uniquely positioned among DERMS vendors due to the integration of our DERMS platform with our DI-enabled devices and ecosystem of DI applications.

HIGHLIGHTED PROJECT

Itron recently implemented the Off-Peak Charging Credit Program for Duke Energy Florida. Duke is using its existing instance of IntelliSOURCE® Enterprise™ to deploy Itron's new suite of DER Optimizer modules to monitor and manage residential EV charging programs at scale. The Itron solution is integrated with a comprehensive EV telematics platform, which connects to cars through their native application programming interfaces (APIs). Duke's priority was to make their EV charging program available to all types of EVs—not only those captured via telematics—so to meet this need, Itron is implementing load disaggregation analytics that use AMI data to identify EV charging activities. Itron's solution enables Duke to collect permissible EV charging session data in near-real time to gain insights into residential EV charging behaviors. Using these data, Duke can identify, monitor, and measure charging behaviors, and provide bill credits to incentivize EV owners to charge their vehicles during off-peak hours. These detailed data also let Duke discover best practices for residential Off-Peak EV Charging programs. This scalable solution, combined with nuanced behavioral insights, will enable Duke to accommodate the future growth of electric transportation within its service territory. The program will start with 1,000 EV owners in the first year, with projected growth of approximately 1,000 additional EV owners per year. The program is capped at 4,000 EVs.

Contact us for more information at DERO@itron.com