INTRODUCTION

Itron offers a comprehensive suite of energy management and load control solutions. These solutions include control devices, which extend our smart grid communications options, and software to manage device lifecycles and dispatch instructions. By combining flexible communications with devices that target a broad spectrum of electric loads, Itron’s solutions maximize control of energy and capacity. Intelligent dispatch of load over existing networks ensures value creation and business transformation for utilities.

With a growing need to deliver reliable energy in the face of capacity constraints and rapidly changing generation portfolios, the realization of these benefits is critical.

NETWORK FLEXIBILITY

Utilities may pursue several strategies for connecting edge devices to their smart grid networks. ZigBee® Smart Energy can be used to extend communications through smart metering and AMI systems. Field area networks, such as the Cisco IPv6 RF Mesh, can be used to deliver multiple applications throughout a utility’s service territory. 3G cellular networks can be used for hard-to-reach assets, including agriculture irrigation pumps. Itron’s solution allows each of these networks to manage control devices and dispatch control signals (see diagram below). Two-way functionality is delivered over each of these options, allowing verification of load availability and measurement of results. By flexibly extending existing infrastructure, Itron’s load control solution accelerates value realization while maximizing managed capacity.

EXTENDING INTELLIGENCE TO CONSUMERS

Achieving utility business transformation requires evolving the relationship between utility and consumer into a rich collaboration. While load control has historically implied a passive consumer experience, Itron’s approach to load control engages consumers by extending energy management intelligence from control devices to consumer devices. Itron’s EntryWay™ platform leverages IP communications through OpenWay, the cloud, and utility networks to both control devices and inform consumers of events, constraints and opportunities to participate in utility programs. Broad participation in energy management initiatives will be increasingly important as consumer solar generation, home energy management systems and electric vehicle charging systems create more opportunities to balance energy and capacity with reliable delivery. The diagram below shows how control devices, consumer devices and networks can be converged with the EntryWay platform.

ITRON SENSING APPLICATIONS

Itron sensing applications combine metrology and sensing technologies with control software and flexible communications to enable collaborative energy exchange networks. Itron sensing applications are intended to be embedded directly inside best-of-breed energy management assets, including electric vehicle charging stations, solar inverters, and load control switches and thermostats. Itron packages these components in a low-cost, easy-to-integrate, easy-to-deploy manner. Itron’s load control solution leverages sensing capabilities to both increase the capacity of managed load, as well as monitor the impacts of radically changing energy usage patterns by consumers in near real time. Itron’s control switches can be packaged with sensing capabilities, which measure available load and track energy usage patterns. Combining sensing applications with load control enables utilities to manage energy in collaboration with consumers.