Trilliant Distribution Automation & Demand Response

Most utilities begin their journey to the Smart Grid with Advanced Metering Infrastructure (AMI). With it comes a huge efficiency boost in metering and billing. But AMI is only a first step. You can and should demand much more.

Choose Trilliant Distribution Automation

Trilliant solutions keep you up to the minute on factors vital to automated distribution, such as:

- **Grid status.** Trilliant provides reliable, real-time outage reporting from millions of endpoints
- **Power quality.** You get critical power quality data such as voltage, frequency, power factor, and harmonic content.

All are available in real time or as scheduled, depending on need. For instance, Trilliant delivers the real-time alarm reporting you need for conservation voltage reduction (CVR) and generation optimization. Trilliant also delivers the daily historical data you need for compliance reporting, grid modeling, and contingency planning

Trilliant solutions also feature:

- **Remote Disconnect.** This is particularly helpful in high-turnover areas. You simultaneously satisfy customers while optimizing field resources. You'll also use remote disconnects to implement demand and prepay-billing programs
- **Demand-side Management (DSM) applications.** You can use load control switches, programmable communicating thermostats (PCTs), and in-home displays (IHDs)
- **Power during outages.** Trilliant infrastructure stays powered for up to eight hours after an outage to provide network communications and troubleshooting
- **Easy and fast integration** with third-party distribution management systems for outage, distribution, and advanced distribution functions

What is Distribution Automation?
A Distribution Automation system monitors and controls electrical grid equipment between the transmission system and the end user. Distribution Automation can control grid processes automatically, without staff intervention. But in practice, most grid operators double-check significant Distribution Automation recommendations before initiating them. These checks ensure that changes do not negatively affect worker safety or equipment.

What Is Demand Response?
Utilities have two choices when customers need more short-term power than a utility's generation portfolio is prepared to supply:

- It can buy more electricity on the spot market
- It can reduce power available to customers via: slightly reduced voltage (i.e., conservation voltage reduction or CVR), and blackouts or brownouts

DISCOVER THE *Power Of Choice*

Trilliant®

Choose Trilliant for Demand Response

Demand Response lets utilities lower peak demand without building more generators. It helps limit the need for more supply. And it lowers your need to buy power – often at very high prices – on the spot market. While the concept is not new, Trilliant's solution gives utilities far more flexibility than other approaches.

With our Distributed Automation, you can choose among many different types of DR:

- **Time of use programs.** These may be simple programs that use the same three or four charge periods throughout the year. Or they may vary price by day or season
- **Sensor-based load control programs** for limited control over specified customer equipment for time periods governed by a contract.
- **One-time participation,** in which customers elect to lower energy use for a single day
- **Seasonal or yearly customer participation programs,** such as day-ahead calls for power reductions
- **Programs that include or exclude customer overrides**
- **Variable-pricing programs**

For all these programs and more, you get:

- **Sensor-level data** in near-real-time permits close monitoring and control of customer equipment
- **All-channel meter monitoring** means you can include reactive energies, per-phase voltage, per-phase current, and frequency as elements in your DR programs
- **Reliable connectivity** with all equipment enrolled in a program
- **Post event analysis**
- **Participation data** that you can use for predictive modeling
- **Ability to match power availability and demand** more closely. You can analyze data system-wide, across a neighborhood, or feeder-by-feeder
- **Reduced operational cost**
- **Visibility into device failure**
- **Improved reliability**
- **Higher customer participation.** Customers can choose the program options that work best for them
- **Higher customer satisfaction.** Customers can see the benefits of DR events immediately

Questions, comments: info@trilliant.com