

White Paper:

A Retailers' Guide to Achieving Smart Grid Benefits Today

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Hear the words “smart grid” and your thoughts will most likely tend toward the vast quantity of media coverage surrounding stimulus funding and smart meter rollouts to houses across the country. Unfortunately, these smart meters provide little in terms of direct benefit to energy consumers, and in a few well-publicized cases have resulted in customer confusion, regulatory uncertainty, and fear of higher energy bills.

The reality of the smart grid for multisite businesses such as chain retailers, grocery stores, and restaurants is very different. By leveraging information about energy consumption at the equipment level at each site, multisite businesses can understand and improve their energy consumption and participate in demand response programs enabled by the smart grid. In corporate settings, these initiatives come with a low barrier to entry and have proven significantly valuable.

The Path to “Smart Grid Readiness”

A rollout of smart grid technology across a large site portfolio requires both site- and equipment-level integration, and with hundreds or possibly thousands of facilities across the country, it's important for retailers to develop a plan that leverages available smart grid pilot programs to educate management and help fund the rollout. Honeywell Multisite has developed a four-step process to assist multisite businesses in the planning and implementation of smart grid-ready energy management systems.

Step One: Understand the Landscape

It's essential to evaluate the opportunity at each facility to determine where immediate value can be realized from energy management system upgrades or installations and where opportunities will be available in the future.

There are a number of smart grid pilots in process across the country that are suitable for multisite businesses, many of which provide significant government and utility-sponsored funding to

offset the cost of equipment upgrades, and in many cases, to fully fund an EMS upgrade. These pilots are an excellent opportunity to quickly learn about the smart grid with little or no financial risk.

Step Two: Size the Opportunity and Develop a Timeline

It's also essential to understand the potential energy savings and revenue opportunities for each site. Honeywell Multisite's 30 years of experience with energy management in more than 40,000 sites allows us to develop robust statistical models that accurately identify the potential reduction in energy consumption available through EMS installations. Next-generation solutions such as Novar's Opus platform bring new opportunities for savings through more intelligent control of site equipment. In addition to energy efficiency, most regions of the country have opportunities to enroll in automated demand response (ADR) programs, which lie at the heart of the smart grid benefits for multisite businesses. By enrolling in ADR programs, businesses can benefit by receiving valuable incentive payments while also gaining experience in how to balance supply and demand – an essential skill as markets transition to real-time energy pricing.

Automation removes the need to manually execute DR events while continuing to provide oversight and the ability to opt-out of events. It also allows facilities to enroll in more lucrative "fast demand response" programs that typically require load reduction within 10 minutes of notification by an ISO or utility ([learn more about ADR here](#)). Novar's Opus EMS platform uses the smart grid standard, OpenADR, to interact with these programs. By using a defined smart grid standard, Honeywell Multisite has ensured that our customers are future-proofed and are not locked in to any single demand response provider

The knowledge gained in step one, together with the evaluation of potential energy savings and demand response revenue at each site gained in step two, helps establish an initial timeline for implementation by revealing the highest value and most immediate opportunities to providing savings and incremental funding for future opportunities.

Step Three: Implementation

At this stage, it is typically necessary to engage with two key business functions – IT and finance. The IT group must implement the communications flows necessary to receive OpenADR signals and respond to them. Novar's Opus platform provides the flexibility to channel these communications through multiple paths, allowing the IT group to select the solution that best fits with their communication infrastructure and security needs. The finance group must evaluate the ROI of the program. As noted above, some smart grid programs provide up-front incentives to offset or fully fund the cost of EMS upgrades. Outside these programs, Honeywell Multisite's FlexStart program provides a "no capital" option to allow businesses to benefit from smart grid programs immediately.

With FlexStart, multisite businesses can rent, rather than purchase, EMS installations or upgrades. Thus, your energy management spend becomes an operating expense rather than a capital expense, helping you achieve your energy savings goals now. FlexStart requires no up-front capital investment, provides flexible terms from two to five years, and delivers an extended warranty that expands Novar's lifecycle support for as long as your business continues to use the system.

Step Four: Monitoring and Support

Ongoing measurement of performance against the implementation plan is essential to making progress toward your energy management goals. While enrollment in high-value demand response programs can provide significant revenue to your business, this revenue isn't available if HVAC units, lighting panels, or refrigeration units are not functioning correctly. By monitoring the performance of facilities on an ongoing basis, Honeywell Multisite can maximize energy efficiency and ensure that plant and equipment are performing efficiently during demand response and peak-price events.

Conclusion

The smart grid provides many opportunities for multi-site businesses to drive energy efficiency and gain incremental revenue today. Honeywell Multisite's four-step program for "Smart Grid Readiness" leverages a fact-based assessment of your facilities, available demand response and price response programs including smart grid pilot programs, and our next-generation smart grid ready Opus platform to deliver value to your business quickly and effectively.

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