



Case Study - Smart Grid Increases Duke Energy's Economic Development Opportunities

Economic development efforts are incredibly important for communities in order to create and retain jobs and improve quality of life. It takes a great deal of collaboration between a team of state and local partners to successfully bring new business opportunities to a community. One key member of the team is the electric utility that will provide service to the new facility.

In North Carolina, Duke Energy is working to support business growth by assisting with site selection. The utility analyzes sites and helps businesses find a location that meets their specific needs based on their unique criteria.

When new businesses look to enter or expand in Duke Energy's service area, Duke Energy's economic development team supports these potential future employers by helping them assess specific site selection criteria, such as associated electric rates, renewable energy source availability, education systems, available workforce, economy, public transportation, infrastructure, cost of living and quality of life in the local community.

One criteria that is becoming very important in the competitive area of economic development is the presence of a modern, smart and dependable electric grid. For many businesses, losing power, even momentarily power interruptions in the case of manufacturing and other energy sensitive industries, can result in enormous losses. These businesses find it vitally important that they can trust in their energy service provider's ability to always keep electricity flowing.

Duke Energy is investing billions of dollars to modernize the region's electric grid. While many modernization projects are just beginning, Duke Energy is already starting to see the benefits of a smarter grid.

“ Reliability of the power supply has always been important to our customers, but is increasingly so today. Any type of service disruption results in, among other things, significant financial losses, delayed customer deliveries, processing breakdowns, and potential equipment damage. If you're not taking care of your customers, and if you are not actively listening for and responding to their needs, then they will find an electric utility that will. ”

- John Geib, Duke Energy's North Carolina Director of Economic Development

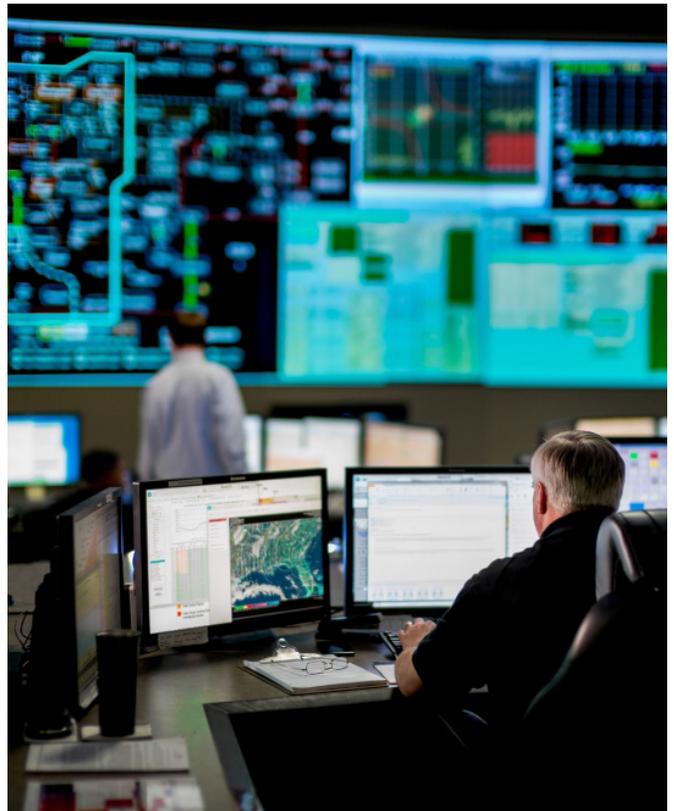
This is exemplified by a recent economic development opportunity that arose when a corporation looked to North Carolina and several other regions for siting its large refrigerated distribution facility. After evaluating over a dozen sites, the corporation set their sights on a location in rural North Carolina. The site met much of the selection criteria they valued. However, they voiced reservations over fears of too many power outages. The new facility was considered to be “mission critical” for their business. A glitch at this location would impact their operations across the entire region.

Understanding that power reliability was a major requirement for this business, Duke Energy proposed to include the area in their self-healing team program, which is part of their current efforts to modernize the grid. Self-healing networks use smart sensors to detect the location of a problem and automated switches to isolate the damaged cable or equipment.

The technology then identifies the best way to reroute power to restore it to the facility, usually in a matter of seconds. This proposed solution offered significant reliability enhancements over what would have been the traditional offering – service from a more remotely located substation.

Because funding had already been allocated to modernize the grid in this area, Duke Energy was able to offer self-healing functionality and improved reliability at no additional cost to the customer. The business, sold on the utility’s efforts to ensure service reliability through its grid modernization work, agreed to locate their facility in North Carolina, adding 1,000 new jobs to the economy as a result.

Examples like this one are not isolated. As more companies come to recognize their dependency on highly reliable energy supply, they see the clear advantages that come with being serviced by a smarter, modernized grid. Duke Energy’s economic development team understands the importance of continual movement towards innovation in order to attract new businesses to the region. When it comes to site selection, the smart grid is expected to play an even more significant role in the future as more companies prioritize grid reliability, renewable energy, smart meters, battery storage, microgrids and other components of a modernized grid. Duke Energy is preparing the grid now to make its communities economically competitive for years to come.



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