Smart grid holds promise for US jobs, says Duke University study

Turning the electric power system into a smart grid, or so-called "energy Internet," has already created thousands of U.S. jobs and has the potential to create many more, says a new report by a Duke University research team.

The team's report, "U.S. Smart Grid: Finding New Ways to Cut Carbon and Create Jobs," identifies 334 U.S. locations in 39 states that are already developing or manufacturing products for a smart grid. The region with the largest number of sites is the Southeast, with California having the most sites of any one state.

Nationwide, utilities now have more than 200 smart grid projects under way. Using two-way digital communication, a fully developed smart grid in the future will allow utilities and customers to share information in real time -- often automatically -- so both sides can manage electricity use more effectively, Duke said. The smart grid promises to reduce carbon emissions, stimulate technology innovation and create jobs, and represents a large technological advance over today's centralized, one-way U.S. electric system, according to the Duke study.

"To make the most of job opportunities, the United States must continue pursuing the cutting edge of smart grid technologies, especially those needed for integrating renewable energy sources and electric vehicles into the grid," said Marcy Lowe, the study's lead author and a senior research analyst at Duke's Center for Globalization, Governance & Competitiveness.

The Duke team studied 125 leading U.S. smart grid firms to assess their potential role in creating jobs in areas that include information technology, core communications, smart hardware, energy services, energy management, telecom service and system integration. They estimate that U.S. suppliers for smart grid technologies have already created more than 17,000 U.S. jobs.

The study notes valuable export opportunities to be tapped by U.S. firms, and says that some well-established manufacturers are not only providing new devices to the smart grid market, but have also found new niches in software and services.

"Additional policy support is needed to tap the smart grid's potential to save energy, reduce carbon and create jobs," Lowe said. "This includes regulatory reform and fundamental changes in the electricity sector's business model, which currently provides incentives for utilities to sell more, not less, energy."

Jackie Roberts, director of sustainable technologies for Environmental Defense Fund, which sponsored the study, said that as energy prices climb, "we need energy efficiency strategies more than ever. Smart grid applications help save businesses money, but the benefits go far beyond that. The firms involved in delivering these new products and services cover 39 states, which shows the widespread market opportunities and job creation potential for America."

The findings build on research that the Duke group has conducted during the past few years regarding potential clean-tech jobs in the United States. More information on the group's research is posted at the website of the Center for Globalization, Governance & Competitiveness.

Source: Public Power Weekly Issue No. 21 (May 31, 2011)