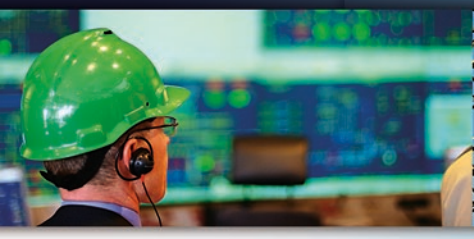
Generating
Smart Grid Solutions

Revolutionizing the Grid from
Raleigh and the Research Triangle



RALEIGH
Economic Development

The nation's current electric grid is not capable of keeping up with rapidly growing demand and an increasing desire to utilize renewable generation technologies. The solution is a smarter grid. But what is that?

The smart grid is an automated energy delivery network that allows a two-way flow of electricity enabling surplus generation to be delivered back into the grid for others to use. This decentralized system will monitor all aspects of the grid from power plants to household devices in order to balance supply and demand in real-time. The net result will be better utilization of renewable resources for generation and an overall increase in efficiency.

The Triangle is a hub of smart grid innovation for several reasons:

- Large supply of engineers and technology professionals
- Excellent research and training programs at area universities
- NC-based Progress Energy and Duke Energy are investing more than $1 Billion in smart grid
- Wide range of companies engaged in this industry, including several headquarters, R&D facilities and centers of excellence

"Very few, if any, communities can match the size, scope and diversity of the Research Triangle's smart grid cluster."

Ed White, Former Chairman of Itron

Unmatched Resources

NSF FREEDM Systems Center at NC State University is an Engineering Research Center focused on smart grid and renewable technologies.

Since 1995, the **NC Solar Center** has managed the DSIRE database covering all policy and incentives for energy efficiency and renewable energy for the US.

Advanced Energy has been developing innovative programs, conducting cutting-edge research and analyzing real-world effectiveness for energy issues for more than three decades.

Duke Energy's Envision Center is a state-of-the-art smart grid technology demonstration center located on NC State's Centennial Campus.

Research Triangle companies—spanning disciplines such as distribution automation, advanced metering infrastructure, generation, demand response, and communications—collectively employ more than 30,000 people locally. **3,000 of these employees are directly engaged in smart grid technologies.**

Accolades

#1 Most Sustainable Mid-Size Community (Raleigh, NC)
U.S. Chamber of Commerce

#2 Top City for Smart Grid U.S. Headquarters (Raleigh, NC)
Duke University

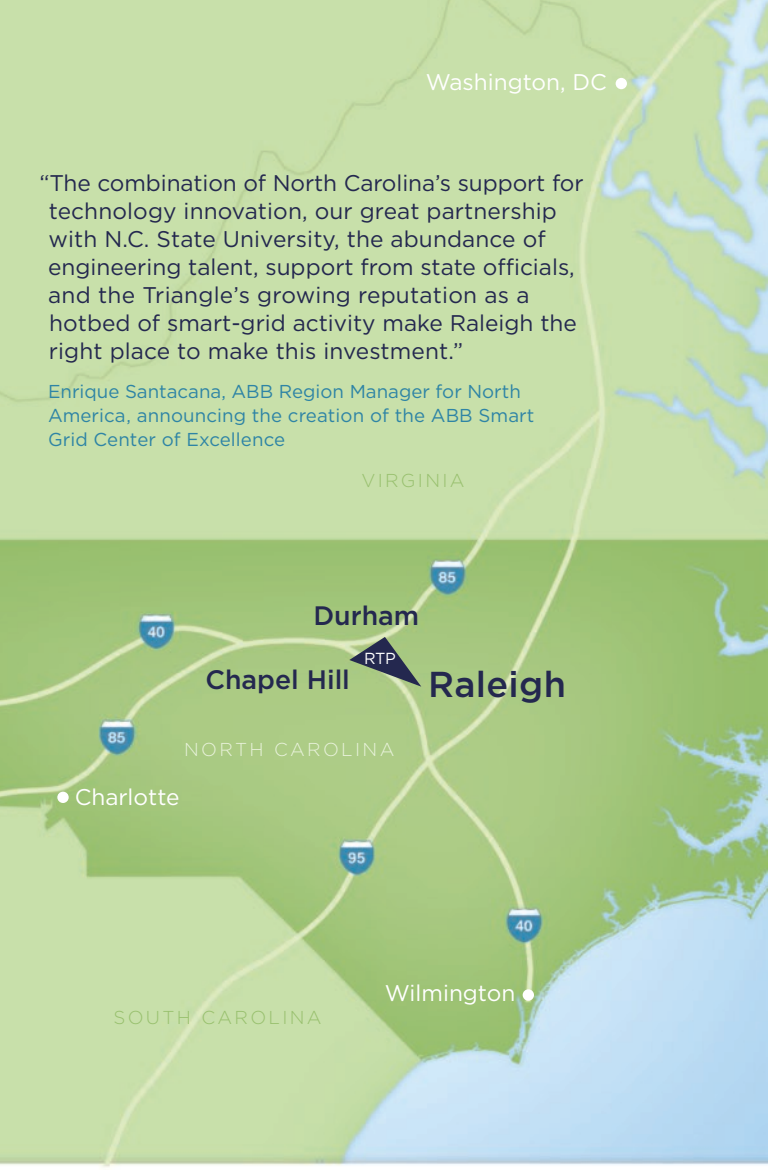
#2 Top City for Smart Grid Software Development (Raleigh, NC)
Duke University

#3 State for Smart Grid Vendors (North Carolina)
Duke University

"The combination of cutting edge research, manufacturing expertise, active utility involvement and public sector support is establishing Raleigh as the world headquarters for smart grid development."

Alex Q. Huang, Ph.D., Director
NSF FREEDM Systems Center

The Raleigh and Research Triangle **Smart Grid** Cluster



"The combination of North Carolina's support for technology innovation, our great partnership with N.C. State University, the abundance of engineering talent, support from state officials, and the Triangle's growing reputation as a hotbed of smart-grid activity make Raleigh the right place to make this investment."

Enrique Santacana, ABB Region Manager for North America, announcing the creation of the ABB Smart Grid Center of Excellence

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