31st Annual Emerging Issues Forum

FutureWork

Leadership Hackathon: Energy

Priorities for Action from Day Two (Feb. 9, 2016) of the FutureWork Forum

Note: Forum participants came together to explore challenges to job creation and workforce development in the "Energy" sector, and to identify key action priorities to position our state for future success in this area of the economy. A panel of sector experts opened the session with thoughts on key challenges and priorities for action. Participants then broke into self-selected small groups to explore strategy options. Each group then reported out on the impact each strategy was likely to have, what resources and assets were needed and available, threats to implementation and existing models for success. Each participant then voted for three top priorities among the strategies. This document summarizes key elements of the hackathon.

Sector Context

The utility model is changing in profound ways. There is more customer engagement, new technologies that allow customers to manage their own energy consumption, and decentralization of energy generation. Within the past eight years, employment in North Carolina's clean energy industry has expanded from 2,000 to 20,0000 employees; this is the largest job increase and diversity of employment in the state's manufacturing sector in this span.

In addition to the sector changes, about 40 percent of America's electric and natural gas workers are eligible for retirement in the next five years. Power plant jobs will be declining by about 5-10% nationally due to the closure of coal plants, but North Carolina will be hit by a much larger wave of retirements. Throughout Duke Energy's territory (in North Carolina, South Carolina, Florida, Ohio, Kentucky and Indiana), a full 50 percent of the employees are eligible to retire in the next 10 years. Line workers, engineers, and power plant technicians will have to be replaced, and there will be a growing additional need for workers with expertise in information technology, cyber security and data analysis.

The question that the more than 75 stakeholders wrestled with on February 9th was: "*What then can North Carolina do now to ensure the right mix of new employees given the utility business model changes?*"

Priorities for Action

1. Develop a Vision for North Carolina's Energy Economy

Stakeholders were unanimous that the development of a vision was crucial before considering any workforce development strategies. North Carolina has many assets to draw upon in its development. First, the state is home to the nation's largest utility and Duke Energy can convene appropriate stakeholders. Secondly, North Carolina has world-class universities with research and development expertise and the potential for energy innovation to create solutions beyond what is presently available. If North Carolina successfully develops an energy economy vision, there will be bipartisan state-level support, a culture that attracts companies and talent to realize the vision, and a healthy and strong utility environment. Once North Carolina develops an energy economy vision, then the state is in a position to develop the appropriate workforce for the industry.

2. Enhanced Career Pathways

An enhanced energy career pathway would consist of a two-year community college curriculum, backed by local businesses, with portable and stackable certificates. The degree would include a technical certificate with broad energy industry fundamentals in year one, plus a flexible choice in the second year of a specific energy career path, such as line technician, gas plant operator, renewable energy technician, wind technology specialist, and a host of other options. This broad approach protects the community colleges and utilities from overinvesting in programs in situations where jobs aren't going to be available when students graduate due to the ebb and flow of hiring needs.

Assets and Measures of Success: The community college system is an obvious asset in this effort. Other noted assets include existing training programs within businesses. Another obvious asset is the collective expertise of retiring Duke Energy employees. To the extent that they can teach or share their knowledge with a younger generation, the better off that new generation of workers will be.

As the panelist from Duke Energy reminded us, though, the most commonly cited reason people do not choose energy careers is because they didn't know about the option or what kinds of jobs are available to them. Other states (Georgia and Florida) have developed an Energy Career Cluster to begin system wide education on energy topics. The stakeholders discussed the desire to explore these other states' programs as possible models.

3. Project-Based Learning

Project-based learning is another way to provide students with exposure to the energy industry through local graduation project and/or summer internship opportunities.

Assets and Measures of Success: There are several assets that would help move this strategy forward include STEM summer camps, service learning that is already done in some middle and high schools, and capstone projects that may be required for high school graduation. Success for this strategy is measured in the independent, innovative future workforce and the lack of fear of failure witnessed in future energy employees.