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Special FutureWork Q&A with North Carolina Utilities Commissioner Don Bailey!

The 2016 Emerging Issues Forum, FutureWork, is just around the corner, and we’re planning a special Day Two “energy sector hackathon” to analyze the sector’s best options for a future of great jobs. We have several key North Carolina energy experts on tap to do just that. Got your ticket?

The Forum’s key goal is to map the right choices now to ensure that North Carolina has enough good jobs for tomorrow, in energy and other key sectors such as banking, healthcare, education, to name a few. Technology is changing or replacing workers across the entire economy, and meanwhile our demography is changing fast. It’s a challenging jobs landscape as we look ahead.

Anticipating the Forum and thinking about energy sector experts, I reached out to North Carolina Utilities Commissioner Don Bailey, a longtime supporter of the Forum, for a brief Q&A. It was a wide-ranging discussion about pressures on the utility business model, sector workforce needs, and other challenges. You’ll definitely want to read the full Q&A, but here are some key excerpts:

FutureWork Forum: Don't Miss Out!

Only a handful of tickets remain for the Forum Day 2 Energy Hackathon! Registration for both days closes Wednesday, Feb. 3! Don’t miss out on your opportunity to convene with some of the industry’s brightest minds! Register here.

Forum Day 2: Announcing Energy Hackathon Speakers!

We’re thrilled to welcome four leading energy experts to our Day Two Hackathon: Chris Hage of Duke Energy; Rob Manning of the Electric Power Research Institute; Andre Pettigrew, a Clean Economy Consultant; and Ivan Urlaub of the North Carolina Sustainable Energy Association!
Diane Cherry: The decentralization of energy generation continues to gain momentum, and customers are using new technologies to better manage energy consumption. How do these trends impact the traditional utility energy business model?

Don Bailey: The energy utility business model is changing more rapidly in areas with higher electric rates or where renewable generation is more economically viable. In the Southeast, and North Carolina in particular, electric rates are below the U.S. average so the change appears slower. That said, many factors are impacting the investor-owned utility model in North Carolina. In 2007, the General Assembly provided a market for renewable generation. There’s a new emphasis on utility implementation of demand-side management and energy efficiency measures, and we’re seeing energy efficiency gains in both residential and commercial/industrial facilities. We have new regulations on carbon emissions, coal ash management, and cooling water restrictions, all of which point toward cleaner electric generation choices and increasing reliance on non-generation alternatives. We’ve lost major manufacturers over the past several decades, but we’ve gained new load demand from “data centers” or “server farms,” many of which seek to offset their electric consumption with expanded renewable generation. So there are many factors in play, certainly.

Like the investor-owned utilities, North Carolina’s co-ops and municipally owned electric utilities are also moving quickly toward implementing smarter grids to provide flexibility. They are responding to the decentralization of electric generation and looking to realize cost savings and greater reliability.

DC: As key parts of the current workforce age out, the sector faces critical workforce challenges. What strategies are needed in response?

DB: The energy utility workforce is “graying” and key
personnel (linemen, pipeline installers, pipeline safety inspectors, engineers, etc.) are retiring. In response, the sector needs to boost recruitment from high schools, community colleges, and military bases all across the state and ensure that new workers are fully prepared through rigorous technical training. Career days will help young people understand the energy sector’s essential importance.

Meanwhile, although the sector has always recruited engineering students from North Carolina’s universities, it now must place more and more emphasis on IT and computer engineering talent. Cyber-security issues are driving this. In the near term, we'll probably need to keep deeply experienced retiring professionals engaged as contractors to help smooth the sector’s workforce transition.

**DC:** What other major technology and automation challenges does the utility industry face in North Carolina?

**DB:** Climate change regulations, though challenging, will create new opportunities for North Carolina’s energy utilities. Numerous technological advances will help: small modular reactors and advanced nuclear reactors will provide opportunities for cleaner base-load generation; as more solar comes on line, advances in DC/AC conversion technologies and the introduction of DC micro-grids will have further positive impacts on grid power quality; improvements in blade design and offshore platform design will boost wind power; and a new North Carolina-based technology using supercritical CO$_2$ turbines will allow natural gas to become even more viable as a cleaner base-load generation alternative.

Smarter grid requirements and supervisory control and data acquisition (SCADA) infrastructure needs will continue to drive automation standardization and improvements. As I’ve noted, robust cyber-security will be a must as the sector implements these automation technologies.

Don’t miss the chance to join a great energy sector discussion at the [Forum](#). Very few tickets remain so [register now!](#)

I’ll see you – plus so many other leaders from the energy sector— at the Forum!

Best,
Diane Cherry