

Testimony of Keith Trent

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Full Committee hearing regarding S. 2146, the Clean Energy Standard Act of 2012

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Thank you, Chairman Bingaman, Ranking Member Murkowski, and the rest of the Committee for the opportunity to testify today regarding S 2146.

My name is Keith Trent and I'm Group Executive and President of Duke Energy's commercial businesses. Most people know Duke Energy as a service provider of electricity to more than 4 million customers in North and South Carolina, Indiana, Ohio and Kentucky. Through our commercial businesses, Duke Energy is also a large independent power producer that generates and delivers electric power and related services in deregulated energy markets.

Our domestic commercial businesses include more than 3,500 megawatts of coal-fueled generation in Ohio; more than 3,000 megawatts of natural gas-fueled generation in the Midwest; almost 70 megawatts of solar generation in Arizona, California, Florida, New Jersey, North Carolina, Pennsylvania and Texas; and by the end of this year, more than 1,600 megawatts of wind-powered generation in Colorado, Kansas, Pennsylvania, Texas, Wisconsin and Wyoming.

Duke Energy is the third-largest operator of coal-fueled and nuclear-powered generation in the country. Over the last five years, Duke Energy has invested approximately \$10 billion to build new cleaner coal, natural gas, wind and solar power plants. In addition, we are pursuing a

license with the Nuclear Regulatory Commission to build a new nuclear power plant in South Carolina. Building and operating such a diverse portfolio of power generation assets affords us valuable insight into the economics and relative advantages, drawbacks and competitiveness of each of these important energy technologies and fuels.

We are pleased to testify today on this important proposal to spur clean energy in the United States. It advances the dialogue about how to create jobs and power our nation throughout the 21st century and beyond. The challenge we face every day at Duke Energy involves balancing the need for affordable, reliable and clean electricity. The bill addresses this imperative. We are supportive of the Committee's efforts to establish a policy that supports the most promising energy technologies, values a diverse mix of power generation fuels, and enables sustained job creation.

The electricity sector is on the cusp of a massive, new investment cycle. Out of approximately 300,000 megawatts of coal fueled electric generation in this country, about 100,000 MW is as old or older than most of us in this room. Compared to newer power plants, these older units – predominantly coal-fueled – are generally smaller, less efficient and more expensive to run.

They typically have higher emission rates of sulfur dioxide, nitrogen oxides and mercury, and are therefore most vulnerable to stricter environmental regulations. It is projected that between 30,000 and 60,000 megawatts of the country's aging coal-fueled generation fleet will be retired by 2015 or shortly thereafter to meet existing and new environmental regulations.

Plummeting natural gas prices are also clearly threatening the viability of these plants. Natural gas prices have not been this low since the mid-1990s, although the 30 percent increase we've witnessed over the last month serves as a reminder of the fuel's historic volatility. Still, at

around \$2.50 per thousand cubic feet, and with prices predicted by many experts to remain low, it is reasonable to expect that most of the coal-fueled units to be retired will be replaced with gas-fueled units. Gas producers tell us not to worry. There's plenty of gas, they say, and prices will stay low.

Electric generating plants are built with the expectation they will operate for over 40 years. Given this long term investment horizon, I believe putting all of our eggs into one basket – one that is very attractive today but has a history of volatility – would be imprudent and short-sighted. Moreover, this path would result in a massive appetite for natural gas from the power industry, putting upward pressure on natural gas prices. Understandably, this makes other natural gas users – like chemical manufacturers, fertilizer producers, and in the Carolinas, textile companies – very nervous. There are also serious proposals to shift heavy-duty trucking from diesel to natural gas. Gas is currently cheaper than diesel and, using analysis from the EIA and RFF, this shift could reduce our oil dependence by up to about 800 million barrels per year, or roughly 25 percent of our oil imports.

S 2146 as currently structured gives new gas generation partial clean energy credit. We have concerns with the concept of including natural gas in the program since it could lead to an overreliance on this single fuel. This is counter to policy goals supporting a diverse generation mix and, more importantly, investments in other proven and promising clean energy technologies. For example, construction of new nuclear units – which we know are highly competitive in the long run – and zero-emission wind and solar power plants will suffer if Congress gives natural gas another leg up. Important work on technologies like carbon capture and sequestration will also grind to a halt barring government support for particular projects. This technology is vital to coal's future.

It is essential to remember that power producers cannot start and stop construction of energy projects as public opinion fluctuates with the price of natural gas. A well-structured Clean Energy Standard can help achieve critical economic and environmental goals while enabling investment in a diverse set of energy technologies. These technologies will serve as an economic hedge that better positions the U.S. to remain competitive when – not just if – market conditions change again.

A new Clean Energy Standard for our country should focus on zero-emission nuclear power, renewables and technologies like carbon capture and sequestration that ensures the continued use of one of our most abundant resources – coal. In addition to the long-term benefits of diversification, investments in these diverse energy technologies will spur continued job creation across many segments of our industry, rather than just one.

The reemerging nuclear technology and construction industries serve as my first example. As we all know, component manufacturing and nuclear plant construction in the U.S. all but disappeared in the 1980s. Today new nuclear construction is putting thousands of Americans to work in building a single plant in Georgia. Technology companies are working to design new nuclear technologies in anticipation of a future boom in new nuclear demand. With expanded support at the federal level, the nuclear industry can continue fulfilling its potential as a major engine for economic growth.

A viable Clean Energy Standard would also fuel job growth in renewable energy sectors like wind and solar power. Uneven federal support has contributed to spasmodic growth in these technologies in recent years. Take Duke Energy's wind power business, for instance. This year we will install nearly 800 megawatts of new wind-powered generation – enough capacity to

power nearly a quarter-million U.S. homes. But like virtually every other project developer, we have not yet announced a new wind project for 2013. Consistent policy support encourages sustained investment in zero-emission energy technologies like wind power, keeping skilled workers gainfully employed.

Finally, a Clean Energy Standard could help unlock billions of investment dollars that are poised to transform coal to a fuel that can be used far more efficiently and cleanly in the decades to come. Domestic and foreign investors are ready to make big investments in emerging technologies like carbon capture and sequestration. They just need an appropriate incentive to lower the technology's investment risks. A well designed Clean Energy Standard can provide that incentive.

I have heard the concern that a Clean Energy Standard is the wrong policy because it picks winners and losers. I believe this claim is a fallacy. A standard does two things. It sets a target for how much power must be derived from a basket of clean energy technologies. It also specifies qualifying criteria for those technologies. If it is structured correctly, the utilities, working with the states will decide how best to meet their obligations under a federal Clean Energy Standard, using the resources that are most appropriate. In deregulated states, technologies would be selected based solely on their relative competitiveness. In Arizona, solar power likely fits the bill. South Carolina could satisfy requirements by continuing to invest in nuclear power. The winners or losers allegation is only accurate if the Clean Energy Standard determines carve-outs for each technology, or it selects which company will supply the technology.

Duke Energy judges Clean Energy Standard proposals against the following criteria:

1. Affordability: How will it impact our rate payers? In these tough economic times, we need to be acutely sensitive to the impact of our policy on those least able to pay.
2. Are they market based – and do they allow the market to decide how much of what type of technologies to deploy?
3. Does the policy only incentivize technologies which are otherwise not being adopted by the market? Natural gas technologies are already preferred by the market – they don't need additional incentives. Including them weakens the policy's ability to advance and deploy alternative technologies and creates disparate regional cost impacts. Both of these unintended consequences are very problematic but easily resolved. Lower the targets and remove natural gas from the list of technologies that qualify for the incentive.
4. Does the policy keep alive and advance the deployment of technologies which the electricity sector broadly agrees are needed to lower future risks of fuel price volatility and new environmental regulations? We find the incentive too weak to advance carbon capture technologies, which most energy experts, including engineers and economists at the Electric Power Research Institute, MIT and other institutions agree is a vital technology. Without carbon capture technologies, there will be no new coal investments.
5. Nothing is free. Is the cost of the policy broadly shared by everyone, or do some states pay significantly more than others? Keeping these technologies alive is in the interest of the entire U.S. economy, yet the EIA analysis indicates wide cost differences throughout the country. Besides being unfair, this hurts the possibility the bill will be passed, increasing the chance our future goes entirely to natural gas.

The policy can be made even more affordable with the addition of supporting policies targeted to remove non-economic barriers to nuclear, CCS and energy efficiency deployment. Duke Energy would welcome the opportunity to participate in this process.

In summary, I commend the Committee for pursuing a Clean Energy Standard that strives to put the U.S. on a coherent path to investment and job creation. Spurring investment in a diverse mix of clean energy sources and technologies – including nuclear, renewables and cleaner coal – will go a long way toward improving our economic and environmental outlook.

I thank you once again, Chairman Bingaman, for your efforts to develop a long-term domestic energy strategy that creates a market-based incentive to deploy new technologies with minimal future fuel price risks and maximum job creation potential. I see a great deal in the legislation that benefits consumers, communities and the American economy.