Energy Standards at Work:

Ohio Senate Bill 221 Creates a Cleaner Economy

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Executive Summary

In May of 2008, on Governor Strickland's initiative, the Ohio legislature passed Amended Substitute Senate Bill 221, a bill including aggressive clean energy standards that represent the foundation for our state's energy evolution. Ohio law now requires Ohio's electric utilities to generate 12.5% of electricity sales from renewable energy sources and to enact programs that will reduce energy consumption by 22%, all by 2025. In passing the bill, policy makers of both parties argued that it would have economic and job creation benefits for Ohio. This report assesses SB 221's effects on economic growth, emissions reductions, energy independence and energy savings, and finds that as long as utilities are reaching annual benchmarks, Ohio will see jobs created, less pollution and, in the long run, money saved.

Ohio's Renewable Energy Standard created a Renewable Energy Credit Market in Ohio, by guaranteeing that Ohioans and outside investors will have a commodity to sell when they invest in renewables here. As of June 2010, 508 applications had been filed at the Public Utility Commission of Ohio to projects as renewable energy resource generators. About 25% of those applications are for projects in Ohio (132), representing over 150 MW of potential homegrown capacity from solar, wind, hydro, and landfill gas, enough to power almost 115,000 homes. Plus, 1500 MW in plant capacity have been approved for co-firing biomass.

Ohio's Requirements for Investments in Energy Efficiency Create Jobs. Between 2010 and 2011, Ohio utilities plan to invest about $340 million in energy efficiency programs in Ohio, to meet standards, including rebate programs for energy efficient appliances, home weatherization programs, education campaigns and energy efficient lighting campaigns. These investments will create about two years of work for 1,700 people. The investments also indirectly support the creation or retention of additional jobs in related industries, some of which are in Ohio. Nearly all 160,000 solar panels used in the Wyandot facility, for instance, were manufactured by First Solar in Perrysburg, which doubled the size of its plant with a $100 million investment.

In addition, Ohio's Clean Energy Standards also have the effect of:

- **Lowering Emissions**. Due to SB221, Ohio could stop as much as 341,890,714 tons of CO_2 from being emitted over 15 years – equal to taking almost 3.8 million cars off the road for 15 years.
- **Producing Energy Savings**. The ACEEE estimates that by 2025 there will be a net energy bill savings of $18.9 billion due to SB221. For the current three-year period (2009-2011), for which we already have programming plans, we estimate a total net savings to consumers of $386 million over four years, plus continued savings for the life of the efficiency measures.
- **Energy Independence**. For 2025, we project a reduction of 28 million MWh of coal-generated electricity consumption due to SB221, eliminating the need to purchase 13.5 million short tons of coal in 2025, saving $562 million from being sent out of state to import it, and reducing Ohio's coal trade deficit by 40%.

Other interesting developments include,

- **FirstEnergy's** $200 million retrofit of the 54-year old R.E. Burger coal Power Plant in Shadyside, saving about 105 jobs and potentially generating enough RECs to fulfill all of FirstEnergy's benchmarks through 2024. The full report discusses this controversial project.

Read the full report and learn more about an economy that works for all:
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- **American Electric Power** has pioneered new power purchasing agreements and offered discounts and rebates of up to 50% of the incremental cost of purchasing energy-efficient products, including LED traffic signals and new industrial project rebates.
- **Duke Energy Ohio** signed a power purchasing agreement with Benton County Wind Farm in Indiana to purchase 100 MW of power over 20 years and started a program to purchase RECs from customers that invest in renewable energy generation.
- **Dayton Power & Light's** built Yankee Solar Field, and is testing biomass co-firing at its Killen Generating Station and obtained 491 RECs from the facility in 2009. The company plans for the facility to remain coal-firing, with biomass making up 10% of the resource mix at the maximum estimate. Due to an unexpected success of its well-marketed CFL program, DP&L actually surpassed its 2009 savings requirement by approximately 70,000 MWh.

The report also reviews issues related to solar benchmarks, biomass and industrial opt-outs. We find that in 2009, all four of Ohio's Investor-owned utility companies met general renewable benchmarks but fell short on **solar benchmarks**. All were granted *force majeure* waivers for their 2009 solar benchmarks, claiming a lack of certified solar projects in the state. However, Duke Energy Ohio obtained ten times the number of solar RECs as FirstEnergy. We conclude that no *force majeure* applications need be approved going forward.

All four of the companies are using similar strategies to meet non-solar requirements, mainly depending on REC purchases and power purchasing agreements with 3rd parties. Almost all projects where utility companies are generating their own renewable energy involve co-firing biomass with coal. We conclude that biomass has a place in transition to green energy; however the magnitude of biomass projects being planned in Ohio is potentially problematic.

Under the law, there is a "mercantile" exemption that allows very large customers to avoid cost recovery fees. Energy efficiency efforts that pre-date the bill's passage are considered eligible for counting towards a company's energy efficiency requirements. There are over 500 filed and voided and 400 open mercantile opt-out cases on file with the PUCO.

We conclude that SB221 is a successful policy. Utilities are changing their behavior and increasing investments in renewable energy. For the law to continue to succeed enforcement efforts of the Public Utilities Commission of Ohio are crucial. As long as utilities are reaching benchmarks, Ohio will see jobs created, less pollution and, in the long run, money saved. The report also recommends that policymakers expand the clean energy standards; expand and extend Ohio's Advanced Energy Fund; enforce the benchmarks; examine biomass more closely and close the mercantile opt-out loopholes.