

THE ENERGY EFFICIENCY & RENEWABLE ENERGY TRACKER

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POLICY TRACKING

Final Clean Power Plan Emphasizes Renewables

The final version of the US Environmental Protection Agency's (EPA) Clean Power Plan (CPP) was announced August 3. The CPP is based on a "best system of emissions reduction" (BSER) which focuses heavily on renewable energy (RE) and does not explicitly include goals for energy efficiency (EE). RE generation is part of Building Block 3 (BB3) of the rule. The BSER includes:

- Improving the heat rate of coal-fired plants (BB1)
- Substituting increased natural gas generation for reduced coal-fired generation (BB2)
- Substituting increased generation from renewable sources for reduced coal-fired generation (BB3)

The final BSER analysis assumes use of more new RE than the proposed version of the rule by including information on recent reductions in the cost of RE, and projections of continuing cost reductions.

Part of the mass-based goal for each state is based on a share of "not captured BB3 generation," which is generation from potential RE capacity that is not yet built. The EPA's "CPP Goal Calculation Viewer" states that these tons are incorporated to "to afford affected EGUs that are subject to a mass-based goal similar compliance flexibility as EGUs subject to a rate-based goal." Emission reductions associated with potential realization of not captured RE are incorporated into each state's mass-based goal.

Although the CPP no longer includes a "building block" devoted to EE goals, energy savings resulting from EE programs contribute to emissions savings. EE activities do not need to be approved as part of a state plan under a mass-based approach to compliance.

States must form a plan to meet interim CPP standards in the 2022-2029 period and final standards by 2030. Final plans, or initial plans with an extension request, must be submitted by September 6, 2016. Final state plans are due by September 6, 2018.

SOURCE: www2.epa.gov/cleanpowerplan.

UTILITIES

Appalachian Power's Commercial & Industrial Energy Efficiency Programs

West Virginia businesses in Appalachian Power's service territory are able to design their own efficiency investments through the utility's Commercial & Industrial (C&I) Program. The program allows commercial and industrial customers to offset the costs of purchasing energy efficient equipment, building upgrades, and implementing process improvements that reduce energy consumption and peak demand. Rebates are contingent on the review and acceptance of application information.

UTILITIES CONTINUED

Standard energy efficient projects including upgrades to lighting, HVAC, water heating, traffic lighting, refrigeration and food service equipment are eligible for rebates. Projects with more than one type of equipment upgrade may qualify for the Custom rebate incentives.

Plans require pre-approval from Appalachian Power. To qualify projects must have a minimum payback, based on electricity costs savings, of at least one year but less than seven years or pass a cost effectiveness test(s) determined by the utility. A facility must also use an average of 125 kW in monthly energy demand to participate in the Custom Program.

For standard energy efficiency projects customers can receive a rebate of \$0.06/kWh saved in the first year for pre-approved qualifying designs or equipment. For custom projects, the incentive increases to \$0.07/kWh. The C&I program will pay up to 50% of a project's incremental cost if project energy saving warrant. A customer may receive up to \$150,000 in total incentives per account per year. Rebates are paid per unit and are capped at 50% of a project's total cost. Companies are allowed to work with their own contractors to complete projects.

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OTHER ENERGY NEWS

Projects in the Interior Region Driving U.S. Average Wind Prices and Installation Trends

The "2014 Wind Technologies Market Report" released by the USDOE's National Renewable Energy Laboratory (NREL) in August reveals that the majority of wind projects completed in 2014 were located in the Interior region of the U.S. No new wind projects were completed in the Southeast (contains WV), and only four projects - totaling 76 MW - were completed in the Northeast (contains PA, MD and NY up to ME). No new wind facilities were completed in WV or PA in 2014. One project was completed in MD in 2014.

An analysis of 363 wind power purchase agreements (PPAs) shows a downward trend in prices since 2009 and 2010, with all-time lows in 2014 and 2015. The Interior region has the lowest levelized PPA prices (\$22.4/MWh in 2014), net of tax incentives, while less recent prices in the West (\$60/MWh in 2013) and the Northeast (\$55/MWh in 2012) have been higher. The national average PPA was \$23.5/MWh in 2014.

Due to low average prices, the overall competitiveness of wind power improved in 2013 and 2014. However, due to higher project costs, wind projects in the eastern and western U.S. have become less competitive compared to projects in the Interior.

SOURCE: NREL.



PEOPLE & PLACES

Beech Ridge Energy Storage Facility Close to Operational

A 31.5 MW lithium-ion battery array owned by Beech Ridge Energy Storage (BRES) is under construction in Greenbrier County near the Beech Ridge Wind facility. The facility occupies about one acre of land on former surface-mined property and is located 20 miles north of Lewisburg. The battery array is connected to the same electrical substation as the wind facility. Both facilities are affiliates of Invenergy, LLC.

The array will provide frequency regulation service to the PJM Interconnection, a vital ancillary service that helps maintain grid stability. Energy storage is part of the long-term solution to increase reliability by providing grid operators more flexibility in dispatching energy. Battery arrays are unique due to the ability to react very quickly to grid needs by charging or discharging depending on frequency conditions. BRES is currently testing the array and plans to activate the facility in October.

SOURCE: Invenergy, LLC.

E4 Project Finishes 2nd Year and Plans to Expand

The Energy Efficiency in the East End (E4) project of the Charleston Area Alliance and Energy Efficient West Virginia (EEWV) wrapped up its 2nd year this summer. The project is an electricity savings contest amongst households and residential blocks in the East End of Charleston. Participants competed for the largest block-level decrease in kWh used in a year and the largest household decrease in kWh.

Participating households used the residential energy audit program of Appalachian Power to help them discover ways to save energy. The five highest energy savings by block were between 13 and 30 percent of kWh used from June 2014 through May 2015 vs. the prior 12 months.

E4 was initially funded by the WV Division of Energy. Continuing funding will be provided by the Appalachian Stewardship Foundation. The expanded project will be managed by EEWV and will be open to all neighborhoods in Charleston.

SOURCE: Emmett Pepper, Energy Efficient WV.



Due to higher costs, wind projects in the Eastern and Western US have become less competitive compared to projects in the Interior.

PEOPLE & PLACES CONTINUED

WVHBA Awarded New Home Efficiency Rating Project

The West Virginia Home Builders Association Charitable Fund (WVHBA CF) was recently awarded a grant by the US Department of Energy (USDOE) to sample energy efficiency characteristics of new homes built in the state. The award, given to the Appalachian Residential Consortium for Energy Efficiency (ARCEE Project), is part of USDOE's Residential Energy Code Field Study project already underway in several other southeast states, including Maryland, Kentucky, Arkansas, North Carolina, Georgia, Pennsylvania, Texas and Alabama.

The goal of the project is to quantify the share of new homes that are being built to the state's mandatory energy code, to inform future builder training. Residential Energy Raters that have training and expertise with the state's 2009 IECC building code will conduct the assessments, which will be done ONLY for the purpose of determining compliance with the code, not for code enforcement. Primary areas of assessment will be: Foundation insulation, duct leakage, windows, wall and ceiling R-values, and lighting efficiency.

The USDOE project is a partnership between WVHBA CF, the HBA of WV, the state's electric utilities, the WVDOE and the Center for Business & Economic Research (CBER) at Marshall University.

SOURCE: Sheila Coleman-Castell, ARCEE Project.



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