



SOUTHWEST ENERGY EFFICIENCY PROJECT

Saving Money and Protecting the Environment Through More Efficient Energy Use

The Clean Power Plan and Energy Efficiency

August 25, 2014

BACKGROUND

The U.S. Environmental Protection Agency's (EPA's) proposed Clean Power Plan to reduce carbon dioxide emissions from existing power plants under Section 111(d) of the Clean Air Act allows states and utilities to receive credit for end-use energy savings as a CO₂ emissions reduction strategy. Energy savings from best practice utility energy efficiency programs are included in the EPA's determination of each state's emissions rate reduction goals. Furthermore, states are allowed to include a wide range of energy efficiency policies and programs in their emissions reduction implementation plans.

Including energy efficiency prominently—as the EPA has done—will enable states and utilities to meet the emissions reduction goals at least cost and potentially with net economic benefits for households, businesses and the economy as a whole. Indeed, the EPA estimates that electricity bills will be 8% lower by 2030 mainly as a result of energy efficiency improvements, while at the same time CO₂ emissions will decline 30% by 2030 from 2005 levels. In addition, the EPA estimates that the proposed rule will result in 78,000 additional jobs in the energy efficiency sector.

The Southwest Energy Efficiency Project (SWEEP) has been focused on advancing energy efficiency in the Southwest for 13 years. Our ongoing analysis of potential energy savings under various policy and program scenarios indicates that the EPA's estimates are likely conservative. When looking at the potential benefits from best practice utility energy efficiency programs in Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming during the 2010-2020 time period, we found that 2.0% annual energy savings are possible, 28,000 jobs could be created in the region, and households and businesses could obtain nearly \$20 billion in net benefits (economic and public health).

In addition to the economic and public health benefits mentioned above, residential energy efficiency efforts can increase occupant comfort, improve health and safety factors, increase property values, and provide some financial relief to low and middle income households. Commercial and industrial programs can increase worker comfort and productivity, reduce waste in production processes, and lower environmental compliance costs. All of these efforts also conserve our water resources, something that has always been a concern in the Southwest.

SWEEP is an active participant in discussions regarding the design of the energy efficiency provisions in EPA's Clean Power Plan and will provide formal comments to the EPA by the October 16, 2014 deadline. In addition, we are available to assist Southwest states and utilities as they prepare their state plans, in particular to help them incorporate strong, cost-effective energy efficiency policies and programs into their plans. For more information on SWEEP, please visit <http://www.swenergy.org>.

CLEAN POWER PLAN RECOMMENDATIONS AND COMMENTS

While we applaud the EPA's proposal in general, we also believe that there are some areas that should be clarified or strengthened in order to best meet the goals of the Clean Power Plan at least cost.

Adjust the Building Block 4 Targets

The targets set in Building Block 4 should be adjusted to reach 2% energy savings per year with a 0.25-0.3% per year ramp up rate, reflect gross (as opposed to net) savings, and include non-utility policies and programs.

- Many utilities in the Southwest are already on track to meet or exceed the 1.5% target in the proposed rule. Our region is also home to many successful non-utility programs.
- The EPA has requested comment on the 2% alternative. The 2% alternative is reasonable given the current state of energy efficiency efforts in the Southwest, especially when non-utility policies and programs are included. For example, both building energy codes and public sector energy efficiency initiatives involving performance contracting through energy service companies (ESCOs) can provide significant energy savings above and beyond what is realized through utility programs.

Allow States and Utilities to Include a Wide Range of Energy Efficiency Policies and Programs in the State Plans and Implementation Efforts

As proposed, the Clean Power Plan allows both utility and non-utility programs to receive energy savings credits. However, some aspects of the proposal could be clarified in this regard including indicating which types of programs are eligible for credits and which are not.

- The EPA should allow states and utilities to receive savings credits for a wide variety of utility programs, including but not limited to measures based incentives, behavior change programs, transmission and distribution system upgrades, financing programs, and incentives for combined heat and power (CHP).
- Pricing policies or rate structures should not be credited under the Clean Power Plan due to uncertain savings.
- Non-utility policies and programs should be credited and may include building energy codes, tax incentives, financing programs, public sector energy performance contracting programs, programs to spur market transformation, and state-based appliance efficiency standards, state programs to improve industrial efficiency.
- Credit should not be given for savings that result from federal mandates or standards. Similarly, to the extent that state or local programs are funded by the federal government, those savings should not be credited to states.

Provide Evaluation, Measurement, and Verification (EM&V) Guidance

The EPA has indicated that it will provide further guidance on EM&V requirements near the time of approval of the final rule. However, this guidance is needed as soon as possible so that states and utilities can plan effectively and efficiently.

- The EPA should indicate which EM&V protocols are acceptable, but allow utilities to implement the protocols and allow states to certify that the protocols were followed when claiming energy savings credits.
- Widely vetted protocols, such as those developed under the U.S. Department of Energy's (DOE's) Uniform Methods Project (UMP) or the International Performance Measurement and Verification Protocol (IPMPV), should be considered.
- The EPA, possibly with assistance from the U.S. DOE, should develop EM&V protocols as soon as possible in areas where such protocols do not exist at the present time.
- EM&V protocols should be refined over time as experience is gained in using them.

Shift to Gross Energy Savings Rather Than Net Savings

The EPA has proposed using net savings to calculate credit towards state targets. Net savings include estimates of and adjustments for free riders and in some cases spillover effects. Gross savings is simpler to calculate and is a more appropriate methodology for both setting state goals and determining credit towards the realization of those goals.

- Gross savings reflect real emissions reductions in a consistent manner. Net-to-gross ratios are not consistent (they vary from utility to utility) and are not traditionally applied to some key policy and program areas, including building energy codes.
- Gross savings are easier to determine and will facilitate states enacting, and receiving credit for, a wide range of energy efficiency policies and programs in their implementation efforts.

- The gross savings approach is consistent with adopting the 2% per year Building Block 4 target mentioned above. Utilizing gross savings will increase the credit utilities and states receive for Building Block 4 savings by 10-15% relative to utilizing net savings, so 1.5% savings on a net basis is equivalent to about 1.7% savings on a gross savings basis.
- In calculating gross energy savings, EPA should clarify that states and utilities are by no means allowed to receive credits for energy savings resulting from federal appliance or equipment efficiency standards or from energy savings occurring in the market outside of participation in approved energy efficiency policies and programs.

Facilitate the Inclusion of Energy Efficiency in State Plans

While energy efficiency efforts are a tried and true least cost means to achieve Clean Power Plan goals, their inclusion in state plans should be facilitated and the EPA requirements clarified.

- The proposed portfolio approach is wise in that it allows efficiency measures to be complementary to EGU limits, but not directly enforceable, while allowing states to adopt and enforce as appropriate.
- States should be able to modify the energy efficiency policies and programs contained in state plans during the implementation phase. This helps to ensure that new technologies can be incorporated, results from EM&V work can be acted upon, and otherwise supports best energy efficiency practices as they evolve over time.
- State plans should be required to include provisions to avoid double counting of energy savings among the various energy efficiency policies and programs included in the plans (e.g., for projects that participate in both utility and non-utility programs).
- If states adopt mass-based limits, EM&V protocols do not need to be applied because no energy savings credits are issued and compliance is measured directly through statewide CO₂ emissions levels.

Clarify Determination of Energy Savings Credits in States That Import and Export Electricity

Clarification should be provided regarding the determination of energy efficiency savings credits between states that import or export electricity.

- SWEEP recommends allowing full energy savings credits in the state where savings occur, as long as the impacted states both choose the emissions rate approach. This is because energy savings in an electricity importing state do not necessarily lower the average emissions rate of the electricity exporting state.
- However, adjustments should be made if an exporting state chooses the mass-based approach and an importing state has selected a rate-based approach. This is because energy savings in an electricity importing state will lower the actual emissions (but not necessarily the emissions rate) of the electricity exporting state. We suggest the adjustment be based on the net electricity imports from states that choose the mass-based approach (e.g., a rate-based state that imports 20% of its electricity from a state or states choosing the mass-based approach would reduce its energy efficiency credits towards its emission rate targets by 20%). This adjustment could be made after states file their state plans and it is known which states choose the rate-based approach and which choose the mass-based approach.

Clarify how States Should Make the Conversion to Mass-based Goals

The EPA's proposal to allow both rate-based and mass-based goals is a good approach. However, the EPA should provide further guidance to states on how to make this conversion as well as provide presumptive mass-based goals based on analysis that the EPA carries.

- EPA could provide a set of interim and final emissions rate goals state-by-state without any energy efficiency or other adjustments to the required emissions rates. States could then aggregate and average the most up-to-date electricity generation forecasts of utilities including projections about energy efficiency efforts in light of the Section 111(d) standards. The weighted average state electricity generation forecast would then be multiplied by the emissions rate goals (without EE credits or any other adjustments included) to determine the state's mass-based emissions limit in any particular year.

- This approach makes use of each state’s up-to-date projections of electricity generation taking into account all types of energy efficiency initiatives already adopted as well as planned, rather than the levels of energy efficiency that are assumed by the EPA for each state in the EPA’s calculation of emissions rate goals.

Credit Early Actions Appropriately

We recommend that states be allowed to start tracking energy efficiency measures installed in 2017 or later, not in 2014 as EPA has initially proposed.

- Counting energy savings from measures installed starting in 2017 towards each state’s emissions rate goals is consistent with the Building Block 4 calculation in establishing the emissions rate goals.
- Counting measures should start after publication of the final rule, EM&V requirements are defined, and state plans are prepared.
- While measures from eligible state and utility policies and programs are tracked and counted starting in 2017, energy savings credit from these measures should begin in 2020 as the EPA has proposed. Starting energy savings credits sooner than 2020 will reduce the overall CO₂ emissions reductions achieved by the Clean Power Plan.

Consider Additional Options for Emissions Reductions

Technologies that reduce overall CO₂ emissions, but do not reduce power sector emissions per se, are readily available and support the overarching goals of the Clean Power Plan. These technologies include electric vehicles and heat pumps that replace inefficient separate heating and cooling systems. Provisions should be included in the Clean Power Plan to encourage adoption of these technologies or at least not discourage their adoption.

- For states that choose the mass-based approach, adjustments to each state’s mass-based targets should be made if the state adopts policies or programs to advance technologies such as electric vehicles or electric heat pumps that lower overall CO₂ emissions but increase power sector CO₂ emissions. The adjustment can be based on an estimate of the CO₂ emissions due to each qualifying device in operation, using the state’s average emissions rate. If such credits are allowed, states should be required to track and report the number of qualifying measures in operation each year.
- For states that choose the rate-based approach, adjustments are not as critical since the adoption of electric vehicles, heat pumps and the like do not necessarily change a state’s average emissions rate.
- States should be allowed to receive credits for combined heat and power (specifically, CHP systems that are smaller in size than the threshold for being included as an affected EGU). The credits should be based on the net CO₂ emissions reduction of each CHP system. CHP credits should be allowed as long as a state or utility has a CHP incentive policy or program, and the policy or program is included in the state’s plan.

ADDITIONAL RESOURCES AND CONTACT INFORMATION

For a copy of SWEEP’s full comments, more information, or to request assistance, please contact Ann Livingston at alivingston@swenergy.org (or 720.863.6397) or Howard Geller at hgeller@swenergy.org (or 303.447.0078x1).

Additional information on the potential for cost effective energy efficiency implementation in the Southwest is contained in SWEEP’s study “The \$20 Billion Bonanza: Best Practice Utility Energy Efficiency Programs and Their Benefits for the Southwest” found at www.swenergy.org/programs/utilities/20BBonanza.htm.