

December 1, 2014

U.S. Environmental Protection Agency  
Attention Docket ID No. EPA-HQ-OAR-2013-0602  
Mail code 28221T  
1200 Pennsylvania Ave. NW.  
Washington, DC 20460.

Via email: [a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov)  
Attention Docket ID No. EPA-HQ-OAR-2013-0602

**Re: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, EPA-HQ-OAR-2013-0602, 79 Fed. Reg. 34830 (June 18, 2014)**

Dear Administrator McCarthy:

The National Association of Energy Service Companies (NAESCO) appreciates the opportunity to submit comments on the above above-referenced matter, the Clean Power Plan (CPP).

### **Introduction to NAESCO**

NAESCO is the leading national trade association of the energy services industry. NAESCO numbers among its members some of the world's leading energy services companies, including: ABM Energy, AECOM Energy, Ameresco, CM3 Building Solutions, Clark Energy Group, ClearEnergy Contracting, Climatec, ConEdisonSolutions, Constellation New Energy, Control Technologies and Solutions, CTI Energy Services, Energy Control Inc, Energy Solutions Professionals, Energy Systems Group, Entegrity, Excel Energy, The Fulcrum Group, Indoor Environmental Services, NextEra Energy Solutions, Honeywell, Johnson Controls, Lockheed Martin, McClure Energy, Navitas, NORESKO, Onsite Energy, Opterra Energy Services, Pepco Energy Services, Performance Services, Schneider Electric, Siemens Industry, Southland Industries, Synergy Companies, Trane, UCONS, and Wendel Energy Services. Utility members include the New York Power Authority, Pacific Gas & Electric, and Southern California Edison.

During the last twenty years, NAESCO member companies have delivered thousands of energy efficiency, renewable energy, demand response, distributed generation and combined heat and power projects to institutional, commercial, residential, and industrial customers across the country. Nationally, NAESCO member company projects have produced:

- \$45 billion in projects paid from savings
- \$50 billion in savings – guaranteed and verified
- 400,000 person-years of direct employment
- \$30 billion of infrastructure improvements in public facilities
- 450 million tons of CO2 savings at no additional cost

## Summary of Comments

NAESCO strongly supports the white paper entitled “Greenhouse Gas Reductions through Performance Contracting under EPA’s Clean Power Plan” that was prepared by seven NAESCO member companies, including Ameresco, Honeywell, Ingersoll Rand (Trane), Johnson Controls, Schneider Electric, Siemens, and United Technologies (NORESO). NAESCO will reinforce the comments of this “ESCO Group” by providing additional information on several key points.

- 1) NAESCO urges the EPA to begin the discussion of Building Block 4 with a few facts that put the size of the potential demand side energy efficiency (EE) resource in perspective for policy and program makers not familiar with EE and make it very clear that EE is on a par with the other building blocks.
- 2) NAESCO urges the EPA to explain why its estimates of the costs of energy efficiency (EE) are much higher than the estimates of other respected national sources, because the discrepancies between the estimates undermines the credibility of EE as a building block in state CPP compliance plans.
- 3) The PC market is large and growing, and has little overlap with the ratepayer-funded EE program market.
- 4) NAESCO urges the EPA to provide specific guidance to states about how to incorporate performance contracting projects (PC) into state compliance plans. Without specific guidance on what EPA will accept in terms of the monitoring and verification of savings (M&V) and enforceability of savings, which we address below, NAESCO fears that many states will omit performance contracting from their compliance plans, because they think it is too difficult to understand or implement, and deprive their states of a resource that is both low cost and low in state administrative effort.
- 5) NAESCO supports the comments of the ESCO Group that a registry of performance contracting projects, maintained by a reputable third party which certifies the standards for both calculating and verifying project savings, will allow state air regulators to use performance contracting in their compliance plans, and will allow the EPA to evaluate these plans with confidence.
- 6) NAESCO urges the EPA to consider that the M&V of PC projects is arguably more rigorous and reliable than the M&V of ratepayer-funded energy efficiency (EE) programs, and that PC projects offer the states and the EPA a large safety margin on savings performance that ratepayer-funded programs generally do not offer. NAESCO believes this makes PC projects a reliable resource for CPP compliance.

7) NAESCO urges the EPA to consider that the delivery of savings from almost all performance contracts is today, and has been for the past two decades, enforceable by contracts with public agencies, and that these contracts are public record, available for inspection and/or audit by state air regulators and the EPA. NAESCO believes that this enforceability makes performance contracts a reliable resource for state CPP compliance programs.

## **Discussion**

NAESCO offers the following arguments in support of its comments.

**1) NAESCO urges the EPA to begin the discussion of Building Block 4 with a few facts that put the size of the potential demand side energy efficiency (EE) resource in perspective for policy and program makers not familiar with EE and make it very clear that EE is on a par with the other building blocks.**

NAESCO believes it would be helpful for regulators, policy makers and the general public to understand the amount of energy wasted in the US and the size of the potential EE resource, and the amount of CO<sub>2</sub> emissions reductions resulting from the elimination of this waste. Two examples of rough benchmarking of the size of the energy efficiency potential:

- The EPA ENERGY STAR program has for years estimated that about one-third of the energy delivered to the nation's homes and businesses is wasted. In addition, substantial electric energy is lost in the transmission and distribution system that carries electricity from generating plants to end use customers. Converting this estimate into potential CO<sub>2</sub> emissions reductions and calculating the potential percentage of the national CO<sub>2</sub> reduction goal available from eliminating end-use waste is one example of the potential savings that can be mined from the national building stock.
- Another example is converting the estimated improvement in energy efficiency over the past four decades (70%), a figure often cited by oil companies in advertising, into CO<sub>2</sub> emissions reductions.

All of the stakeholders today understand the capability of the CPP Building Blocks 1-3 to produce the amounts of energy or the amount of efficiency required to satisfy their portion of each state's goals. But there is significant doubt by some stakeholders about the ability of energy efficiency to satisfy its portion. NAESCO members have attended conferences since the publication of the CPP at which representatives of major utilities have stated that the EPA's target for EE is simply not attainable. So NAESCO suggests that EPA begin the discussion of energy efficiency by estimating the potential size of the energy efficiency resource and providing an estimate of the amount of the target CO<sub>2</sub> emissions reductions that could be met with energy efficiency. We believe that this information would reveal that the EPA's target for EE in perspective is easily attainable.

**2) NAESCO urges the EPA to explain why its estimates of the costs of energy efficiency (EE) are much higher than the estimates of other respected national sources, because the discrepancies between the estimates undermines the credibility of EE as a building block in state CPP compliance plans.**

In the proposed rule, the EPA on page 235 estimates that the Levelized Cost of Saved Energy (LCOSE) for the 111(d) compliance period is \$85/MWh to \$90/MWh. The EPA cites the calculations of a respected national research organization (ACEEE) whose estimate is \$54/MWh, but does not explain why the two estimates differ. A recent draft publication from the Lawrence Berkeley National Laboratory<sup>1</sup> estimates the national average CSE at \$44/MWh, even lower than the ACEEE estimate, as depicted in the excerpted graphic below.

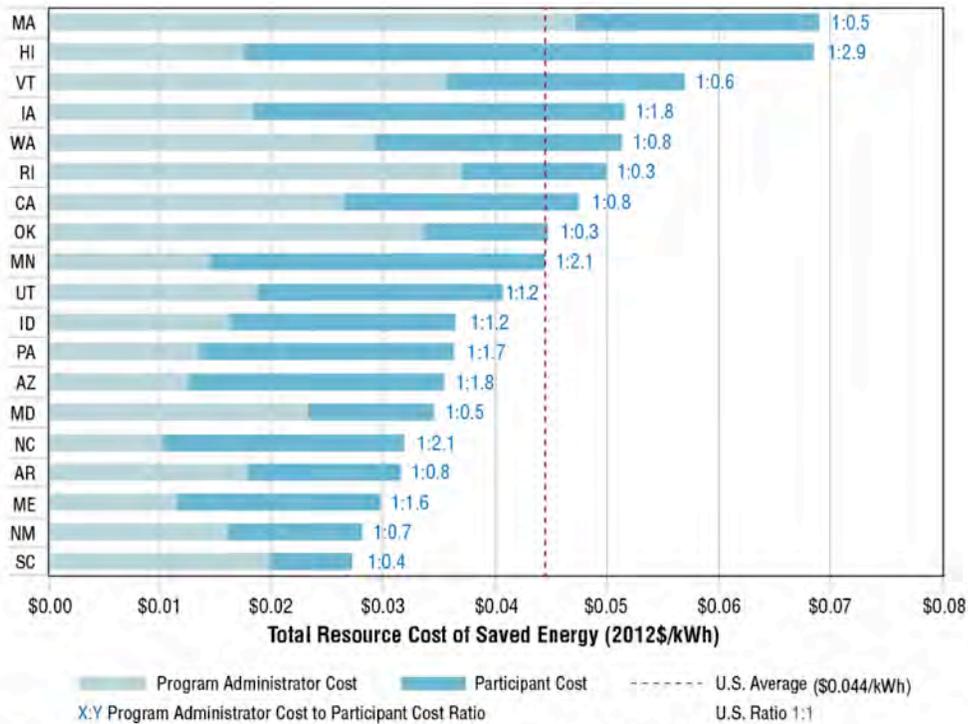


Figure 8. Average total resource cost of saved energy by state, as a function of the program administrator cost of saved energy and the participant cost of saved energy. The red dotted line denotes the national average total resource cost of saved energy of \$0.044/kWh.

Source: LBNL DSM Program Database, 2009-2013

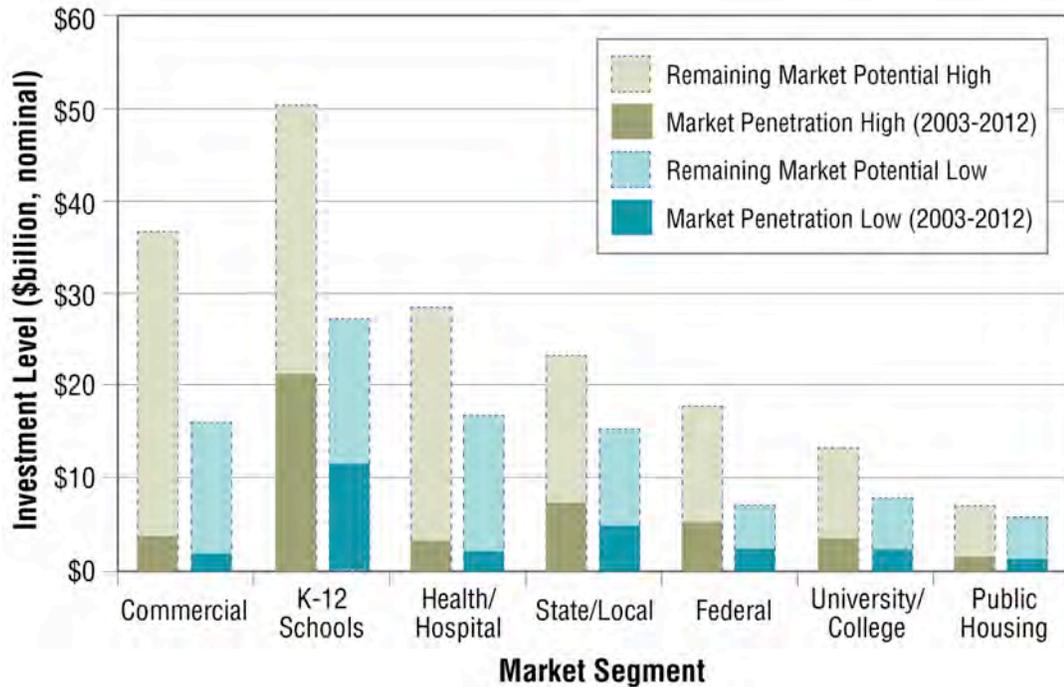
Given the large discrepancy between the EPA estimates and the estimates of other national experts, NAESCO urges the EPA to re-examine its estimates and to publish an explanation of the differences.

<sup>1</sup> “The Total Cost of Saving Electricity Through Utility Customer-Funded Energy Efficiency Programs: National, Sector- and Program-Level Estimates and Issues” Hoffman *et. al.*, *DRAFT FOR REVIEW*, November National, Sector- and Program-Level Estimates and Issues” Hoffman *et. al.*, *DRAFT FOR REVIEW*, November 2014

**3) The PC market is large and growing, and has little overlap with the ratepayer-funded EE program market.**

A recent report from the Lawrence Berkeley National Laboratory (LBNL)<sup>2</sup> estimates the remaining potential market for PC projects at between \$71 and \$133 billion, as depicted in the graphic below.

**Estimated Market Penetration and Remaining Market Potential, by Segment**



Source: LBNL-6300E

Historically, only about one-third of the electricity savings produced by PC projects have utilized ratepayer-funded incentives or rebates<sup>3</sup>, because these incentives are inconsistent across the country. So the majority of electricity savings in PC projects will not be accounted for in state CPP compliance plans unless the plans specifically recognize PC projects as a unique delivery mechanism.

**4) NAESCO urges the EPA to provide specific guidance to states about how to incorporate performance contracting projects (PC) into state compliance plans. Without specific guidance on what EPA will accept in terms of the monitoring and verification of savings (M&V) and enforceability of savings, which we address below, NAESCO fears that many states will omit performance contracting from their compliance plans, because they think it is too difficult to understand or implement, and deprive their states of a resource that is both low cost and low in state administrative effort.**

<sup>2</sup> “Current Size and Remaining Market Potential of the U.S. Energy Service Company Industry,” Stuart *et al.*, July 2013, LBNL-6300E

<sup>3</sup> “Estimating customer electricity savings from projects installed by the U.S. ESCO industry,” Carvallo *et al.*, LBNL ESCO industry Brief, 11/25/14

As the EPA knows, states face significant technical and political challenges in assembling their CPP compliance plans. These challenges are especially acute when state air regulators consider Building Block 4, because the regulators typically have little or no experience with EE. Building Block 4 seems complicated and risky when compared to the other building blocks, or even the renewable energy (RE) component of Building Block 4, because EE is a dispersed resource, while the other resources are concentrated, and the measurement of EE delivery is more complicated than the meter reading that can be used for the other resources. The challenges of PC are even more difficult than for ratepayer-funded EE programs, because, unlike ratepayer-funded programs, the results of PC projects are not reviewed and approved by state utility regulators.

Despite these challenges, NAESCO believes, and the ESCO Group comments demonstrate, that PC can be a significant resource for many states in meeting their CPP targets, and the value of PC can be captured by states without the bureaucratic burden that is required for ratepayer-funded programs. In order for states to capture this value, however, they will need very specific guidance from the EPA about how to monitor and verify the results of PC projects, and how to understand that PC projects already meet the EPA standards for enforceability. NAESCO addresses these issues below, and urges the EPA to include the type of specific guidance we and the ESCO Group request in its final rule.

**5) NAESCO supports the comments of the ESCO Group that a registry of performance contracting projects, maintained by a reputable third party which certifies the standards for both calculating and verifying project savings, will allow state air regulators to use performance contracting in their compliance plans, and will allow the EPA to evaluate these plans with confidence.**

One of the elements in the specific guidance on the acceptability of PC projects that NAESCO urges the EPA to promulgate is a registry of PC projects. We believe that such a registry will significantly reduce the challenges that state air regulators face in including PC projects in their compliance plans in several ways.

- A registry can relieve the air regulators of the burden of monitoring and verifying (M&V) the electricity savings produced by each PC project, because the M&V can be performed by third party experts that are certified either by the EPA or by state air regulators. These experts already are available across the country today, and include both the staff of national laboratories (for federal projects) and private sector companies, many of which have been providing services to public sector agencies that host PC projects for more than a decade.
- A registry can relieve the air regulators of the burden of converting energy savings into units of CO<sub>2</sub> reduction by using the certified savings from each project and conversion factors specified by the EPA or state air regulators.
- A registry can relieve the air regulators of the burden of M&V for the life of the PC project, which is typically 10-20 years, by providing a standard bookkeeping method and a database of the certified savings for the life of the project.

- A registry that can certify their project energy savings without exposing their projects to public disclosure can also encourage industrial customers to allow their projects to be used for state CPP compliance. Industrial customers are often unwilling to make their energy efficiency investments public, because they consider their energy usage information to be competitive secrets.

NAESCO suggests to the EPA that there is a registry up and running that could be used for by PC projects for CPP compliance. e Project Builder (ePB) is a PC project savings calculation and database system that has been commissioned by the US Federal Energy Management Program (FEMP) and has been built and will be hosted and maintained by the Lawrence Berkeley National Laboratory (LBNL). ePB is the successor to an ESCO Project Database of more than 5,000 projects that LBNL built and has hosted for the past fifteen years. ePB is ready for immediate use, and FEMP is recruiting ESCOs to begin entering their projects.

Several leading national EE organizations have been working with The Climate Registry on a plan for a registry to be used for CPP compliance that is described in a white paper available at the following URL: <http://www.theclimateregistry.org>. This registry might be developed for use with projects other than PC, such as non-ratepayer residential EE programs or industrial EE.

NAESCO therefore urges the EPA to encourage states to use registries to facilitate the inclusion of PC and other projects that are not part of ratepayer-funded EE programs, and to certify one or more registries as acceptable for states to use.

**6) NAESCO urges the EPA to consider that the M&V of PC projects is arguably more rigorous and reliable than the M&V of ratepayer-funded energy efficiency (EE) programs, and that PC projects offer the states and the EPA a large CO<sub>2</sub> emissions reduction safety factor that ratepayer-funded programs generally do not offer. NAESCO believes this makes PC projects a reliable resource for CPP compliance.**

Every PC project is implemented subject to a contract between an ESCO and a customer, and all of these contracts include specific plans for savings M&V. The M&V plans are project-specific applications of the International Performance Monitoring and Verification Protocol (IPMVP), either as published by the Efficiency Valuation Organization (EVO) on its website ([www.evo-world.org](http://www.evo-world.org)) or published in a form adapted for use by federal agencies by the Federal Energy Management Program. The M&V plan for each project includes a reporting schedule for project M&V reports that typically lasts for the full term of the PC project contract. NAESCO knows of no comparable project specific M&V protocol that is used in ratepayer-funded programs.

Furthermore, NAESCO suggests that each PC project embodies a substantial CO<sub>2</sub> emissions reduction “safety” factor or margin that ratepayer-funded electricity EE programs cannot offer. That margin is due to the fact that a typical comprehensive PC project produces about 30% non-electricity energy savings and that this additional

energy savings produces additional CO<sub>2</sub> emissions reductions that will not be counted toward CPP compliance.

**7) NAESCO urges the EPA to consider that savings from almost all PC projects is today, and has been for the past two decades, enforceable by contracts with public agencies, and that these contracts are public record, available for inspection and/or audit by state air regulators and the EPA. NAESCO believes that this enforceability makes PC projects a reliable resource for CPP compliance plans.**

Almost 90% of PC projects are implemented by ESCOs for government agencies, pursuant to federal and state laws that permit PC projects as an exception to the normal process for procuring public construction projects. In a PC project, a government agency is permitted to procure PC on a “best value” basis that seeks to minimize the government’s life cycle costs, rather than just its first cost. The *quid pro quo* is that the PC project contract includes a savings guarantee by the ESCO that ensures that the energy savings will repay the full cost of the project retrofits.

NAESCO understands that some EE “experts” denigrate the value of these savings guarantees, which are legally enforceable and have in fact been enforced hundreds of times. NAESCO suggests that such denigration demeans the credibility of thousands government contract officers who have signed PC contracts. There is no comparable mechanism in ratepayer-funded programs that guarantees that the customer will get the estimated energy savings. There is also no record of which NAESCO is aware in ratepayer-funded programs that is comparable to the 20-year history of ESCOs making good on their savings guarantees, usually with additional retrofits that true up the savings, or, if that fails, with financial compensation to the customer.

NAESCO believes that this history of enforceable savings guarantees should reassure the EPA and state air regulators that PC projects are a reliable long term resource.

## **Conclusion**

NAESCO appreciates the opportunity to offer these comments, and urges the EPA to make the changes that NAESCO recommends in its final rule, including:

- 1) Begin the discussion of Building Block 4 with a few facts that put the size of the potential demand side energy efficiency (EE) resource in perspective for policy and program makers not familiar with EE and make it very clear that EE is on a par with the other building blocks.
- 2) Explain why its estimates of the costs of energy efficiency (EE) are much higher than the cost estimates of other respected national sources, because the discrepancies between the estimates undermines the credibility of EE as a building block in state CPP compliance plans.
- 3) Recognize that the performance contracting (PC) market is large and growing, and has little overlap with the ratepayer-funded EE program market.

4) Provide specific guidance to states about how to incorporate performance contracting projects (PC) into state compliance plans. Without specific guidance on what EPA will accept in terms of the monitoring and verification of savings (M&V) and enforceability of savings, NAESCO fears that many states will omit performance contracting from their compliance plans, because they think it is too difficult to understand or implement, and deprive their states of a resource that is both low cost and low in state administrative effort.

5) Support the establishment of a registry of performance contracting projects, maintained by a reputable third party which certifies the standards for both calculating and verifying project savings, will allow state air regulators to use performance contracting in their compliance plans, and will allow the EPA to evaluate these plans with confidence.

6) Recognize that the M&V of PC projects is arguably more rigorous and reliable than the M&V of ratepayer-funded energy efficiency (EE) programs, and that PC projects offer the states and the EPA a large safety margin on savings performance that ratepayer-funded programs generally do not offer. NAESCO believes this makes PC projects a reliable resource for CPP compliance.

7) Recognize that the delivery of savings from almost all performance contracts is today, and has been for the past two decades, enforceable by contracts with public agencies, and that these contracts are public record, available for inspection and/or audit by state air regulators and the EPA. NAESCO believes that this enforceability makes performance contracts an even more reliable resource than state utility EE programs.

Respectfully submitted by,

A handwritten signature in black ink, appearing to read "Donald Gilligan", with a long horizontal flourish extending to the right.

Donald Gilligan  
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