

**Before the Pennsylvania Public Utility Commission**

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**Comments by Clif Payne  
On behalf of CMC Energy Services, Inc.**

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**Docket No. No. M-00061984  
House Bill 2200 *En Banc* Hearing  
Energy Efficiency and DSR Panel**

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**Harrisburg, Pennsylvania  
November 19, 2008**

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**Chairman Cawley  
Vice Chair Christy  
Commissioners Powelson, Pizzingrilli and Gardner**

My name is Clif Payne and I am the executive vice president of CMC Energy Services (CMC). I appreciate the opportunity to appear before this commission and respond to the questions raised by CEEP.

For 30 years, CMC has designed, administered and implemented energy efficiency programs for utilities throughout the Mid-Atlantic. A privately held, woman-owned business, CMC has been awarded over 100 utility contracts, performed more than 325,000 residential and 30,000 small commercial audits and currently administer PECO's low income usage reduction program (LIURP). We deliver similar programs for PSEG and South Jersey Gas. Based on proprietary software, CMC also offers the only on-site residential energy audit available nationwide, offered by over 700 independent energy inspectors in 48 states, who have been trained and certified by CMC.

My background includes professional experience across energy efficiency, renewable energy and Pennsylvania's restructured electricity market. Before joining CMC, I served as president of Green Mountain Energy's eastern division, based in Wayne, PA. I entered the restructured energy industry in 1997 as a founding officer of retailer Georgia Natural Gas.

CMC applauds the passage of HB 2200 and the structure it provides for achieving energy savings. My comments focus primarily on questions related to residential energy efficiency and conservation program structure, rather than addressing the entire list.

## Program Design

*Should all EDC's be required to implement the same type of EE/DR programs?  
Is it likely that programs will be equally cost effective in every EDC territory?*

All EDC's should be required to offer a group of the same type of programs. Proven programs such as residential audits, web-based tools, TOU pricing, appliance rebates, etc. are examples. This should insure that consistent coverage and opportunities will be provided for all customer groups. It also allows for consistent, and therefore efficient, state-wide educational and communication support of the overall initiative.

However, given the variation in rates, usage, composition of customer groups and cost-of-living between EDC's, there will likely be a need for EDC's to have the flexibility to vary programmatic detail and tactics to insure cost effectiveness.

EDC's should also be allowed to offer niche programs that they have initiated and been proven cost effective in their own service territories, whether other EDC's are interested or not. Additionally, variations within core program design and implementation, along with EDC-specific programs, maximize the opportunity for quick learning and sharing of best practices across the program.

## Existing EDC DSR Programs

*What types of new programs or changes to existing programs, if any, would be needed to achieve the targets contained in Act 129?*

All EDC's should be required, as a core energy efficiency program, to include energy audits of existing homes utilizing a "whole house" approach. It is estimated that 80% of the opportunity for energy efficiency savings in the residential segment lies in existing homes that are 15+ years of age. By analyzing how the building shell and interior partitions are constructed and how they interact with energy using systems, the most impactful and cost effective measures can be identified for implementation. Given that ratepayers are funding these programs, spending should be prioritized by program effectiveness and efficiency, rather than letting individuals choose programs on a one-off basis.

In many cases, air sealing and the addition of insulation are the most cost effective measures, and necessary before any additional steps are taken. Without an appropriately "tight" house and insulation levels that meet today's standards, it's not possible for updated HVAC systems, programmable thermostats, smart meters etc. to meet their savings potential. In Connecticut for example, an energy audit and implementation of the recommended cost effective measures are required in order for homeowners to receive state subsidies for residential renewable energy projects.

Continuing with an eye toward responsibility for oversight expressed in Act 129, the PUC should be wary of efficiency programs which are based on “market transformation” models. EPA’s Home Performance with Energy Star (HPwES) is one such example. It is driven by the belief that the best way to achieve energy savings in existing homes is to train and only certify contractors to conduct whole house audits. The contractor then educates the homeowners on the merits of measure installation and provides a price for the work. Despite claims of success, HPwES has yet to demonstrate that it is effective or efficient at producing a meaningful numbers of audits or efficiency measure installations. Indeed, Honeywell, the administrator for New Jersey’s Clean Energy Program, draws the following conclusion about HPwES in its 2009 program plan filing:

*“Experience to-date with HPwES in New Jersey, upstate New York and other areas suggests that it requires a long development period and a tremendous amount of support to contractors and customers to create a sustainable market for energy efficiency services for existing homes.”<sup>1</sup>*

Specifically, after nearly four years of development/marketing and a budget of over \$15 million, New Jersey’s Clean Energy Program has completed only 450 home audits and made improvements to 80 of those homes.<sup>2,3</sup>

This lack of results can be explained by a number of factors:

- It is time-consuming and expensive to attract, train, and then retain contractors while the program ramps up.
- The expense and lost time associated with achieving Building Performance Institute (BPI) certification and purchase of required diagnostic equipment can be as high as \$20,000 and is a barrier to entry for many small contractors. Most HPwES programs have been forced to provide heavy subsidies as a result.
- Many, and perhaps most, homeowners prefer that an audit be conducted by an independent third party, such as a home inspector certified in energy auditing. They believe that contractors have a conflict of interest.
- HPwES audits generally require the use of blower door and infrared camera diagnostic equipment, doubling the time and expense of the audit to the \$500 range. Homeowner interest in audits at this price is limited limited, requiring substantial program subsidies to overcome resistance.
- HPwES relies heavily on subsidies to incent homeowners to install measures, as opposed to other program approaches which provide an audit report with easy-to-understand and actionable analysis.

Consequently, CMC recommends that the PUC:

- 1) Develop inclusive guidelines for EDC's to use in constructing home energy audit programs which reflect the needs and interests rate of payers, such as independent energy auditors, whole house audits without diagnostic equipment and therefore lower prices, and reports that explain which efficiency improvements to implement and why.
- 2) Establish qualification criteria for CSG's and independent energy auditors which do not involve the expense associated with an exclusive gatekeeper like BPI.
- 3) Position home energy audits as the lead program offered to ratepayers and as a prerequisite to qualify for other efficiency or DSR programs.
- 4) Create homeowner demand for retrofit services as the carrot to attract contractors and technicians to a whole house service orientation, rather than the other way around.

*What is the projected level of customer interest or savings in these new programs?*

Based on audits of 325,000+ homes, CMC has found potential savings to be from 20% to 30% in existing homes. This level is consistent with the results reported by other firms and programs conducting audits across the industry. Customer interest has varied dramatically and is determined by program structure, marketing approach and price, as referenced above. A program optimizing these variables has the potential to attract 5% of an EDC's customers each year. Installation of the recommended energy savings measures by homeowners is affected by how well the audit results are understood, incentives and available financing. CMC is seeing installation rates approach 45% in a pilot program that we are conducting with a client in the East.

### Cost Recovery

*What are the appropriate time frames to expense or amortize energy efficiency and demand response expenditures?*

Amortization of expenditures should reflect the useful life of the measure or program. This approach strikes a balance between minimizing the carrying expense and the monthly surcharge for ratepayers.

### References

<sup>1</sup> Honeywell Residential Energy Efficiency and Renewable Energy Program Plan Filing for 2009, New Jersey Board of Public Utilities, October 6, 2008, page 30.

<sup>2</sup> Summarized from *New Jersey's Clean Energy Program Reports*, New Jersey Board of Public Utilities, 2005 – 2007, various pages.

<sup>3</sup> *Board Order - Approving Revised 2008 Budgets and Programs*, Office of Clean Energy, DOCKET NO. EX04040276, New Jersey Board of Public Utilities, September 30, 2008, page 9.