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James J. McNulty
Secretary
Public Utility Commission
400 North Street
Keystone Building
Harrisburg, Pennsylvania 17120

December 17, 2008

Docket No. M-2008-206988

Dear Mr. McNulty,

Thank you for the opportunity to comment on the November 19th *en banc* hearing on Act 129. I am addressing my comments to the questions asked concerning the qualifications for conservation service providers and two areas, terminology and quality assurance, that are also important for clarity.

Terminology

As the green industry grows there will be some confusion of terms until they can be defined clearly and permanently. The plan that the PUC will publish on January 15th is a good place to start.

Suggestions for a few of the terms or concepts to be defined:

1. Reduce energy demand vs. reduce carbon emissions
    a. When power is being supplied by carbon based generation, the only way to reduce emissions is to reduce demand or usage. Typical projects that address energy savings are:
        i. behavioral change such as reducing cooling and heating or the number of appliances; managing time of day use and keeping actions to reduce usage uppermost in their consciousness
        ii. energy star appliances, HVAC systems and water heaters
        iii. passive solar refurbishments
        iv. weatherization
        v. balanced insulation and venting
        vi. recycling
        vii. lighting
        viii. non-carbon based furnaces such as corn-fired
        ix. conversion of oil or electric heating to natural gas
        x. reduction of water usage
        xi. buying locally and buying locally produced goods
        xii. grid improvements, such as the Smart Grid, to reduce the energy lost in transmission
    b. When power is supplied by renewable/alternative generation, the need to modify people's behavior is reduced. Projects that address alternate sources are:

i. solar thermal
ii. solar photovoltaic
iii. wind
iv. geothermal
v. low impact hydroelectric
vi. hydroelectric
vii. biomass

c. The same split defines vehicle programs,
    i. energy savings are achieved through:
        1. public transit
        2. managed traffic flow
        3. high efficiency vehicles
        4. bike and pedestrian paths
        5. car and errand pooling
    ii. whereas carbon emissions are directly reduced through:
        1. alternatively fueled vehicles

This distinction is important because of the different efforts required to change individual behavior. Where reducing energy usage is concerned, concerted and continuous communication plans are a key component of any project. Communications are certainly important for alternative fuel projects but, particularly with the developing financial model that leases alternative power equipment, it is far less so.

2. Energy Usage Inventory vs. Carbon Footprint Calculator
    a. The planning model promoted by the International Council for Local Environmental Initiatives (ICLEI) looks only at emissions directly calculable at a location. For example, the eCO_2 value for the electricity used at a home only counts the emissions from the electricity used. It does not include the cost to mine the coal, for example, or transport it to the plant. The model also doesn't deal with areas that are more driven by upstream or downstream emissions such as the transportation of food or goods. This allows them to look at the biggest blocks of usage, and if followed consistently will eventually capture most energy usage at its source.
    b. The planning model used by the federal Department of Environmental Protection (DEP) is the carbon footprint, which looks at all the steps requiring energy to get a product or service to a consumer. It includes the energy to mine and transport the coal, and any post production waste costs. It provides full comparative information of a particular action's impact – helpful when making a choice between burning corn or (waste) wood pellets in your furnace for example. It more fully defines what an individual's impact on the environment is. Used for the universe of consumers though, there could be significant double counting.

    This distinction is important for the purpose of certifying reductions and ensuring that calculations do not count apples and oranges.
3. Electric Usage vs. Total Generation
    a. Total electric usage is what is billed based on meter readings at the consumer's point of use. It measures all the electricity that has been actually used.

b. Total generation measures the output of the generating plants owned by the utility, as well as any power purchased from other sources. (For this purpose energy from renewable energy sources should not be included.) Because so much of what is originally generated is lost in the transmission process – estimates range from 15 - 47% - the carbon emissions from total generation are larger than what is reported strictly from energy usage.

This distinction is important because only the second method counts all emissions; but also because it highlights a solution, systems like the Smart Grid, that may be very cost effective but not yet part of what the bill considered as a solution.

4. Large Business vs. Small Business
    a. Generally this is differentiated by the size of the service provided; small businesses needing a 400V or smaller service are often included with residential customers.

This distinction is important because of how the legislation measures success and allocates cost.

Other than a specific requirement for households at or below 150% of the federal poverty income guidelines, the rest of the reduction can come from either the commercial or the residential side. Whatever costs are incurred are to be allocated to the class of user benefited. A solution that targets all businesses but only allocates costs to larger businesses would not be a fair allocation, nor would the cost per amount of emissions reduced be calculated properly.

Separately, it is probably easier to achieve large reductions from the commercial side. Using PECO as an example:

42% of usage is by large commercial and industrial customers; achieving just over a 2% reduction would meet the bill's total requirements for 2011. 2% (maximum percentage of revenue by class of user to be used for reductions) of revenue of the large commercial and industrial customers' revenue is $25.6 million (2006 revenues) which would cover a variety of different projects that could achieve the reduction. It would also be easier to deal with just a few large customers than try to reach individual households. It means that the rate increases will go to commercial entities only, however, unless the measures also deal with small businesses that are kept as part of the residential mix and then costs can be spread to a larger pool. The same issues apply to the 2013 reductions.

It would be even better if there was a method to aim the utility at some additional percentage of residential customers.

<u>Verification and Quality Assurance</u>

Presently, reductions are accepted by the energy credit market only if they come from energy raters certified by the Residential Energy Services Network (RESNET) for homes; standards for high rise residential and commercial buildings are just being developed by RESNET and industrial and low rise commercial buildings use a synthesis of published methods.

Infrared training and certification is provided by a number of industry associations.

The Building Performance Institute (BPI) provides the general contractor training and certification on treating the building as a system. This philosophy has developed over the past twenty years and is based on balancing conflicting solutions – air tight vs sufficient ventilation for example – to achieve both energy efficiency and comfort.

Requirements that these certifications remain the standard are important. It may take some quantifying to get the commercial standards uniform, however.

If the residential side is to be addressed by the utilities, then a push for more training available locally would be helpful. Currently there is nothing available in Pennsylvania, New Jersey or Delaware.

For any property, an energy audit must be the first step in order to develop both a whole-building plan of renovations and to quantify the initial conditions. It is very likely that the utility would undertake only a portion of the identified work and the homeowner would handle the rest. One of the very big issues to resolve is what reduction is credited to the utility. An audit that identifies the contribution of different elements of the building to the excess energy used would be able to provide logical answers. One consideration however, if the utility is providing the audit, is to attribute some portion of savings funded by the property owner to the utility as it is the audit that identified the proper balance of solutions.

A final step, to measure the quality of the solutions is a follow-up audit, which can be part of the audit contract. This will provide very solid measurements of the quality of the contractors work.

Qualifications of the Conservation Service Provider (CSP)

There are companies who have been in this field for a number of years; for them a check of the Better Business Bureau and customer references would be a natural method of qualification.

There are a number of companies just getting started, however, and the same criteria are not necessarily available to them. Given the amount of work that must be accomplished quickly, it does not benefit anyone to simply cut new companies out of the running.

Training and certification requirements are certainly a must; but company management and business acumen may require the type of more generic qualification statement found in a job description: previous size of budgets or manpower handled, level of technical experience in some form of construction or engineering, project management experience and possibly communications and marketing capabilities. A credit check of the principals may be appropriate.

Specific response to the questions as they pertain to new (formed in the last two years) companies:

1. In place of experience in the conservation field; ten years of senior level management in project or program management in an engineering or construction company. The bulk of the work undertaken by the CSP will need the full range of project management expertise is planning, research and synthesis, scheduling, construction management, contract management, communications, daily project assessment and direction and quality assurance.

2. Either through the use of employees or subcontractors whose qualifications are part of the application, the minimum qualification required is the RESNET energy audit certification, the BPI contractor certification and LEED certification in any or all of its fields. Again for new companies there may not be a history of lawful operations, however the principal owner(s) credit and criminal history could be a qualification.
3. The Keystone HELP program application is a good process; it would only need to add the certification requirements for RESNET, BPI and LEED.
4. The RESNET trained rater has a built-in quality assurance process that should be able to carry the newly certified rater.
5. Registration in other jurisdictions should not relieve an entity from the application process and approval.
6. A letter of credit for $50,000, similar to the Keystone Help program would be appropriate for residential work. For commercial projects over $500k, a letter of credit for 10% would be appropriate.
7. Insurance should be a requirement, the type depends on what work the CSP will provide. Certainly a general liability for $1 million, and if they are doing construction work themselves then insurance as required by the HELP program seems sufficient.
8. A criminal background check seems appropriate, to screen for any crime related to theft, fraud or violence.
9. Credit histories should be required; bankruptcy with unfulfilled debts or a history of non-payment or default would be disqualifiers.
10. For a new company, a probation period may be appropriate in place of references. The period would last for three years and could be reviewed every year or only at the end of the third year. Existing companies, and new companies at the end of the three years, would need recent references from customers and trades whose work represented 60% of the past two years' revenue.
11. The same probationary period would apply in regard to the Better Business Bureau.
12. – 14. Follow the HELP program
15. Requalification should mirror the original qualification process and occur every five years. An interim requalification would be triggered if the Commission or Better Business Bureau receives complaints; or if there is a significant change in the company structure.
16. Some level of continuing education/knowledge through association membership or actual courses or certifications should be required.

Thank you again for this opportunity, I am sincerely excited to think that we are really going to move forward on alternative energy and climate change initiatives. If at all possible, I would be very interested in attending the Working Group Meeting to discuss the Energy Efficiency and Conservation Program on December 10th, Docket No. M-2008-2069887.

Sincerely,

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cc Representative Greg Vitali
Acting Secretary, DEP John Hanger
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