

Unanswered Questions from U.S. EPA State and Local Climate & Energy Webcast: Using Effective Communication Methods to Ensure the Long-Term Success of State and Local Climate and Clean Energy Programs

December 18, 2013

Questions in bold were asked during the webcast.

Questions for All Presenters

1. *Example of a "story" that you used that was successful--reached or touched your audience?*

Karina Castillo: While not a “story” one example of something that has reached and touched our audience is the regional planning that is going on in our region of South Florida with the Southeast Florida Regional Climate Compact (RCAP). Participants are always surprised and excited to know that regional leaders are planning mitigation and adaptation strategies for addressing climate change in our communities.

Eileen Quigley and Elizabeth Willmott: Climate Solutions’ Solution Stories project works to capture and communicate stories from the U.S. Northwest of how we are leading and making the clean energy economy real. Available online at: <http://climatesolutions.org/solution-stories>.

Kelly Lucci: Tropical Storm Irene was a real turning point in Vermont, and there has been a lot of focus on recovery efforts. A great project that has really generated interest among our blog readers, and the media, is a collaborative effort we are helping lead to design energy efficient and affordable mobile homes to replace a lot of the housing stock that was damaged/destroyed by the storm. These new homes are designed to have energy bills as low as \$16/ month – here’s a recent blog post that provides more details: <http://efficiencyvermont.com/Energy-Forward-blog/2013/11/11/the-mobile-home-of-tomorrow-vermont-leads-the-way>

2. *It seems that the programs being presented are more about putting out propaganda about how effective the programs are. Any thought on the need to document that the programs being promoted will actually make a dent in reducing CO2 emissions to the 80% reduction levels that are needed?*

Karina Castillo: This is a good question, but with our particular program (The CLEO Project on Climate) it is hard to document that doing X activity or participating in our program will lead to Y reduction in CO₂ emissions. This is often the problem with open-ended learning.

Eileen Quigley and Elizabeth Willmott: New Energy Cities’ partners are at the point in their process of developing a roadmap to achieve their ambitious climate pollution reduction goals. Once they have created and begun their implementation plans, we expect to work with them to develop ways for tracking, monitoring, and reporting progress. One good example of a city progress report on reducing climate pollution is Portland, OR. Portland’s Year One report is here: <http://www.portlandoregon.gov/bps/article/327050>. The Year Two report is here:

<http://www.portlandoregon.gov/bps/49989>. Another approach is to develop a public-facing dashboard of indicators related to GHG reduction. One example of this is the City of Bellevue, WA's dashboard, developed by Scope 5: https://city-of-bellevue.scope5.com/public_dashboard.

Keith Canfield: The subject of the webinar was using Communication to Showcase Success, so I think that is what each speaker featured rather than the equally important question you pose which is essentially how to measure and evaluate program success. In the case of the HEAL program, for every house in our program, we both pre-test and post-test homes receiving energy efficiency improvements, and acquire at least one year of pre-improvement utility data. This provides us both a baseline and improvement estimate which we can further analyze, depending on the willingness of the utility to participate, by comparing actual utility consumption for a one year period post-improvement (weather adjusted, of course). This methodology can not only identify the savings, but also trends on which types of housing, occupant groups or improvements are most cost effective in producing CO2 savings for the community.

Kelly Lucci: Since Efficiency Vermont is a regulated utility, overseen by the state, we have a very robust evaluation, measurement, and verification program to document the results that are being generated on energy efficiency. Here is a link to our reporting documents: <http://efficiencyvermont.com/About-Us/Oversight-Reports-Plans/Annual-Reports-amp-Plans>

- 3. What is your view on the idea that climate change is a symptom of a larger problem - namely that our infinite growth based economy powered by burning fossil fuels has run into the limits of our finite planet? Until we admit that, any strategies will likely fail and result in the symptoms getting worse.*

Karina Castillo: I agree that climate change is a symptom of a larger problem, but I also believe that the problem is a manageable one. Like you stated, until we admit the real problem, things will get worse, but this is why we need to create a culture where planning and implementation of plans for a climate ready future are a priority for everyone. Furthermore, CLEO believes we need to better incentivize and promote incentives for renewable energy.

Eileen Quigley and Elizabeth Willmott: Climate Solutions is an organization focused on accelerating practical and profitable solutions to global warming. Our approach has yielded vibrant partnerships over our 15-year history and has led to considerable advances in promoting clean energy and climate solutions that work economically. We are optimistic that this work will continue to yield positive results.

- 4. Do you have any measurements to show what the actual cost in dollars is for your outreach programs and correlated those costs to figure out what the \$/Ton of CO2 emission reductions are for the different options?*

Karina Castillo: Please see response in question 2.

Eileen Quigley and Elizabeth Willmott: We don't do direct outreach programs. We work entirely through our partner-cities for outreach.

Keith Canfield: The outreach cost to find an interested participant at an employer for a HEAL program is very small- usually less than \$1/ton. However, it's the implementation cost (audit, retrofit, post-QA) that is much higher than say, planting trees in Southeast Asia. Part of the focus for upcoming work in the HEAL program is making Residential Building Retrofit based carbon reductions cost competitive with these other options. We aren't there yet, but the persistence and predictability of a Building based carbon reduction is hard to beat – especially in residential where building life is longer and major renovation work less frequent than commercial/industrial building stock.

Questions for Karina Castillo (CLEO Institute)

1. ***Thank you for an excellent presentation! What other environmental issues have been addressed by the PPC (Promote, Provoke, Celebrate) method?***

That's a great question. I cannot speak directly to any environmental issues that have used this strategy. But I can tell you that with climate change being such an umbrella topic that covers your food and water and national security issues that really I would say that it can be applied to any other environmental issue. When you want to engage people, PPC, I think, is the most effective method. As long as you promote, provoke and celebrate people are always willing to come to the table. And they're happy to be a part of a bigger issue and a bigger organization. And we found this has been really effective and growing our program. I think that method can apply to any environmental issue.

2. *Who is being kept accountable, the participants or the CLEO Project?*

It depends on what aspect of the Project you are focusing on. CLEO Project participants are being held accountable for their own individual outreach pledges. As an organization, we are being held accountable by our funders and donors.

3. *Based on your photos it looks like there are many "happy smiling people" involved in your climate change outreach projects. I am wondering how folks you work with are able to keep such a positive outlook, when from what I understand about climate change - it is likely "the end of the world as we know it"? Any thoughts on this or if keeping things up the "up beat" that allows us to avoid having to really deal with the serious nature of climate change?*

We believe that remaining solution-oriented and keeping a positive outlook is key. One thing that we always stress is that human ingenuity is alive and well and that we/humanity can unleash our own creativity to come up with solutions.

We also stress the collective and individual roles in society. For example, we highlight that an action such as using reusable grocery bags while individually small, if done collectively can have a big impact.

Questions for Eileen Quigley and Liz Willmott (Climate Solutions)

1. *Have you equated the GHG reductions to cost savings? Where I work the most effective presentations are ones where we can show monetary benefits.*

[Elizabeth] We have not equated GHG reductions to cost savings for the Beaverton community. We are aware of examples around the country of communities such as Burlington, Vermont who have looked at costs associated with different greenhouse gas reduction strategies. In Burlington I believe a consulting group named Spring Health Solutions actually adapted some analysis the Mackenzie Group had done, and applied that to a community process that included different greenhouse gas reduction strategies. But we have not [equated the GHG reductions to cost savings], specifically for the Beaverton community.

[Eileen] We haven't in Beaverton and Issaquah with the energy map and (GHG reduction) that we've done, just in terms of where they are in their process; they're still testing their strategies and their pilot programs. We did do that work for sure in Jackson, Wyoming, and in Edmonds, WA and in a couple of other places such as Albany, Oregon, but for specific projects only. In Edmonds, WA, we looked at the costs and the benefits and the GHG reductions on a project-by-project basis for a specific energy efficiency project and a specific waste to energy project. In 2014 that is most definitely where we will head because our aim in 2014 is to see the sustainable energy strategies implemented. And you have to figure out the cost to make that happen and also obviously the funding, as well as the partnerships with the utilities and the government and the business community and the citizenry.

2. *Definitely interested in the city-led innovation study link!*

Powering the New Energy Future from the Ground Up: Profiles in City-Led Clean Energy Innovation can be found [here](http://newenergycities.org/powering-the-new-energy-future-from-the-ground-up-profiles-in-city-led-clean-energy-innovation). (Full URL: <http://newenergycities.org/powering-the-new-energy-future-from-the-ground-up-profiles-in-city-led-clean-energy-innovation>)

3. *Is there a software program that generates the Sankey (energy flows) chart? How do you generate that diagram with the available data?*

We used an Excel spreadsheet to assemble and analyze the electricity, natural gas, and transportation data. We then took the outputs from that analysis and developed the graphic in e!Sankey, a software program for creating flow graphics.

4. *Regarding the 2012 snapshot, have you prepared a similar snapshot for how energy will be provided in the reduced CO2 future to understand how much energy will still be needed, and what the future sources of the energy will be?*

We have considered developing an Energy Map that depicts a low-carbon future scenario for our partner cities, but have not done so to date. The City of San Francisco has developed this type of graphic.

- Eileen: In your intro to New Energy Cities you mentioned that one goal is to find practical and profitable solutions to climate change. Any thoughts on the idea that one of the key causes of climate change is economy driven by economic growth which is driven by profit. Is there really a profitable solution to climate change, when it seems answer will require steady state economy which would be the end of growth?*

There are numerous examples worldwide of economic growth at the same time as clean energy commitment. One such example is Massachusetts' six-percent statewide economic growth in the face of a national recession, simultaneous to implementation of the state's Global Warming Solutions Act, Green Jobs Act, and Green Communities Act, which involved cutting greenhouse gas emissions and investing heavily in energy efficiency and renewable energy. Massachusetts experienced a 11.2 increase in clean energy jobs between 2011 and 2012, after 6.7 percent in the prior year, and has developed a clean energy workforce of over 71,000 individuals. See [Massachusetts Clean Energy Center's Industry Report](#). for more information.

- 6. What are the renewable energy sources that are assumed to be able to replace the 40% renewable energy? Is it actually practical to build the infrastructure needed to obtain this substitution and have you evaluated what the energy impacts of building and installing these new replacements will be? Also, has any thought been put into what environmental impacts these replacement energy sources would cause?*

That graphic [in our presentation] is not intended as a feasibility analysis, but an order-of-magnitude depiction of what types of sector-level targets the city would need to achieve in order to be on a path to meet a theoretical 40-percent reduction goal. These wedges are therefore considered "What if?" scenarios rather than statements of technical feasibility.

- 7. Elizabeth, it appears that in your charts, you assume a straight proportional growth in energy usage from 2012 to 2030. A more realistic model would require that exponential growth rates be used to estimate future GHG emission. Any thoughts on how factoring the power of exponential growth would change the outlook for Beaverton?*

Yes, we used an average annual growth projection, because we needed to have a straight line in order to depict the wedges. We have not calculated the effect of exponential growth

- 8. What is the economic impact to local communities of new GHG targets and associated programs - for Climate Solutions?*

Yes, we used an average annual growth projection, because we needed to have a straight line in order to depict the wedges. We have not calculated the effect of exponential growth.

9. *Are the wedges in the graph cumulative [slides 16-18]?*

Yes, the wedges in the graph are cumulative.

Questions for Keith Canfield (Clinton Foundation)

1. *Has the HEAL concept been piloted at a Federal level, (i.e., partnering with a credit union, etc.)?*

In terms of federal government level, no. But that would be an intriguing possibility, wouldn't it? On a national level in terms of rollout and multiple jurisdictions we have had some interest from employers, but interestingly not from credit unions, so if you have a credit union that does have a national footprint, or some federal agency that would like to try the HEAL program, we would love to talk to both of them.

2. *What are the types of energy efficient improvements you mentioned and have you done any studies to evaluate how effective this efficiency changes will be in reducing GHG emissions over the long haul? Any thought on how the "rebound effect", consumer/mfg actually using savings from energy efficiency to consume more energy?*

The types of improvements we see vary depending on the climate zone- in the south we see duct sealing, air sealing and attic insulation most frequently, while in the north its furnace replacement, basement insulation and thermal bypass work. The GHG impact also varies by locale due to several factors such as primary fuel mix of the utility and scale/scope of the work, but generally we see CO2 reduction impacts per home averaging 2-4 tonnes per year.

As for rebound, while the program has not been in existence long enough to produce an exhaustive longitudinal study, we have not seen evidence that would tend to indicate that there is a significant rebound effect, particularly in low income homes that seem to immediately find other non-energy uses for the savings (e.g.- health care, groceries, school related).

3. *I have a question on how the program is carried out. The employer offers a loan to their employee to do retrofitting, but is it up to the employee to find companies to conduct those retrofits and what kind of requirements (if any) do those companies have to meet in order to be funded through the program. I'm sure this depends on the employer providing the program loan, but perhaps you can share some examples? Also what kind of liabilities can be expected in this type of program?*

The Program is designed to make implementation by the Employer a 'light lift' for their Human Resources personnel. Although the program is designed to be customized for each employer, in general a local partner (usually a non-profit active in the energy space) is recruited and trained by HEAL to manage the program for the employer. This includes a process for identifying local resources such as rater/energy auditors and contractors through an RFP process that stipulates

accreditations, experience and insurance requirements necessary for participation. All HEAL programs include a best practice manual and dispute resolution process so that all parties- rater, contractor, employer and homeowner- are fully aware of expectations and roles.

Questions for Kelly Lucci (Efficiency Vermont)

1. *Looking at your graph of your blog, what happened, for instance on your blog in March 2013 that resulted in the spike in interest?*

I think we kind of got our feet under us and really started doing more promotions through our social media and we were able to leverage a couple of earned media placements to bring people to the blog in March. Then you know it's just a funny thing when we work on energy efficiency, there are times that people tend to be interested over the course of the year and I think we had some cold weather, so there were more people coming to our site overall. What is most striking to me, and is not shown on the graph: we always have a drop off in traffic to our website over the summer months when weather is warm and people aren't interested in efficiency. But the dip in traffic to the blog last summer was not as steep as the drop in traffic to our website overall.

2. *If I understand it right, Vermont has already obtained a 12 % reduction in energy usage based on increased efficiency. Any thoughts on how much more gains are possible in improving energy efficiency and what are the methods of improvements that are available to meet those future reductions?*

We get asked this question a lot, and the short answer is, yes, there is still a lot of potential for energy efficiency in Vermont. At a minimum, we've got technologies (lighting, appliances, building systems) that are continuing to improve in efficiency every year, and driving widespread adoption of those technologies will continue to bring savings to Vermonters. But that's really just the tip of the iceberg. We are doing a lot of work to deepen the level of energy savings among large C&I customers in the state by providing customized technical assistance using energy data and other resources. These efforts can help generate a lot of savings without a lot of capital investment, which is often a barrier. Here is one story about this work that we shared on our blog: http://efficiencyvermont.com/Energy-Forward-/blog/2013/07/18/Thriving_Under_Pressure_Husky_Injection_Molding_Systems. C&I customers represent more than 60% of Vermont's electric usage, so these type of success stories really do add up.

We are also working to reach out and collaborate with communities across the state in promoting energy efficiency – and looking at how we can optimize the design of our programs to make them more effective and help reach more people. I did not get a chance go into a lot of detail about our white papers project on the webcast, but the aim of that work is to share our thinking around what the future holds for energy efficiency in Vermont. The approach is summed up on this blog post, which also has links to all the white papers we have published so far: <http://efficiencyvermont.com/Energy-Forward->

[/blog/2013/09/30/What Comes After the CFL Technologies Techniques and Long Term Approaches in Energy Efficiency.](#)

3. *Increased web page hits may show that people are reading what you write, but how do you correlate those results to actually measuring if folks are actually implementing energy efficiency projects, and then correlating that data to how much actual GHG emissions are being reduced?*

A key facet of our programs is measuring and verifying participation and results. As a regulated utility, we report several times/year on our various programs – the most recent Annual Report (2012) can be found here:

http://efficiencyvermont.com/docs/about_efficiency_vermont/annual_reports/Efficiency-Vermont-Annual-Report-2012.pdf

We know that marketing and promotion are critical factors in driving program participation, and energy efficiency actions, and we can track this pretty closely: as we advertise about CFL pricing, or whole-home energy efficiency, we see a marked increase in program participation. It does get a little tricky to measure this when we talk about blog readership and broad PR efforts, which is why I am always keen to emphasize that they are intended to help support our program marketing (not replace it), while helping make sure that more people understand the reasons that Vermont has chosen to invest in energy efficiency – and the benefits this investment has beyond individual projects.