Draft Meeting Summary

COG Climate Energy and Environment Policy Committee (CEEPC)

May 22, 2013

Members and Alternates Present:
Hon. Ryan Spiegel, Gaithersburg
Hon Konrad Herling, Greenbelt
Hon. Roger Berliner, Montgomery County
Hon. Del Pepper, Alexandria
Hon. Jay Fisette, Arlington County
Hon. Penelope Gross, Fairfax County
Hon. Jonathan Way, Manassas
Hon. Al Carr, Maryland House of Delegates

Sam Moki, Prince George's County
Kambiz Agazi, Fairfax County
Brendan Shane, District Department of the Environment
Kanti Srikanth, Virginia Department of Transportation
Rachel Healy, WMATA
Caroline Petti, ACPAC Chair
Chris Randolph, General Services Administration
Robin Snyder, General Services Administration
Steve Walz, Northern Virginia Regional Commission
John Andreoni, Institute for Market Transformation
Nicole Steele, Alliance to Save Energy
Chris O'Brien, American University
Larisa Dobriansky, Global Energy Network
Kathy Magruder, Maryland Clean Energy Center
Luisa Robles, Greenbelt (via telephone)

Others Present:
John Heermans, District Department of the Environment
Tim Stevens, Falls Church
Erica Bannerman, Prince George's County
Nicole Rentz, Office of Hon. Mary Cheh
Dauod Abudr-Rahman, General Services Administration
Chris Somers, Arlington County
Adrian Macias, DOE-EERE Better Buildings
David Molchany, Fairfax County
Dave Good, District Department of the Environment
Khoa Tran, Alexandria

<u>Staff Present:</u>
Julia Allman, COG DEP
Leah Boggs, COG DEP
Amanda Campbell, COG DEP
Maia Davis, COG DEP
Jeff King, COG DEP
Joan Rohlfs, COG DEP
Stuart Freudberg, COG DEP

1. Call to Order, Introductions, and Chair Remarks

The meeting was called to order at 10:00 am.

Vice Chair Jonathan Way provided opening remarks. For the first time, greenhouse gas concentrations in the atmosphere have reached 400 parts per million, an historic high. This event underscores the importance of this committee's work. To that end, we'll be voting on the proposed Climate and Energy Action Plan.

2. Approval of Meeting Summary for March 20, 2013

Approval of meeting minutes was deferred because at the opening of the meeting a quorum had not been reached. After the vote on the Climate and Energy Action Plan, the minutes were adopted with no changes.

3. Financing for Energy Efficiency Retrofits

Panelists: *Cynthia Adams, Virginia Local Energy Alliance Program (LEAP-VA)*
Kathy Magruder, Maryland Clean Energy Center
Natalie Trojan, PACENOW
Jody Clark, Hannon Armstrong
Baird Brown, Drinker, Biddle & Reath LLP
Tom Dooney, Bostonia Partners LLC

Mr. Way provided opening remarks. The focus of the agenda is energy financing to retrofit the existing building stock. This is particularly important because buildings dominate the energy consumption in this region. The panel will bring the committee up to speed on energy finance and help us understand what state and local governments and building owners can do to deploy available financing to improve building efficiency and reduce greenhouse gas emissions.

Jeff King, Principal Environmental Planner in COG's Department of Environmental Programs, moderated the discussion. We are hoping to hear from the panelists about how close some programs are to reaching maturity and maximum market penetration. What does scale mean, and how close are we to it? How important is financing to solving retrofit challenge? There are important new approaches to financing getting going. We would like to hear what state and local governments in this region can do to advance this issue.

The panel will include perspectives on three sectors: residential, commercial, and the financial sector perspective.

Cynthia Adams:

- Ms. Adams is Executive Director of LEAP-VA, a non-profit that runs residential and commercial energy efficiency retrofit programs in Northern Virginia. The organization works closely with Steve Walz from the Northern Virginia Regional Commission. The organization has been funded by federal grants, though we're developing a market-based approach under a fee structure.
- The DOE defines scale at something approaching 2% market penetration annually. This would mean 4,900 retrofits per year, or 400 retrofits per month, in the Northern Virginia area. LEAP-VA has completed 1,500 retrofits total over its first few years. No organization that I am aware of has approached reaching scale in the residential market.
- Challenges include that it is a disaggregated market and that there needs to be more education, outreach, and contractor training. The potential customer needs to have better tools for understanding how to choose the best action for their home, and how to approach the project.
- Financing is often talked about as a stumbling point because the home performance market is focused on conducting multiple improvements to comprehensively address energy systems within the home. Because it's a bigger price tag, many homeowners need financing to do it. The average multi-measure retrofit cost in Northern Virginia is around $12,000 to $15,000. That would include air sealing, insulation, HVAC, etc.
- Because of the large price tag, there has been a call for low interest financing. A number of programs can address this, such as on-bill financing or PACE. In Virginia, PACE financing has been authorized, but because the lien priority is not where it needs to be, no local governments have implemented any programs. Other programs use grants to buy down interest rates or provide loan loss reserves.
- LEAP's program in central Virginia was able to buy down the interest rate to 0% and provide a $1,000 rebate, and expected to see a lot of interest. However, there were still challenges to get homeowners involved.
- Seeing this, my perspective is that financing is not the key. The key is meeting homeowners and contractors where they are. The Home Performance with Energy Star (HPwES) model is set up to perform vertically integrated, multi-measure improvements. However, homeowners don't tend to make improvements "out of the blue"—they do them on an as-needed basis (when something breaks) or because they can wrap them into a larger remodeling project. Additionally, contractors aren't well suited to this model. Contracting companies often specialize in one area, such as insulation or HVAC, but they are not set up to do multiple improvements.
- To respond to this, LEAP-VA is pursuing a structure that allows homeowners to "stage" retrofits, allowing different contractors to participate in the program without requiring a

great deal of additional training or tweaking of their business model. This can help engage consumers and try to scale up from an individual repair to more comprehensive improvements.

Roger Berliner made remarks regarding PACENOW and a national overview of efficiency financing. PACENOW is the preeminent organization in the country promoting PACE and energy efficiency financing.

Natalie Trojan:

- Ms. Trojan is the Senior Director with PACENOW. The focus of this presentation will be about PACE programs across the United States. PACENOW is a national, impartial fact-based advocate for PACE that is foundation-supported.
- The top three challenges holding back energy efficiency financing are lack of funding, insufficient return on investment, and uncertainty about the savings potential of home energy retrofits. PACE addresses these issues. It provides 100% financing, has a long term of up to 20 years so the return on investment can be positive, and most PACE programs require that savings are there from year one.
- PACE is a financing vehicle for commercial property owners to finance clean energy improvements, energy efficiency improvements, and water conservation measures. It is used when a state enables PACE financing structures, and a local government sets up a program through a special tax district. Using private capital, the local government provides a loan for an energy improvement, and the property owner pays back the loan through the property tax bill.
    - It's "non-recourse," meaning it is binding to the owner of the property, rather than the borrower. If the property owner sells, the new owner takes on the loan payments.
    - It's off balance sheet, so it does not increase debt.
    - Longer funding terms allow for lower monthly payments, and terms of 20 years are much longer than what's available in the financial market (usually 3, but sometimes up to 10 years).
    - The improvements have to be "permanently affixed," meaning it's attached to the property (such as a roof or insulation, rather than an appliance), and it has to have demonstrated savings.
    - Owners can pass on payments to tenants.
- Nationally, as of 18 months ago, there were 70 projects totaling financing of $10 million in two states. This year, we have 3 times the number of projects totaling $100 million and many more states included.
- This month, PACE legislation was passed in Texas, Utah, and Arkansas. We're seeing it being picked up in Massachusetts, Pennsylvania, and Illinois.
- Any property owner can use PACE, including farms. It's also attractive for institutional investors that want to make improvements to their property but not use their own equity.

- PACE is attractive to local governments because improves the environment, helps constituents save money and build property value. It is paid for only by those to utilize the program, so it's not being subsidized by other taxpayers. It creates jobs through local contractors. The programs can pay for themselves.

Mr. Berliner remarked that many people became familiar with PACE for residential retrofits. However, residential programs have been stymied by the Federal Housing Finance Authority, which is not comfortable with a loan being placed in higher priority than the mortgage. The focus has now shifted to the commercial sector, and it is exciting because private capital is now being utilized to fund these programs. These programs are so important because the existing building stock accounts for 70 percent of our energy consumption.

Jody Clark:

- Ms. Clark is Vice President at Hannon Armstrong, a 32 year old Annapolis-based firm focusing in energy efficiency finance. On April 18, we became a public real estate investment trust (REIT). It is an unconventional type of REIT because we invest in components within a building (such as chillers, lighting, etc. rather than the building itself). Prior to becoming a REIT, Hannon Armstrong was in the federal market. It has a current portfolio of $1.6 million.
- Commercial buildings account for 18% of energy consumed in the United States. There are 182,000 commercial buildings in the country, comprising 30 billion square feet. Seventy five percent of these buildings are over 25 years old.
- In terms of the challenge for increasing building efficiency, there is a misfit between the lender's view and the commercial building owner's view.
- Lenders have money to lend if they can find the right format to make loans on a risk-adjusted basis. They need "bankable" investments, where savings are predictable, able to be measured and validated, and are backed up by a stable regulatory environment. In terms of scalability, lenders need to have simple, template-based transactions that they can securitize.
- Owners are focused on the essential elements of their business, and energy efficiency can be a complex proposition. It does not fit into their standard practice, and they are not confident that energy efficiency will have a strong positive impact on their business. A challenge is that the owners who have good credit and are able to borrow also tend to have money on hand, and don't need to borrow as much. Those who need funding tend to have poor credit. There is also a split incentive, because in a large commercial building with many tenants, the energy bill does not impact the owner's bottom line. Additionally, owners tend to want off-balance sheet treatment.
- The REIT can overcome some of these obstacles:
    - Hannon Armstrong has capital available now, and can evaluate each transaction rather than attempting to securitize a group of investments.
    - Lender consent: Lenders have been concerned about 3rd party debt coming into their building, and about 3rd party equipment ownership. REIT allows them to

    subordinate the loan completely to the primary loan. Hannon Armstrong won't remove equipment, so there is less of a threat to the mortgagee. Lenders have a positive impact on their debt position—they have an improved building and loan to value ratio.
  - In the past, we were limited to performance debt structures, and now are available to offer funding to many different structures such as PACE and on-bill finance. We are also able to offer longer terms and transfer loans to new owners.

Kathy Magruder:

- Ms. Magruder is Executive Director of the Maryland Clean Energy Center (MCEC). She presented in place of Terry Daly, the Loan Program Manager, who was not able to make it to the meeting.
- MCEC was created by the legislature in 2008 as an instrumentality of state with certain enabling capabilities including owning infrastructure, issuing bonds, and financing projects.
- MCEC has two financing capabilities for energy efficiency. The first is a response to PACE, to provide a residential home energy program.
- The MD Home Energy Loan Program (MHELP) was funded initially with ARRA funding. It leverages public funds with private investment to increase fund volume and contractor protection is key for consumer protection. Mariner Finance leverages its private capital toward a loan loss reserve and an interest rate buy-down to make loans available to homeowners at below the market rate. Contractors are vetted by the lender, the work is monitored for compliance by MCEC, and the contractors are the point of sale for consumers. Utility rebates can be applied.
  - The eligibility review and approval process is an easy online, fax or mail form. It requires that the homeowner is a primary Maryland resident, and has at least a 620 credit score (slightly lower than bank requirements). The loan is approved within 24 hours.
  - To date, MCEC has funded over 630 loans valued at $5.2 million; these projects have saved an estimated 2.5 million kilowatt hours. It has contributed to 14,000 full-time energy jobs. Many projects include HVAC improvements, and homeowners often come to the program during a crisis, when their system has broken down.
  - The model could be replicated, but the challenge is that the interest rate buy-down account is limited, so a sustainable funding stream is needed. We have pursued securing funding through the EmPower program, but it was not approved, so we are looking for other options.
  - MHELP has established a brand that is recognized by consumers. We have a record of success and a private sector partner that is investing over $15 million toward the program.
- The Maryland Clean Energy Capital (MCAP) program is designed for institutions. It's launched with Hannon Armstrong as an advisor. It is directed to Maryland jurisdictions. It uses state bonding authority to implement energy efficiency and renewable energy

projects on municipalities, universities, school, hospitals, and non-profit entities. It offers a very attractive rate.
    - Our first deal was a $6 million project for Coppin State University for energy efficiency. Other projects in development include wind turbines at UMD-Eastern Shore and Worcester County Technical High School and Towson University.
    - MCEC is interested in talking to any CEEPC members who are interested in participating. The program is aimed at projects of at least $2 million, but we have the ability to bundle projects to reach that threshold.

Tom Dooney:

- Mr. Dooney is a Managing Director with the Bostonia Group, a boutique investment bank and broker-dealer. We focus on financing energy real estate and public-private partnerships. We have been proud to be a part of some recent local projects.
- The presentation will address the state of the market in terms of investment-grade and non-investment-grade projects. Non-investment grade projects are not a bad credit, but it can be expensive to put into an investment-grade structure, such as securitization. There have been significant private sector resources devoted to this, and though there hasn't been significant progress yet, deals are getting done.
    - Keystone HELP securitized 4,900 home energy loans in cooperation with local banks.
    - Citizen's Energy pooled tax- and sponsored equity across very small municipal projects. They did this for PV solar facilities.
    - NYSERDA got EPA to allow for energy efficiency investments through Clean Water Act revolving funds. This model can be replicated across other states.
- In the non-investment grade markets, programs must use senior and subordinate structures to make the money to be de facto investment grade. There has been success partnering with community banks for secondary residential market sales.
- Another strategy is taxable private placements for energy efficiency. They can be done at a small size, don't require disclosure documentation. They can be done on a standalone basis, so you can get energy efficiency projects moving without waiting for many projects to bundle together.

Baird Brown:

- Mr. Brown is a Partner in Drinker, Biddle & Reath's Environment and Energy practice group. He formerly worked with the Delaware Sustainable Energy Utility, the Sonoma County Water Authority, the DC PACE Program, and the Campus Energy Efficiency Fund, which is making energy efficiency investments in universities in Pennsylvania.
- There is a need to move beyond just low hanging fruit, such as lighting. We must promote deep, 20-year financing retrofits to make significant progress.
- There are many types of banks and financing entities that are interested in doing energy efficiency retrofits. The most important piece is developing programs that help guide customers through the retrofit process, which is often confusing. ESCOs aren't trusted by many institutional customers.

- A Sustainability Finance Organization is needed—it can be a REIT, a utility-run program, a government program, or a non-profit organization. The program must be able to aggregate procurement and financing, prequalify vendors, and standardize project documentation.
    - This model was implemented in Delaware, where 5 state agencies and 2 state higher education institutions took on $70 million of financing. The aggregate guaranteed savings was $40 million greater than the bond payments.
- This type of program can be effective in a number of different markets, both public and private. It helps to change the culture among the investment community.
- Slowly, relationships with the rating organizations are improving. They are beginning to see that energy efficiency investments are a benefit to a bond rating.
- Once project energy savings are independently measured and verified, they can enter the market for green bonds and impact investing—this is a growing market.

DISCUSSION:

- Mr. Berliner asked, What should be the takeaway for local governments?
    - Ms. Trojan: Statewide PACE administration has worked well (Connecticut is a good example). Statewide programs require the same documentation, so projects are easily securitized. They can also provide initial funding to start the program going, and private funds take off from there. I would encourage counties to implement PACE programs on as large a scale as possible.
    - Mr. Dooney: Eventually we can go beyond just statewide standardization. Northeast and Mid-Atlantic states can provide program models that are attractive to companies that do retrofit work across state lines.
    - Ms. Magruder: Streamline the permitting processes for renewable energy installations. More complicated means more expensive. Bring together Non-profits about how to pool needs and resources. Montgomery County has done a great job with cooperative buying. Local governments should take a look at their own facilities and take advantage of a municipal/institutional financing model. This can be done regionally by local governments and does not require legislative action. It requires local leadership.
    - Ms. Adams: I would echo what Mr. Brown said. It takes programs. Nonprofit organizations can enter into public-private partnerships with local governments, states, and federal agencies. They can innovate, and can liaise between financing institutions, utilities and governments to take advantage of incentives, rebates, and tax credits. The advantage of a 3rd party program implementer is they can act as a catalyst and convener. However, everyone likes the ideas of programs, but funding is a challenge – how do we move beyond ARRA funding? How can local government commitments to lower greenhouse gas emissions be expanded to the residential and commercial sectors? How can we leverage investment?

- Mr. Berliner commented that we need to walk the walk. Agreements such as Cool Counties, and legislation help back up our goals. It took 3 years to get cooperative contracts through the legal process. Mr. Brown, do you have any insights on how to work with ESCOs?
    - Mr. Brown: It helps to use independent assessments. Use a 3rd party to validate the process, make it less mysterious.
    - Ms. Magruder: One component of the MCAP program is that the ESCO guarantees the savings. If there are excessive savings, that is worked out as well. An independent 3rd party (e.g. MCEC, DC SEU) can play that reassuring role.

- Mr. Walz commented on Connecticut's PACE program. In Virginia, we are working with Fairfax County on local ordinances, but there hasn't been attention on a statewide program. How workable is a bottom-up strategy?
    - Ms Trojan: It can be done, but as a long-term approach, teaming up with other counties can be more beneficial. Dave Good from DDOE is here, and DC's Commercial PACE program has just completed its first project, so there may be opportunity for collaboration.

- Mr. Fisette noted that we need financing, but also we need branding and trust of the programs. Arlington plans to adopt a Community Energy Plan next month as a part of the comprehensive plan. It shows that the local government is invested and willing to be an active partner. What do we need to do next, knowing that Virginia local jurisdictions are limited in their authority?
    - Ms. Clark: We're at a critical place to make a big difference with enormous resources. My number one "what can you do" is lead by example. Improve your own jurisdiction buildings. This is the "free lunch" that gets carbon benefits, improved assets, and better air quality. The other thing is benchmarking. It has taken off in New York City and California. It can shine a bright light on the opportunities and identify market signals.
    - Ms. Adams: We've already started conversations with Arlington and Alexandria staff. It would be terrific to have something that works for the region, one benchmarking system that works for all. We are also talking about getting Home Performance with Energy Star programs together in Maryland and DC, because contractors work throughout this area.
    - Ms. Trojan: I would echo the benchmarking comment.
    - Mr. Berliner: Montgomery County is piloting a home energy score.
    - Mr. Brown: Creating a program doesn't take a lot of money. Constructing the Delaware SEU program from scratch was less than half a million dollars. The all-in financing cost was under 3%. You just need a little money up front.

- Ms. Dobriansky: In terms of measurement and verification protocols – do we need international protocols?

- Mr. Brown: ESCOS are their own worst enemy, doing Type 1 savings when they should be doing Type 4. Someone needs to help the program and individual customers.
- Ms. Clark: The technology is a huge piece of this. There are big innovations in monitoring and verification. A program in Seattle has 2,000 data points per building. It will be a powerful tool.

Mr. Berliner directed Mr. King to look into advising the committee on how to move forward and increase scalability. He thanked the panel for their input.

4. Climate and Energy Action Plan, Maia Davis, COG DEP

Mr. Berliner remarked that this item is critical to the committee and to the region. It is our blueprint to move forward. A lot of time has been spent on developing the plan to ensure there were ample opportunities for members to understand and comment on elements of the plan.

- Ms. Davis gave an overview of the development process of the plan, and its major components. The process has taken about a year. A Task Force was appointed to develop individual recommendations, and then these recommendations were vetted by COG staff and many COG committees. Comments were sought from CEEPC members.
- There was interest from CEEPC members to see how the region was progressing toward the goals. This baseline was created using the annual local government survey.
- Additionally, there was interest in getting more information about the individual measures and guidance on implementing them. COG staff developed a Resource Guide, and a draft has been made available to the committee.
- The proposed Action Plan contains six categories – GHG inventories, Built Environment and Infrastructure, Renewable Energy, Transportation and Land Use, Sustainability and Resilience, and Outreach.
- The Resource Guide has descriptions and resources for each recommendation in the Climate Action Plan. There is still time to provide comments on it.

DISCUSSION:

- Ms. Petti made comments on behalf of the Air and Climate Public Advisory Committee. We have spent a great deal of time discussing the plan. We feel very strongly that the action plan is a very useful tool for the region, in terms of identifying a suite of possible actions for reducing greenhouse gasses, conserving energy, and improving air quality. It promotes local and state governments to take action.
  - ACPAC has provided many comments on the action plan goals throughout this process, and I would like to present the committee with a letter highlighting these comments. It underscores the importance of states and localities moving forward with GHG inventories. Many have done that, but a few have not. This is

a critical first step to gain understanding of the sources that need to be controlled and the actions to take going forward. COG may be uniquely qualified to help here. In terms of implementation, we encourage providing incentives to localities on various actions. There are a host of possibilities to do this, such as highlighting successful localities' successes and presenting lessons learned at CEEPC. We recommend establishing an awards program for successful jurisdictions.

- Mr. Way commented that Manassas is a small and fairly conservative jurisdiction. Manassas endorses the goals and recommended actions, to the extent that they are cost effective and improve competitiveness, and can be accomplished within existing staff capability.
    - There are many new items in this plan. Mr. Way asked staff to look into which new measures could cause a substantial increase in the workload burden on any of the jurisdictions to comply with, and which ones do represent a workload burden.

- Mr. Spiegel remarked that it is a comprehensive and bold plan. I find it encouraging that status data is included. It shows us that even though it is bold, it is also achievable. Many of us have moved significantly toward these actions. I encourage my colleagues to adopt.

ACTION: The 2013-2016 Climate and Energy Action Plan was adopted unanimously.

5. Staff Program Updates

- <u>Paul DesJardin, Region Forward Strategic Investment Plan:</u> The Baseline Project Report was our first major product as a Coalition. The COG Board has approved the regional activity center map. It was year-long effort working with planning directors to identify important areas for growth.
    - The next task is to determine how to move from the map to implementation. This will be developed in the Strategic Investment Plan.
    - Staff has developed "Places and People typologies" to evaluate locations. They include the state of place, including physical attributes, walkability, and the real estate market. People typologies include indicators of equity and vulnerability, job access, housing affordability, and income diversity. The project objectives are to collect data and produce analysis to understand physical and economic characteristics of individual activity centers.
    - The Coalition has undertaken focus group and expert assistance and consulting to identify strategies for the Strategic Investment Plan. We identified groupings of places in order to encourage density and development appropriately in different contexts. It incorporates place-based design and highlights individual community needs.
    - The next steps are to finalize groupings, develop strategies, review findings with regional leaders, share the final report, and hold a symposium.

- Leah Boggs, Electric Vehicle Work Group: At the last EV Workgroup meeting, we discussed barriers to EV development in local governments. The takeaways were that the cost of vehicles and infrastructure were a challenge at this time. At the May 30th meeting we will discuss cooperative purchasing for EV development. The Mid Atlantic Purchasing group, which is a partnership between COG and the Baltimore Metropolitan Council, will make a presentation.
- Maia Davis, Climate Adaptation: We have been focusing on climate adaptation at the local level and building capacity of regional leaders to address impacts of climate change. We recently produced a report, and are looking for feedback. What local projects are needed? The report is posted on CEEPC website, and comments are accepted through next Friday.
- Jeff King, Solar Cooperative Purchase: The Cooperative Purchase project is nearing the RFP release. We have also started a Round 2, and anyone with potential solar PV sites can participate.
- Jeff King, Microgrids Project: We have initiated conversations with Dominion, Pepco, DC Water, and MWAA on a project to design and implement advanced microgrids to support critical infrastructure in the region. The project is a partnership with Sandia National Labs and the Army Corps of Engineers. We are looking for seed funding to get microgrids going.

Comments from the Committee:

- Mr. Fisette: Arlington County made a press release yesterday. The Arlington Initiative to Reduce Emissions set the goal of reducing county building and fleet energy consumption by 10% between 2000 and 2012. We found that we have reduced by 12%. In this time, the local bus fleet went from 170,000 riders to 2.5 million. If we had followed business as usual, we would have seen a 25% increase in energy use. The intention was to lead by example first. We are now looking at a community-wide plan, but we wanted to push our own operations first. The annual savings from this effort are $850,000.
- Ms. Magruder: Save the date for the MCEC Summit on October 15th and 16th. It will focus on distributed generation, including advanced microgrids.

6. Adjourn

The meeting was adjourned at 11:45. The next meeting will be July 24.