**Draft Meeting Summary**

**COG Climate Energy and Environment Policy Committee (CEEPC)**

**November 17, 2010**

**Members and Alternates**

Hon. Roger Berliner, Vice Chair, Montgomery County Council

Hon. "J" Davis, City of Greenbelt

Hon. Adam Ebbin, Virginia House of Delegates

Hon. Jay Fisette, Chair, Arlington County

Hon. Penelope Gross, Fairfax County Council

Hon. Andrea McGimsey, Loudoun County

Hon. Del Pepper, Alexandria

Hon. Jonathan Way, Manassas City

Kambiz Agazi, Fairfax County

Laine Cidlowski, District of Columbia

Stan Edwards, Montgomery County

Bucky Green, U.S. EPA, Sustainability Facilities Branch

Ian P. Hines, Maryland Energy Administration

Samuel Moki, Prince George’s County

Garrett Moore, Virginia Department of Transportation

Erica Shingara, City of Rockville

Kanti Srikanth, Virginia Department of Transportation

Hilari Varnadore, Frederick County

Luke Wisniewski, Maryland Department of the Environment

Melissa Adams, Washington Gas

Allison Bishins, World Resource Institute

Dale Medearis, NVRC

Jeff Platenberg, Loudon County Public Schools

Dr. Dann Sklarew, George Mason University

Lindsay Smith, M-NCPPC- Prince George’s County

**Others Present**

Eric Bannerman, City of Alexandria

Jeffrey Bond, Prince George’s County

Sarah Cosby, Dominion Resources- Virginia

Roger Diedrich, Sierra Club- Virginia Chapter

Rich Dooley, Arlington County

Naomi Friedman, NARC

Peter Garforth, Garforth International LLC

Dave Jamieson, TBD.com

Caroline Keicher, IMT

Laura Knudsen, US EPA

Jim Noonan, KCI Technologies

Salah Osman, Fairfax County

Bob Owolabi, Fairfax County Department of Transportation

Luisa Robles, City of Greenbelt

Steve Schey, Ecotality EV Project

Bill Skrabak, City of Alexandria

Nicole Steele, Loudoun County

Tim Stevens, City of Falls Church

Suzanne Wells, US EPA

**Staff Present**

Jeannine Altavilla, Environmental Planner, COG DEP

Leah Boggs, Environmental Planner, COG DEP

Jen Desimone, COG DEP

Stuart Freudberg, Director, COG Department of Environmental Programs

Jeff King, Principal Environmental Planner, COG DEP

Sunil Kumar, COG DEP

Anne Mariani, Environmental Planner, COG DEP

Joan Rohlfs, Environmental Resources Program Director, COG DEP

**1. Call to Order/Introductions/Chair Remarks**

Chair Fisette called the meeting of the Climate, Energy, and Environment Policy Committee (CEEPC) to order at 9:35 a.m.

Dr. Lise Van Susteren joined the meeting by conference call.

Chair Fisette welcomed Garrett Moore, the new District Administrator for the Virginia Department of Transportation.

**2. Approval of Meeting Summary for September 22, 2010 and Amendments to the Agenda**

The meeting summary for the September 22, 2010 meeting of the Climate, Energy, and Environment Policy Committee (CEEPC) was approved with no changes. There were no changes to the agenda.

**3. Wise Energy by Capital Area Neighbors (WE CAN) Website** (Maia Davis, COG DEP Staff)

Maia Davis provided an update on the outreach program Wise Energy by Capital Area Neighbors, WE CAN.

The program is a web-based and community-based home energy challenge for households. Businesses and community groups can participate as program partners and rewards sponsors. The pilot program is taking place in 3 communities: Brookland in DC, Cascades in Loudoun County, VA, and Greenbelt, MD. The pilot program is running for six months, through March 2011. The goal is to have a total of 150 households sign up for the program, 50 per community. As of November 5 there were 162 households signed up through the WE CAN website: 24 in Brookland, 65 in Cascades, and 73 in Greenbelt. Earth Aid has more than 2,000 households signed up in the DC region. The pilot program will award prizes for communities that reach the 50 participants milestone, the best energy saver in each pilot community, the best energy saver community, and outstanding WE CAN supporters. Chair Fisette noted that the friendly competition aspect of this program is spurring participation.

The WE CAN team has attended 22 community meetings, distributed over 1,400 materials, been highlighted in 22 newsletters and articles, been on 2 local access TV spots, and held 2 workshops. The outreach materials include a website, Twitter, Facebook, monthly e-newsletter, flyers and postcards, home energy workshops, and business recruitment materials. Businesses can be WE CAN Sponsors or Earth Aid Local Rewards Partners. WE CAN sponsors offer cash or in-kind donations to sponsor pilot program prizes or program promotion. Earth Aid Local Rewards partners support sustainability in their local community by offering online discounts or coupons to homes that demonstrate energy savings.

Dr. Sklarew commented that he has signed up. He likes that you can have friends on the site to share information, but it has been difficult to connect with people. This aspect could use more development. Staff responded that all WE CAN participants are automatically in the WE CAN group, and can join the neighborhood groups, which should make it easier to connect with friends.

Chair Fisette reminded the committee that it was a goal for 2010 to create an education outreach campaign where residents could be invited to learn about energy efficiency. Using competition has given the program an extra edge that could allow the program to expand wide. Chair Fisette urged all members to sign up so that they can provide feedback to the staff. He noted that he had problems connecting his WE CAN account with one of his utilities.

Ms. Bishins asked how success was being measured. Staff responded that getting 50 people to sign up in each community was the success measure for the pilot program. The statistics from the pilot will be used to set future goals for energy savings and participation. Staff will use feedback from the pilot to make sure the program can be successful region-wide.

Dr. Van Susteren asked when the pilot would be completed and the program would be ready for expansion. Staff said that a recognition event around Earth Day 2011 was being planned, and that hopefully a region-wide launch for mid-2011 would be possible. Joan Rohlfs noted that COG is seeking funding for the region-wide program. Continued expansion of the program is dependent on funding.

Mr. Way asked if there was an adjustment for degree days, especially since the program is occurring during the winter season. Staff responded that Earth Aid is developing this capability which should be available by the end of the pilot program.

**4. Status of Electric Car Markets and Infrastructure** (Mark Smith, US Department of Energy and Anna Chamberlin, District Department of the Environment)

Mark Smith of the Department of Energy presented an advanced electric vehicle status and production update.

Plug-in Hybrid Electric Vehicles (PHEVs) are not on the market yet. Toyota is testing 150 PHEV Prius with a 13-15 mile range for pure electric. Georgetown University has 2 or 3 of the PHEVs being tested. A Battery Electric Vehicle (BEV) can drive only on its electric battery and has no combustion engine. The Chevy Volt will be hitting sales floors soon, and the Nissan Leaf could be delivered as early as December. Both are PHEVs. The Volt can travel for 40 miles on electricity. When the battery is depleted the motor runs a generator that allows the car to continue to drive with electricity.

There are several ways to charge electric vehicles. Level 1 charging plugs into an existing 110V outlet and takes several hours to fully charge. Level 2 charging takes 2-4 hours for a complete charge. Sockets are standardized so that all plug-in cars will be able to use the same connector for level 2 charging. Most of the development of charging stations is at this level. Public stations would ideally be located at places like parking garages, the mall, or the movies where people often spend a few hours. Level 3 charging, known as DC Fast, is being developed in Japan but there are no standards in the US. This would take 15-30 minutes using a special connector.

There are numerous manufacturers that have announced PHEVs to be released in 2011 and 2012. There are also numerous BEVs with driving ranges expected from 80 to greater than 100 miles. EV Project vehicle deployment is expected in Arizona, California, Oregon, Washington, Tennessee, Texas, and the District of Columbia. Participation targets are 5,700 Nissan Leafs and 2,600 Chevrolet Volts, as well as 14,650 Level 2 Chargers and 310 DC Fast Chargers. These Project EV participants represent a subset of the PEVs being sold and will provide data on vehicle and infrastructure use for three years.

Mr. Ebbin asked about the companies releasing these vehicles. Some of them are start-up companies who are trying to break into the market dominated by a few larger companies. The major manufacturers are now taking a bigger stake in the EV market.

Anna Chamberlin presented information about the District’s Electrification Plan.

The District held a press event on November 16 to open the first curbside level 2 electric vehicle charging station in the nation. The station also has a plug for level 1 charging.

ChargePoint America is funded by the American Recovery and Reinvestment Act (ARRA) through the Transportation Initiative of the Department of Energy. Coulomb Technologies will provide electric charging infrastructure in nine US regions, included the Washington, DC metro area. Tesla is opening a dealership at 11th and K Sts, NW. DC has a 20 station pilot project. The first station is installed, but the other stations won’t be installed until a May 2011 redesign that will eliminate the need for customers to stow the charging cord themselves. The cords are copper, and could be a target for theft. The park & charge system will have a $3 per hour fee and be open 24 hours a day, 365 days a year. A car must be charging to use the spot. Stations will be located in areas of high green vehicle registrations, and will stay away from snow and emergency routes. Green vehicle registrations are currently defined in DC as all vehicles over 40 miles per gallon. Signs have been developed specifically for these stations. Many cities are looking to located stations at municipal garages, but DC does not have municipal garages so stations must be on-street parking.

DDOT plans to add 10 electric vehicles to the Fleetshare Program in Fiscal Year 2011. This program operates like Zip Car and the EVs would be available to all agency members. The RFQ will be released soon.

Mr. Agazi asked if a plan or business model was available, it is not.

Chair Fisette asked how many jurisdictions are actively working on electric vehicle infrastructures. Leah Boggs, COG DEP, responded that Fairfax County is actively working on this and that COG may develop a regional plan. MDE received stimulus funding for charging stations. The Energy Advisory Committee could serve as a regional forum over the next few months.

Mr. Hines mentioned that there are three grants in Baltimore. One grant is for stations in City parking garages, one is for 55 stations along I-95 and the third is a grant for truck drivers to use a plug instead of leaving their engine idling. They often stop or sleep with the engine idling, which uses one gallon of gas per hour. Chair Fisette asked that any dates of discussions be advertised to CEEPC.

Ms. Bishins asked about the cost of a station, the costs of the vehicles, and whether they would be purchased or leased. The charges are free as part of the stimulus. The install is a match funding. It costs $15-25,000 per station depending on the location. Pepco installs a designated meter for each station, the sidewalk and road have to be torn up and replaced. Garage parking stations are cheaper, probably from $800-5,000 per station. The cars are different costs due to the different battery types. DOE is finding out how they different types will function. The Volt is $41-42,000 and the Leaf is $32,000 plus the $7,000 tax credit. EV production is still subsidized by the government. Manufacturers cannot provide greater deals because they are still losing money. There are no fleet deals yet. The region could pool efforts on EV fleet development, especially with regards to codes and standards for home charging stations. Portland Oregon and San Diego, California are trying to speed the process. A nationwide standard would provide for faster turnaround. In San Diego there is an online application with a 24 hour turnaround. Smart Car is the only EV without an ownership option.

Mr. Agazi noted that Fairfax is struggling to decide who pays for the operation and maintenance of stations. The County does not have many curbside meters, but does have park and rides. They have done work with building and electricity permits and are willing to share that information. The forms will soon be online so that it will be easy to get a permit.

Ms. Cidlowski of DC Planning asked about measuring success and how to use the information regionally. DDOT is going to examine time and length of use of the stations. They are not permitted to resell electricity so they cannot charge for the exact electricity used. Premium meters in the city are $2 per hour so they used $3 per hour for the charging stations. This will hopefully encourage a turnover.

**5. Projects and Subcommittee Updates** (COG DEP Staff)

a) 30% Solution (Leah Boggs, COG DEP Staff): COG received $96,000 from the Energy Foundation to fund 62 people from nine jurisdictions to attend the ICC Final Action Hearings. The region’s representatives had a positive impact to push the 30% solution. This improves the efficiency in codes by 30% from the 2006 codes. It is now up to states and local governments to pass the amendments into their codes. Maryland must pass at the state then local levels; in Virginia codes are only at the state level. Chair Fisette noted that 15% of these efficiencies have already been adopted; the next round of state updates will add 15% more efficiency.

b) Street Light Subcommittee (Mayor Davis, Greenbelt): The committee postponed the November meeting until January. There are no updates to report.

c) Adaptation Project (Anne Mariani, COG DEP Staff): EPA officially announced that COG has received the Smart Growth Implementation Assistance award. There were a total of four national awards that cover eight locations. There are two goals for this project: to understand what impacts climate change will have on the region, and to develop adaptation planning guidelines to include in local and regional planning. Staff is currently setting up an expert panel that will meet at the end of November. The EPA will make a consultant available for the project in January who will engage COG committees in the work. Dr. Sklarew noted that GMU and the USGS have done work on adaptation and will contribute to COG’s work.

d) Sustainable Purchasing Workshop December 3 at 2pm: Representatives from the Responsible Purchasing Network will give a presentation at COG on how the network could benefit COG’s jurisdictions.

**6. Community Energy Planning** (Peter Garforth, Garforth International LLC)

Peter Garforth presented on the importance of community energy planning.

The Community Energy Plan for Loudoun County was recommended by the National Association of Counties as a model for other communities to use. Garforth applauded the recent passing of the 30% solution. Germany had a comparable step in 1985; Ontario did the same three years ago.

Governments plan for many areas including transportation and land use, but do not plan for energy. Energy has a substantial impact on the economy of any location. Investors look for locations with good reliability and distribution. Community plans need to add a chapter on energy. It is being sensible. Energy efficiency and planning are not religious or dogmatic. Energy planning is bigger than politics.

Today’s global energy realities show many risks and opportunities. Energy prices are unpredictable and the US has a large dependence on imports. There are uncertain impacts of climate change legislation. The American energy infrastructure is underinvested. China and India are new major energy customers. Trigger events such as blackouts and hurricanes and tornadoes are becoming more frequent. Energy innovation can provide investments and jobs. Today’s energy realities are different from the past.

There is a potential resource in energy that is lost in transmission. Less than 10% of the electricity generated is used on our services. People pay for the fuel and are not getting any value out of most of it.

The European Union (EU) uses just over half of the energy per Gross Domestic Product (GDP) unit of the US. China and India use over triple US use, but China’s use of energy per GDP is coming down quickly. The US uses 2.5 times more energy than the EU on the buildings sector. In 10 years China has built a high speed rail network equivalent to the network in Western Europe. In the next 5-10 years they will double that network by adding approximately 8,000 miles. Greenhouse gas is a good representation of overall energy productivity. The US uses 21.7 Metric Tonnes (MT) of CO2 per capita annually. The European Union uses 10.5. The goal for Arlington in 2050 is to reduce their MT CO2 per capita from 14.6 to 4.5. Loudoun County’s goal for the same time period is to reduce MT CO2 per capita from 14.2 to 6.

Copenhagen is the global best practice. They currently use 3 MT CO2 per capita and have a goal of zero MT CO2 per capita. They display a certificate in all public buildings with the energy rating that is updated annually. They have taken a portfolio approach to determining fuel source; there is not a single fuel source. The Copenhagen plan launched in 1973 and has done no harm to their economy. It has been good for business. Urban centers are designed for biking and walking with efficient trams and trains.

Key questions in the community energy plans are “how much energy is really needed?” and “how to minimize greenhouse gas emissions?” The plans optimize investments between efficiency, distribution, conversion, and fuel with a minimum 25 year horizon. The community energy plan addresses four aspects loading order or *trias energetic.* Energy efficiency- if you don’t need it, don’t use it. Heat recovery- if it’s already there, use it. Renewable energy- if it makes sense, go carbon free. Energy distribution- invest where it makes sense.

Some changes are incremental in total energy use such as community activity, small stand alone projects and minor changes in policy. Transformative benefits come from scale projects at the neighborhood size, local policy changes, and a new “business-as-usual” due to integrated policy across sectors.

Energy performance labeling is a low-cost performance validation tool. It should be available in private buildings when they are rented or sold and displayed in public buildings. Labeling could be voluntary or mandatory. This provides a basis for market driven improvement.

A successful community energy plan implementation features leadership and community engagement, transparency and outreach, planning policy changes, an integrated utility approach, and early implementation of scale projects. Scale projects should have a high probability of being implemented and a manageable number of participants, be large enough to implement integrated energy within the boundaries, apply different energy supply and efficiency than the surrounding norms, and have a future possibility to link to other community projects. Typical scale projects are located in places like high density urban villages, core renewal neighborhoods, commercial or research parks, retail clusters, transit hubs, academic campuses, and military bases. Arlington has several potential projects including Rosslyn, East Falls Church, Columbia Pike, and Crystal City.

The Moorefield station in Loudoun County is a community scale district energy project. The area is a 400-acre mixed-use development clustered around the Dulles Silver Line. It is funded by a $400,000 from the Claude Moore Foundation and a DOE grant, with support from the Digital Realty Trust. An integrated energy master plan for the area will be prepared by 2011. District energy is a closed networked that distributes to many homes and buildings. It optimizes the energy supply from multiple sources including combined heat and power (CHP), boilers and furnaces, absorption chillers, electric chillers, solar and biomass, and waste heat recovery. There is centralized supply and delivery of heating, cooling and domestic hot water. There are large areas in Arlington that could possibly implement district energy.

Scale projects of 100-150 acres are best when being rebuilt or newly built. Solar power in Arlington will be effective at managing peak load but will not be a great impact on the total energy use. The Cool counties target is in line with the total plan aspects, aiming for 2.5 MT CO2 per capita.

A community energy plan provides benefits of being competitive, sustainable and flexible for residents, utilities, developers, banks, commercial interests, industry, and academia.

Dr. Van Susteren noted that this presentation is inspiring. She asked that the slides be available on the website.

Ms. Smith noted that the video Arlington County released on smart growth planning was a useful tool. She asked Chair Fisette if Arlington was planning a similar public education piece on community energy planning. Chair Fisette responded that it is not in the plans now, but if it were developed it would be over a year before it would be released. The board must vote on the plan first. Ms. McGimsey thought that a video would be a great idea because education is a huge part of this. She has been asked to give speeches about Loudoun County’s plan. Many organizations have seen this plan as the only place with the four aspects addressed together: transport, land use, water and integrated energy management.

Ms. Bishins is glad for the holistic approach. It would be interesting to have a presentation from Loudoun and Arlington Counties on what actual steps will be implementing and what gains would be expected from these steps. Chair Fisette noted that a presentation is possible, but there is no set road map for moving forward.

Ms. Varnadore mentioned the HUD grant and work with the National Energy Center for Sustainable Communities in Frederick County. There is a lack of capacity for energy planning in the Planning Department. Where are other communities focusing the work? Mr. Garforth noted that it is an interesting global dynamic. Urban Energy Planning as a master’s degree is not available at any US university. There is one program in York, Canada that has graduated three classes. There is at least one master’s program in every EU nation. The EU started their programs in the mid-1980s and 90s so they are losing their experts to retirement. There is a transformational gap. The logic is not different from other planning disciplines but is just being applied to a different context. Chair Fisette noted that Arlington is using the Department of Environmental Services, as well as Economic Development and Planning. Ms. McGimsey noted that Loudoun’s is not a county energy plan but a strategy. Work is being led by the Energy Manager in the Waste Management and General Services Department and the Administration, but not in planning. The planning department is a partner, but not a lead.

Mr. Edwards asked about any examples of combined heat and power (CHP) in the US. Mr. Berliner noted that it is a major opportunity to put all of these players together. Mr. Garforth replied that there are very few large scale projects in North America. There are projects in Minnesota, Ontario, and a small project in Austin, Texas. This project is a legacy district heating project with old technology that has been poorly maintained. It is much easier to see CHP in Europe, because the best global examples are there. One of the biggest barriers to implementing CHP is overcoming the picture in people’s heads. Also, the developer may not want to make the initial investment. There are two different balance sheets. One is horizontal investment thinking about the 50-year life of the utility. The market is vertical and capitalizes on getting investments back quickly. Questions to addresses include technical aspects, business ownership, operation, business environment, and safety. Ms. McGimsey asked if there are things that should be discussed with the state in order to make a sound business case for CHP. Chair Fisette said he’s not sure yet but they have faced fewer barriers than they initially thought.

Chair Fisette commented that performance labeling is critically important for quality control and education. The Australian example of voluntary commercial real estate labeling is wonderful. It has become good advertising of building performance for potential tenants. Financial institutions decided that labeling was required for financing, so the government never had to mandate it. Ms. Adams asked if the labels show the full fuel use or the end use. Chair Fisette responded that it was recommended to be all inclusive and show the source energy and greenhouse gas emissions to link them together.

**7. Adjourn**

The next meeting is scheduled for January 26, 2010 from 9:45am to noon. There being no other business, the meeting was adjourned at 11:35.