Metropolitan Washington Council of Governments

Built Environment and Energy Advisory Committee (BEEAC)

Meeting Summary: February 18, 2016

MEMBERS AND ATTENDEES:

Gina Mathias, City of Takoma Park
Nima Upadhyay, City of Takoma Park
Erica Shingara, City of Rockville
Amit Sidhaye, Arlington County
Santosh Raj Neupane, Arlington County
Joan Kelsch, Arlington County
Rich Dooley, Arlington County
Michael Younes, Chevy Chase Village
Jessica Lavender, Fairfax County
Kate Walker, City of Falls Church
Tim Stevens, City of Falls Church
Crystal McDonald, US Department of Energy
Steve Morgan, Clean Energy Solutions
Valerie Holmes, Maryland Energy Administration
Daniel Layton, City of Bowie
George Stephanos, City of Bowie
Jeff Bond, Prince George's County
Kevin Galligan, (by phone)
Kaira Hoskins, (by phone)

COG STAFF:

Leah Boggs, COG DEP
Maia Davis, COG DEP
Jeff King, COG DEP
Isabel Ricker, COG DEP
Madison Wagner, COG DEP
Steve Walz, COG DEP, Director

1. Call to Order and Introductions, *Leah Boggs (COG DEP)*

In Chair Vigen's absence, Leah Boggs called the meeting to order and attendees introduced themselves in person and by phone. The meeting minutes from the January meeting were approved by the attendees.

2. Jurisdiction Updates, COG Program Updates, and Announcements

Falls Church: The City of Falls Church has created an Energy Transition Sub-Committee to evaluate the City's energy future in terms of efficiency, retrofits, and renewable energy use. Falls Church is moving forward with its Solarize program. The City of Falls Church is currently converting 165 streetlights to LED, and plans to have completed this update in June 2016. Very few of the existing

lights in the City are Dark Sky compliant, but will be after the LED transition. Falls Church has also signed up to participate in a program to evaluate costs and benefits of lighting updates in the city. **Fairfax County:** Fairfax County has created a Green Business Partners program to recognize the sustainable achievements of businesses located in the County. The County's lighting contract is reopening soon and the County is looking to increase its LED options at that time.

Takoma Park: 722 single-family households in the City of Takoma Park have entered the City's Green Homes Challenge; representing about 20% of the single-family homes in Takoma Park. The City's Green Impact Campaign has conducted 63 free energy assessments for local business thus far. Takoma Park is one of the communities entered in the Georgetown University Energy Prize, where it is currently ranked in the top 10 out of 50 participating communities.

Chevy Chase: Chevy Chase Village has successfully converted all of its municipal building lighting to LED and is anticipating changes in conversion and tariff rates and costs in the impending Pepco-Exelon merger that will impact the feasibility of an LED transition for streetlights in the Village.

Bowie: The City of Bowie piloted a small LED streetlight program (12 lights) in a local neighborhood. The City is currently investigating options and seeking input and information from other jurisdictions.

Rockville: The City of Rockville's Master Plan is currently being updated and the first draft of the report is ready. Rockville's metered streetlights haven been converted to LED, as well as some of the City's municipal buildings and parking lots.

Arlington County: Arlington County has completed one solar co-op, where the County installed 37 systems, and has plans for another. The County completed an LED interior retrofits of its municipal buildings, where it saw considerable energy savings. Arlington County is holding meetings on residential energy programs, like the Green Home Choice Program, to help its residents move toward energy efficiency and sustainability.

COG Updates: COG is currently working on a project with the Greater Washington Green Cities Program to develop a greenhouse gas inventory of DC's fleet, which will be used to inform policy decisions on how to best upgrade and manage the city's fleet, reduce transportation emissions, and improve air quality. COG is also working on a US Department of Energy and National Association of Regional Councils project to develop a cooperative purchasing program for electric and alternative fuel vehicles and alternative vehicle infrastructure. The Multi-Sector Working Group's policy committee met in January 2016 and were not ready to support the full list of strategies and targets developed. COG staff has worked to develop survey questions to be distributed to member jurisdictions for input on the MSWG. This survey will be sent with the CEEPC annual climate and energy survey. COG has almost completed an assessment of the microgrid and combined heat and power capacity of St. Elizabeth Hospital in DC and is looking for local suggestions for microgrid and CHP capacity assessment in the future.

3. Takoma Park LED Building Projects

Gina Mathias, Sustainability Manager, City of Takoma Park

In 2014, the City of Takoma Park began evaluating its 4 main municipal buildings for opportunities to meet MD Smart Energy Community goal of a 15% reduction in per square foot electricity consumption by 2017. The Community Center and Recreation Center received LED retrofits, and the Heffner Park Community Center received HVAC improvements. The Takoma Park Public Works building was certified LEED Silver in 2011 and included in the building evaluation. The City also conducted an LED streetlight pilot project, converting 49 streetlights to LED. The LED retrofit projects received Pepco rebates of almost $21,000 each, while the Heffner HVAC project did not receive a rebate from Pepco and the rebate for the City's streetlight project has yet to be determined. All project costs after the rebates were covered by MEA and CDBG grants.

The four projects alone provided enough energy savings for Takoma Park to meet its 2017 target of 15% energy consumption reduction with leftover grant money to use toward continuing reductions. The Recreation Center alone provided the majority of kWh reductions (25 kWh per square foot), with other buildings seeing small reductions. The Public Works building's energy consumption increased, but this was a result of changing measures included in the evaluation than in the baseline. The City of Takoma Park's LED streetlight retrofit saves 20,012 kWh annually, provides financial savings to the city, and continues to advance technology and savings.

Through these projects, Takoma Park learned the importance of completing a lighting study and seeking the input of residents, framing small efficiency gains to look more attractive for grants and to the community, and the challenges of the rebate process.

4. Chevy Chase LED Streetlight Pilot Project

Michael Younes, Director of Municipal Operations, Chevy Chase Village

In 2011, Chevy Chase Village ran modeling of its streetlights with standard lighting and LED alternatives to determine the costs and benefits of converting. All streetlights in Chevy Chase are unmetered and owned by Pepco. The village conducted a pilot program, installing 25-30 streetlights on neighborhood blocks and providing a questionnaire to residents for feedback. Only 4% of the residents surveyed returned a response, so it can be assumed the majority of Chevy Chase residents took no issue with the LED pilot. Chevy Chase also evaluated the public safety aspects of LED installation.

Until streetlights in Chevy Chase Village can be metered, there is not a lot of incentive to transition to LED. There are no real energy savings to the village and it would still pay the same costs in usage, but the Pepco-Exelon merger may change that. The operation and maintenance costs for standard streetlights are paid by Chevy Chase, as would the LED operation and maintenance costs. The LED upgrade project has been under discussion for 4 years, with high upfront costs and long payback rates deterring the village from moving forward on this.

Discussion

30-40 year paybacks are unrealistic based on the current costs of LEDs and their operation and maintenance rates. Until policy initiatives are established to remove utility control over operation

and terms, payback periods will be unattractive to local governments. Reasonable payback rates should be 10 years or less, based on the actual costs of LED retrofits. There has been some movement from the Maryland Public Service Commission to create such a policy, but no real progress has been made. While many utilities consider streetlight upgrades as an income source, it is possible to make it a win-win from both the city and utility perspective.
Many member jurisdictions expressed concern in how to move forward on streetlight upgrades; and whether to do so through their local utility or with the help of an ESCO, citing costs and payback periods. Metered versus non-metered lights also makes a difference in the payback time, and jurisdictions differ widely in this regard.

5. Arlington County LED Streetlights

Santosh Raj Neupane, Streetlight Systems Engineer, Arlington County

Arlington County conducted an inventory of its streetlights, determining that Dominion owned 11,800 lights, while the county owned 7,150; though this number has been increasing over time. Arlington began its LED streetlight conversion in 2010, focusing on high-density areas with significant pedestrian traffic. In 2015, the County had only 18% remaining toward achieving its first LED installation target. Through this targets, Arlington also aims to reduce per capita emissions from 13.2 to 3.0 MT CO_2e per capita by 2050.

Arlington County is using smart LED systems and technology as proactive maintenance and budgeting. Choosing the best light distribution type is important because of the high level of pedestrian traffic impacted by the converted streetlights. The County's dimming program allowed for a reduction from 4,091 kWh to 702 kWh from standard streetlights with no dimming capabilities to LED lights with the dimming system. This is an almost 80% reduction in electricity consumption and signifies a decrease in greenhouse gas emissions from 6 MMT CO_2e to 1 MMT CO_2e. To achieve this reduction, Arlington County invested $6 million, which was paid back in a period of 5 years.

Arlington County has only made efforts to convert county-owned streetlights to LED, as the rates to replace streetlights owned by Dominion are 4 times the cost to replace county-owned lights. In the next contract negotiation with Dominion, in 2018, Arlington plans to raise this concern to the utility. The County has realized the importance of communication with residents early on in the process, and going forward, will focus on converting streetlights in high-density and commercial areas unless residential neighborhoods show interest.

6. US Department of Energy Outdoor Lighting

Crystal McDonald, Policy Advisor, US Department of Energy

The US Department of Energy's (USDOE) Better Buildings Initiative focuses on 4 aspects: workforce development, federal leadership, better information, and market leadership. The USDOE aims to use these aspects in tandem to develop innovative solutions and projects for energy sustainability. The Outdoor Lighting Accelerator is a program under the Better Buildings Initiative. The program intends to accelerate the adoption and use of high efficiency outdoor lighting in the public sector and develop best practices through local collaboration for accelerating adoption, and improve municipal, system-wide outdoor lighting replacement.

The Outdoor Lighting Accelerator (OLA) demonstrates practical and effective strategies through community collaboration, and helps its partners to overcome regulatory, financial, and technical barriers to outdoor lighting improvements. Currently, the OLA has 23 partners (15 cities, 3 states, and 5 regional energy networks) across the US. These partners have made significant progress toward the program's 2016 goal of replacing 1.5 million poles in the public sector, having replaced 1.3 million thus far. The best conversion opportunity is through municipally owned lights; however, in making this goal a reality, it is necessary to work with utilities because they own a large portion of the streetlights in most municipalities.

Discussion

BEEAC members were curious about the benefits and assistance OLA partners received. The only necessary commitment to become a partner is a statement of the number of streetlights planned to be replaced in the community. Partners then receive technical assistance, benefits, and public recognition for their participation. Resources developed for best practices in streetlight installation are publically available to non-partners. Regional government agencies can join by identifying the municipalities they would be working with on outdoor lighting upgrades. Thus far, OLA has had several successful projects with regional energy networks, which are comparable to regional government agencies in terms of multi-municipality projects.

7. Legislative Updates, *Isabel Ricker, COG DEP Staff*

All of the Virginia General Assembly bills have been introduced, and most have been acted on. The COG Legislative Committee has written several comment letters regarding these bills. First, on the Clean Power Plan (CPP), there are two bills, one each in the House and Senate, which have passed that chamber. These bills would require the General Assembly to approve the State Implementation Plan before it goes to the EPA. The Legislative Committee is encouraging legislators to support full and timely compliance with the CPP and to allocate resources for local government efforts on climate mitigation and resilience. The second letter is on legislative initiatives to expand access to clean energy. Several bills have been introduced to this effect, including one on legalizing PPAs, increasing net metering caps, introducing residential PACE, and establishing community renewable energy programs. Third, the committee is supporting efforts to improve evaluation of utility energy efficiency programs, such as the development of new performance metrics that incorporate cost-benefit calculations.

Maryland has had several legislative proposals of interest to COG's climate and energy programs, including one on expanding access to clean energy through residential PACE, removing the size limit for renewable energy systems financed with PACE, improving interconnection speeds, and establishing a Maryland Green Bank. COG supports these efforts, along with efforts to extend greenhouse gas reduction targets in Maryland. The Greenhouse Gas Reduction Act reauthorization would increase the state's greenhouse gas reduction targets to 40% by 2030, and another bill would increase the RPS to 20% by 2025.

8. Upcoming Meetings and BEEAC Adjournment

- CEEPC Meeting – March 23, 2016
- BEEAC Planning Call – March 3, 2016
- BEEAC Meeting – March 17, 2016