



BUILT ENVIRONMENT AND ENERGY ADVISORY COMMITTEE (BEEAC)

Draft Webinar Meeting Summary: February 18, 2021

BEEAC Members in Attendance:

- Gina Mathias, City of Takoma Park (Chair)
- Bill Eger, City of Alexandria (Co-Vice Chair)
- Ashleigh Armentrout, City of Bowie
- Dawn Ashbacher, Frederick County
- Amanda Campbell, City of Rockville
- Ellen Eggerton, City of Alexandria
- Lisa Goldberg, City of Alexandria
- Beth Groth, Charles County
- Dawn Hawkins-Nixon, Prince George's County
- Joan Kelsch, Arlington County
- Luisa Robles, City of Greenbelt
- Najib Salehi, Loudoun County
- Khoa Tran, City of Alexandria

Additional Attendees:

- Mati Bazarro, City of Bowie
- Patti Boyd, DCSEU
- Kim Cheslak, New Buildings Institute
- Emily Curley, Montgomery County
- Ronald Davis, City of San Jose
- Chloe Delhomme, City of Manassas

- Paul Kaplowitz, City of Alexandria
- Cliff Majersik, Institute for Market Transformation
- Elena Olmedo, Natural Resources Defense Council (NRDC)
- Devin Sclater, Dominion Energy
- Kara Strong, Sustainable Design Consulting
- Theodore Trabue, District of Columbia Sustainable Energy Unit (DCSEU)
- Amber Wood, City of Denver
- Carolyn Lyle

COG Staff:

- Leah Boggs, COG DEP
- Camilla Cook, COG DEP
- Maia Davis, COG DEP
- Katie Dyer, COG DEP
- Jeff King, COG DEP
- Wyetha Lipford, COG DEP
- Tim Masters, COG DEP
- Sabreen Rash, COG DEP



1. CALL TO ORDER AND INTRODUCTIONS

Gina Mathias, City of Takoma Park (BEEAC Chair)

Chair Gina Mathias called the meeting to order. Leah Boggs (COG staff) went over the virtual meeting guidelines.

2. APPROVAL OF THE NOVEMBER 19, 2020 MEETING SUMMARY

Gina Mathias, City of Takoma Park (BEEAC Chair)

The November 19 BEEAC Meeting Summary was approved.

3. BEEAC 2021 PRIORITIES RESULTS

Leah Boggs, COG Staff

This is BEEAC's sixth annual priority survey. With the recent finalization of the 2030 Climate and Energy Plan, COG is now focusing on plan implementation. BEEAC's 2021 priorities includes:

1. Energy Efficiency
2. Energy Resilience & Climate Adaptation
3. High Performance Building Technologies
4. Technical Assistance for Clean Energy Technology Projects
5. Clean Energy Financing
6. Building & Energy System Decarbonization

Some of the priorities can be grouped and addressed together, such as energy efficiency, high performance buildings and building and energy system decarbonization. Most resounding items put forth were 2030 climate action planning and the net zero energy buildings and decarbonization series. The results found that legislative updates during the meeting are very useful. There were not many responses for BEEAC topics that were least useful, but green financing was mentioned. The survey results show that members want to see more with regard to net zero energy and decarbonizing existing buildings. Responders also want to see more regarding:

1. Energy portfolio benchmarking
2. Implementing 2030 Climate Planning
3. Energy Efficiency

There were a variety of interest areas put forth for additional areas of interest. Financing energy upgrades and clean energy projects was one, as well as equity and environmental justice. COG will be looking at program development through this lens a lot more moving forward. Another area of interest was electric vehicle (EV) readiness. COG has a meeting planned in the fall to focus on EV readiness strategies. In April, BEEAC will be focusing on decarbonization and tree canopy. In June, BEEAC will be looking at linking climate-readiness to capital improvement plans. In November, BEEAC will hold a joint session with CEEPC and possibly COG's transportation planners, with specific focus on the Transportation Mitigation Study and Transportation Resiliency Study.

BEEAC also sent out the Non-Utility Fuel Use Survey. COG staff conducts greenhouse gas (GHG) inventories for COG member jurisdictions and the region. Inventories have been completed for 2005, 2012, 2015, 2018 and the next set of inventories will be for the calendar year 2020. The purpose of the Non-Utility Fuel Use Survey is to collect local data and information to improve the local accuracy of the non-utility fuel consumption and the resultant GHG emissions reported for all years of the GHG

inventories. Many BEEAC members said that there is difficulty finding this data. Some are unsure if it is tracked in their community or if what they have is partial data. BEEAC is extending the survey deadline to March 31 in an effort to get more feedback on this item.

4. LEGISLATIVE UPDATE

Katie Dyer, COG Staff

COG's 2021 legislative priorities primarily revolve around assisting local government members and state governments to implement actions that support the region's climate and energy goals. The legislative priorities are very similar to last year, with the addition of two new items for 2021; the first is enhancing incentives and financing mechanisms for green infrastructure and natural resource protection. The second is supporting the Transportation Climate Initiative in designing and taking actions to reduce greenhouse gases.

CEEPC's Legislative Subcommittee is a small group of local government members who periodically meet with staff to review legislation in the District of Columbia, Maryland, and Virginia. COG staff track various bills during the legislative session that fall within COG's legislative priorities. A series of ad hoc calls are held to determine specific actions on bills including producing advocacy materials in the form of comment letters. The subcommittee primarily runs from January through April.

In Virginia, CEEPC's Legislative Subcommittee sent four comment letters in support of clean energy and building standards including HB 1919, HB 2048, HB 1859, and HB 2227. All bills have made it passed crossover. The subcommittee also sent a comment letter in support of electrification bill including HB 1965, HB 1979, HB 2118, and SB 1223. In Maryland, the subcommittee will send four comment letters of support in the areas of clean energy, energy efficiency, and renewable portfolio standards including SB 414 / HB 583, SB 77 / HB 70, HB 561, and HB 61. The subcommittee is currently reviewing legislation dealing with community choice energy and net energy metering including HB 768, HB 584 / SB 508, and HB 569 / SB 407. In the District of Columbia, the subcommittee is reviewing B24-0018 (the Green Food Purchasing Amendment Act of 2021) for a possible comment letter.

5. COG ANNOUNCEMENTS AND UPDATES

A. Regional Climate Website

Jeff King, COG Staff

COG has been working under contract with Prince George's County to support their Climate Commission and the development of their Climate Action Plan (CAP). One of the tasks is to set up a regional climate collaborative website. The web developer, Wood Street Inc. out of the City of Frederick, has been hired to develop the website. A domain name was bought; climatepartners.org is the current domain name for the website. However, a number of other suggestions are being followed up on such as DMV Climate Collaborative, National Capital Climate Partners, Capital Climate Partners, etc. The other big focus is on content. The team is actively developing this content. The aim is to have the main landing page about the partnership or "collaborative" and then have links to local jurisdictions pages, which would have links to individual local government members. This is where some coordination is needed between COG, local government members, and others to decide what information to put on the website.

B. Energy Utility Survey

Tim Masters, COG Staff

COG sends out an annual utility energy data survey to the nine electric and natural gas utilities that serve the region. COG sends it out at the end of January each year with a submission deadline set for March 31. This data is used to analyze electricity and natural gas consumption trends in the region, as well as renewable energy trends. This data is also used for COG's GHG emissions inventories. The request consists of five main areas, including total grid-connected renewable systems, customer base and annual energy consumption, monthly energy consumption, streetlight energy use data, as well as incentive programs data that utilities have for energy efficiency upgrades or renewable energy projects. COG requests data by jurisdiction, zip code and sector for the calendar year. The survey has not changed much, but there are a few new questions, namely under the total grid-connected renewable systems category. COG has added a battery storage data request, asking for the number of grid-connected systems and kilowatt (kW) capacity, similar to what is asked for with solar and wind data. The survey also asks how many of these battery systems are paired with renewable energy systems. COG has also added a request for community solar data, asking for the total number of systems and subscribers in each of COG's member jurisdictions, as well as the kilowatt hour (kWh) consumption delivered to those subscribers. COG also added a question in the annual energy consumption category, asking if consumption from net metered energy systems and/or community solar is included in the total energy consumption reported by the utilities. This question has been added in an effort to better understand renewable energy trends in the COG region. COG will begin analyzing this data in the spring and summer.

6. JURISDICTION UPDATES AND PEER EXCHANGE

Local government members highlighted energy and building-related events, projects and programs. Members were asked to discuss:

- What beyond code efforts has their jurisdiction or state implemented?
- What barriers exist to make building codes in their jurisdiction or state more progressive than the minimum energy efficiency requirements?
- What are the specific concerns related to all-electric buildings?

Bill Eger, City of Alexandria (BEEAC Co-Vice Chair)

Regarding beyond code efforts, in 2019, the City of Alexandria updated its green building policy to include a voluntarily requirement for new developments to achieve a stronger threshold of energy efficiency and stormwater management. Second, within the city's developments there are requirements related to EV ready infrastructure and EV charging station infrastructure, as well as other transportation improvements. In terms of barriers, in Virginia, localities cannot adopt codes that are more stringent than what is set forth by the state legislature. This precludes the city from adopting any more stringent, mandatory requirements at the local level. Second, there is a statewide adopted building code that must go through a multi-year stakeholder process for adoption and often some of the progressive considerations related to energy efficiency or the adoption of energy efficiency codes are contested. Regarding specific concerns related to all-electric buildings, the city has some pushback from the development community. There is the financial factor, as well as engineering and design complexities that preclude the city from advancing all-electric buildings. The cost regarding both electricity rates and natural gas rates often preclude investment in this area.

Joan Kelsch, Arlington County

In terms of beyond code, Arlington County has their green building incentive program. The county tries to incentivize large commercial multifamily buildings to build far more energy efficient and higher performing buildings using density as an incentive because the county cannot work with the building

code in Virginia. Virginia's limitations are well-known. Regarding all-electric buildings, the county did a study looking at all-electric buildings and the issues associated with them. Cost is obviously one, but there are also water heating issues, and also issues related to HVAC systems.

Najib Salehi, Loudoun County

As it relates to all-electric buildings, Dominion Energy Virginia does offer an all-electric rate schedule, which is a cheaper than normal electric rate. People that do have all-electric buildings can take advantage of that.

Emily Curley, Montgomery County

In terms of beyond code, Montgomery County has adopted the 2018 IECC and are working on the 2018 IGCC. The county is clarifying the alternative compliance pathways for the IGCC code. If someone is pursuing the alternative compliance path, the county has some kind of guarantee that the building will obtain a green building certification. For beyond code efforts, the county recently updated their green building tax credit program. It allows existing buildings to get credit for going above the code in terms of their energy design. It also includes an incentive for existing buildings that are demonstrating high performance through their Energy Star score and green building certifications. With regard to all-electric buildings, there has been some discussion about eventually looking at all-electric new buildings and net zero energy homes.

Gina Mathias, City of Takoma Park

The City of Takoma Park is looking closely at what is happening at the county level, since it impacts the city. One of the city's concerns about all-electric buildings is the cost of operation and how the transition and construction will be possible.

Dawn Hawkins-Nixon, Prince George's County

Prince George's County continues to offer their green business tax credit. The county has been trying to get local businesses to register or apply for that tax credit. The county is working on efforts to facilitate the installation of EV infrastructure. The county's permits office has developed a process for making those applications easier to apply for. The Office of Central Services continues to offer a number of energy efficiency and renewable energy grants for residential properties. Regarding all-electric buildings, costs is a big issue. Regarding barriers, it takes time to push legislation forward. Bringing the building industry onboard and in agreement can also be an issue.

Dawn Ashbacher, Frederick County

In terms of beyond code efforts, Frederick County has not done much, especially with regard to buildings. The county does have beyond code efforts in terms of forest resources. The county has a strong reforestation plan, but in terms of buildings, there is not much to report on. The county has a Climate Emergency Mobilization Workgroup, which recently issued a midterm report. Code issues will likely be included in their recommendations. The county is hoping to work with COG on some climate action planning and EV readiness planning. Code issues will likely be part of this work. In terms of barriers, the county needs to work with stakeholders to develop a common understanding of how this would work and how it would impact people. The cost, especially for people with low and moderate incomes, is a concern. The county has some grant funding through MEA for fuel switching to all-electric. Switching from fuel oil or natural gas is a harder case to make. The other issue with all-electric buildings is whether the source of energy coming from the grid is cleaner. While Maryland has the 50 percent renewable portfolio standard (RPS), the exact steps to get there are still uncertain.

Amanda Campbell, City of Rockville

The City of Rockville and Montgomery County have separate building codes, but the city tends to model them to closely mirror the county in an effort to aid developers. The Montgomery County Green Bank has financing for green building initiatives. One thing to be aware of is the situation in Texas right now. Many people are wondering about the stability of the electric grid compared to natural gas. If there are power outages and more extreme weather, then you get a situation where services are disrupted. The electricity grid is more vulnerable than the natural gas distribution system.

7. BUILDING DECARBONIZATION: MOVING BEYOND CODE

Kim Cheslak, [New Buildings Institute](#)

The New Buildings Institute (NBI), in partnership with NRDC, has a toolkit for decarbonization. Their toolkit includes three components: code overlay, an advocacy framework, and an outreach toolkit. Cities and states are very familiar with the IECC; how to adopt it, how to implement it, how to enforce it, and how it interfaces with other codes. Putting the language on top of a code document that is already well known was the best place for NBI to start from. The 2021 IECC provides a solid efficiency foundation to build on. Most states use the IECC already, and states and cities are familiar with the IECC and amendment process, therefore, language will be ready for introduction to future model code development cycles. The code overlay component focuses on new construction, including residential and commercial. It includes two “steps” for jurisdictions: mixed-fuel electric ready buildings, and all-electric buildings. The overlay focuses on the following key areas for electrification: heating, water heating, cooking, and lighting.

*Ron Davis, [City of San Jose](#) and Elena Olmedo, *Climate Advisor to the City of San Jose American Cities Climate Challenge**

The City of San Jose worked with NBI to develop their reach code and it was critical to the advancement of their policies. Climate Smart San Jose was adopted in 2018. It is one of the first Paris Agreement-aligned climate action plans in the US and it has ambitious goals to reduce the city’s GHG emissions. Many of the goals are centered around building decarbonization, as well as transportation electrification, among other strategies to reduce emissions. The city sees a lot of the benefits in all-electric buildings. They are safer, healthier, and more resilient. In 2019, the city adopted their reach code and convened a number of different staff from different departments to develop that with NBI. Thereafter, the city adopted a natural gas infrastructure prohibition. About a year later, that natural gas infrastructure prohibition was expanded. The city is working with another technical partner called the Building Electrification Initiative who are assisting with the development of a building electrification roadmap for the city’s existing building stock. The city has not developed any formal policies or programs yet. Electricity used by buildings in San Jose is projected to be almost entirely carbon neutral in the next couple of years. This is because their local utility is a community choice energy provider and 86 percent of the electricity is already carbon free. All-electric buildings are generally less expensive to build. The statewide codes and standards team produces a cost-effectiveness study that looks at all-electric buildings and the cost effectiveness of all-electric buildings compared to mixed fuel buildings at the time of new construction and compares this across different climate zones in California.

Amber Wood, [City of Denver](#)

The City of Denver also worked with NBI through the American Cities Climate Challenge to put together their net zero energy new buildings and homes plan. The city has their 80 by 50 climate action plan. In 2020, they convened a Climate Action Task Force, which updated their goals to align with the climate science. The recommendations made to the city by the task force look at reducing GHG emissions by 100 percent by 2040. The task force also made specific recommendations for buildings, including net

zero energy by 2030. According to their 2019 inventory, 64 percent of their emissions come from buildings and homes. In addition, a study showed that by 2050 approximately 40 percent of the city's building stock will be new construction. This is why new construction is specifically addressed. The city includes all-electric buildings as part of the plan to reach their emission reduction goals. All-electric buildings can be cost-effective. It depends on taking out the natural gas distribution savings. The developer can get the cost savings by not putting the distribution for natural gas into a development. The city will be starting their 2021 code adoption process based on the 2021 IECC codes for both the Denver Building and Fire Code and the Denver Green Code, which is their stretch code. In addition, for 2021, the city is having a number of preliminary meetings specifically focused on energy efficiency and sustainability, where they will review proposed code amendments. The city is working in collaboration with NBI on some of those proposed code amendments.

Discussion:

- As part of the City of Denver's Energize Denver Task Force, the city is developing a building performance policy. They will likely have a building performance policy in early 2022.
- Hospitals are a huge energy user. The City of San Jose did not address this issue at this time due to the impact of COVID-19.
- Battery storage could be used for backup power. Since backup power is what would be considered unregulated load, it is not solely for backup power. Battery storage would be used primarily to handle demand response; i.e. peak shaving. It could certainly be used for backup power, if needed. There would need to be some additional sizing requirements for batteries to get worked through building by building with an engineer.
- The decarbonization code overlay is backwards compatible in terms of the language. The numbering is going to be the biggest issue in any backwards compatibility, or if there are local amendments. NBI numbered it to overlay exactly on top of the 2021 IECC. It could very easily be renumbered.
- In the COG region, Washington Gas has recently completed a carbon business plan for Washington DC. As part of that plan, there is interest and discussion of renewable natural gas or green gas. The City of San Jose does not anticipate renewable natural gas being a big player. The infrastructure would have to be updated, as it is fairly old at this time.
- The City of Denver is looking at community microgrids. The National Renewable Energy Laboratory (NREL) is doing a test project near the Denver airport with a hotel and a number of single family residences. As far as renewable natural gas, that is definitely part of the conversation, particularly as a part of the Energize Denver Task Force. One of the reasons that the city is currently focused on all-electric equipment is that it seems more feasible for reducing GHG emissions from heating. The city is open to the fact that there are going to be new technologies, whether it is renewable natural gas or other technologies.
- The Energize Denver Task Force is looking at a carbon budget to try figure out how they can address existing buildings, which right now produce more emissions than new buildings. They are looking at emissions over time and producing a carbon budget that is interactive. The grid needs to become cleaner, while also thinking about energy efficiency, renewables, and all-electric equipment. The city is going to make an interactive tool to help figure out what might be most cost-effective.
- In California, there is the renewable portfolio standard (RPS), which requires utilities to source 33 percent of their energy from renewable energy sources for 2020. The standard moves higher toward 2030, and the City of San Jose's local community choice energy provider is already going to be providing almost 100 percent of their energy from carbon-free sources. Having those long-term policies in place to move forward, while relying more on carbon free

electricity, compared to natural gas, which, even with renewables, will make it difficult to meet their GHG emission reduction goals.

- One of the biggest pieces that NBI hears from communities is that if the aim is for a 100 percent renewable grid, why is efficiency continually put first? There are other benefits from efficiency that include passive survivability and other things that are critical to having all-electric infrastructure. To have an all-electric grid, efficiency needs to come first.
- Efficiency is really important for the operational costs in California, as electricity is more expensive per unit. Making sure that the focus is on energy efficiency first is critical to the operational cost of the building.
- The mixed fuel approach is an option. The City of San Jose started with a reach code that is all-electric friendly, but does allow for mixed fuel options. They had support from NBI, who can consult on the different options that are available for a reach code with mixed fuel versus all-electric and the trade-offs of those. It is important to have training for building professionals on the benefits of electrification and how to design for that. In California, a lot of building professionals are trained to design mixed fuel buildings. Making the transition to all-electric and having resources in place to provide technical assistance for that transition is critical.

8. 2021 MEETING SCHEDULE AND ADJOURNMENT

Gina Mathias, City of Takoma Park (BEEAC Chair)

Chair Gina Mathias adjourned the meeting. BEEAC meeting dates for 2021 include:

- April 15
- June 27
- September 16
- November 18

All meeting materials including speaker presentations can be found on the MWCOC website or by clicking the link below –

<https://www.mwcog.org/events/2021/2/18/built-environment-energy-advisory-committee/>

The next CEEPC meeting is March 24, 2021

The next BEEAC meeting is April 15, 2021

Reasonable accommodations are provided upon request, including alternative formats of meeting materials. For more information, visit: www.mwcog.org/accommodations or call (202) 962-3300 or (202) 962-3213 (TDD)