**SEU Advisory Board Meeting**

**Minutes**

**July 14, 2020**

***(Revised and approved at August 11th, 2020 meeting)***

**Call to Order**

Chair Bicky Corman called a quorum of the Sustainable Energy Utility Advisory Board (SEUAB or Board) to order at 10:15 AM, July 14, 2020. This was a Webex video conference call meeting.

**Roll Call/Introductions**

Roll call was taken, and the following people were in attendance:

**Board Members:**

**Board Members in attendance:** Bicky Corman, Sandra Mattavous-Frye, Donna Cooper, Nina Dodge, Nicole Steele, Steve Burr, Cary Hinton (proxy for Willie Phillips, Public Service Commission), Richard Graves, Farrah Saint-Surin

**Absent Board members:** Scott Williamson

**Other Attendees:** Tommy Wells (Director, DOEE);Taresa Lawrence (Deputy Director, DOEE); Lance Loncke (Sr. Program Analyst, DOEE); Hussain Karim (DOEE); Ted Trabue (Director, DCSEU); Shelley Cohen (Solar Program Director, DCSEU); Tamera Christopher (DCSEU); Crystal McDonald (DCSEU); Patti Boyd (Senior Technology Strategist, DCSEU); Lynora Hall (DOEE); Megan Partridge (PEPCO); Dave Epley (Associate Director, DOEE); Lilia Abron (PEER Consultants); Angela Johnson, Wayne Ellis (PEPCO); Edward Yim (DOEE); Yohannes Miriam (OPC); Maria Frazzini (WGL); Alex Fisher (DOEE); Crystal McDonald (DCSEU); John Corliss (PEER Consultants); Katie Bergfeld (Branch Chief, DOEE); Thomas Bartholomew (Branch Chief, DOEE); Adrienne Moulton Henderson (OPC); Brian Smith; Karen Sistrunk (OPC); Ade Sonaike (DOEE); Ari Gerstman (Associate Director, DOEE); Andrew Held (DOEE); Joanna Saunders (DOEE); Ken Overland; Matthias Paustian (Sierra Club DC); Melissa Adams (WGL); Josh McClelland (WGL); Laurence Daniels (OPC); Kristian Hoffland (DOEE); Asa Parker (DCSEU).

**A*pproval of Agenda***

The motion to approve the agenda was made by Ms. Nina Dodge, seconded by Ms. Sandra Mattavous-Frye, and unanimously approved by the Board.

***Review and Adoption of the July 14, 2020 Minutes.***

Nina Dodge and Chair Corman suggested that instead of reviewing previous meeting minutes for approval during this meeting, everyone review on their own time and send in comments to DOEE for updates. Final minutes to be approved at next meeting.

***Sierra Club Matthias Paustian***

*PowerPoint Presentation shown during meeting*

**DC’s public climate comments**

The first slide talks about the District’s public climate commitments:

* 50 percent reduction of GHG emissions by 2032
* Carbon Neutrality by 2050
* Progress towards these commitments is measured by annual inventory of DC’s emissions
* New buildings operate at net-zero carbon by 2030 and all buildings operate at Net-zero carbon by 2050 per District’s Renewable Portfolio Standards:
* 2020: 20 percent from carbon free sources
* 2025; 52 percent from carbon free sources
* 2032 100 percent from carbon from carbon free sources

Part of a wider trend: other states have and will continue to follow

Implications for heat pump development

Once the grid is clean you can heat homes very easily and efficiently with electricity. Heat pumps do not generate heat existing from electricity (like electric resistance heating), and instead move/pump heat in a very efficient manner.

Efficient heat pumps cheaper to operate.

* Heat Pumps: Efficiency measured in Coefficiency of Performance (COP), and it gets high, or efficient COP across range of temperatures, including cold temperatures.

Rheem ProTerra HPWater Heater: COP of 4

* See chart

HP Water Heater in apartments – COP of 4

This is from Seattle - 195 apartments - the COP is 2.7 and above the range that beats fossil fuels. The question about what is going to be GHG and the trend over time. Over time there is a decrease in fossil fuel. There should be a push in the District in line with what’s in the Clean Energy DC Plan to think about strategic electrification comprehensively. Low-income programs that essentially prevent the low-income people from being stuck as the last customers that will rely on gas.

* Example of Strategic Electrification/Conclusion

How does the DCSEU deal with the fact that we rapidly decarbonizing. Most of the DCSEU’s rebate is spent on gas. The DCSEU should adopt specific quantitative targets for heat pumps and development

***PEPCO Donna Cooper and Wayne Ellis***

*PowerPoint Presentation shown during meeting*

Dr. Donna Cooper thanked the board for the opportunity to present to share commitment to work with the government. Mr. Wayne Ellis will give a detailed of PEPCO holdings.

PEPCO serves about a million people and the District has about 365,000 customers. PEPCO wants to highlight their commitment to workforce diversity and quality solutions, and why we advance that is why moving forward around areas of modernization to climate change is critical to them. We are also involving the communities within those operations.

PEPCO is committed to reducing the GHG emissions by 50% by 2032 and becoming carbon neutral by 2050. We are supporting energy efficiency programs as well as the renewables. There are a host of options that are available to PEPCO to assist in this process and I’ll start with number one energy efficiency programs are going to be.

* Energy Efficiency Programs
* Solar and Non-Wire Alternatives
* Electric Vehicles
* #Reduce Energy use DC
* Energy Efficient Lighting
* Electrification of PEPCO Fleet
* PEPCO’s – DC Electrification and Climate Change Initiative

Mr. Ellis said energy efficiency by far is one of the cheapest resources and it’s a very relevant resource in terms of reducing GHG emissions. We’re here to help the District achieve their goals by offering energy efficiency programs, leveraging as the utility for the customers in DC. We are hopeful that the commission act on the recommendation and approve our ability to offer energy efficiency program.

**#Reduce Energy in DC Campaign**

This program kick-off was three months ago, now with a lot of partners on this particular call.

**Electrifying our Fleet**

It’s really just leveraging the message of about powering the future of transportation. Transportation is a substantial part of emissions. We have been working hand-in-hand with our engineering group and DDOT to look at ways we can help electrify.

We know that we have a footprint in the industry as well from our buildings and from fleet. We are keen on walk-in and talking, and this is our commitment to convert thirty percent of our fleet.. We can reduce our emission and so you can see from the stats that replacing a gasoline vehicle with an electric model will reduce annual CO2 emissions by more than 7,000 pounds per year.

**Advancing Solar Storage and other Non-Wires Solution**

We are partnering with the District to making sure that we give our customers the tools and the insights, as well as partnering with developers so they can help install as much solar as possible with Solar for All.

**Helping Local Solar Thrive**

Making sure we are working with DCSEU on giving our customers more choices and availability for solar. To date we have over seventy-five hundred customers are connected. Customers can go on-line to see if solar is right for them.

**Enabling Solar for Limited Income**

We mentioned working with the District for low to moderate income customers, to help them get solar.

***Washington Gas Presentation Melissa Adams***

*PowerPoint Presentation shown during meeting*

**The Climate Business Plan**

Demonstrates that a fuel neutral approach which includes natural gas as well as electricity, transportation fuels, etc. is the most cost-effective way to reach the District’s GHG emissions reduction targets (50% by 2032 and carbon neutral by 2050)

Aligns with and supports DC Public Service Commission Vision for Modernizing the District’s Energy Delivery System.

* Sustainable
* Well-Planed
* Safe & Reliable
* Secure
* Affordable
* Interactive
* Non-Discriminatory

**Peak Demand Defines System Design**

By design, the natural gas distribution system in the District is capable of delivering 61 percent more energy on a peak winter day than electric grid is designed to deliver during a peak summer day.

**Washington Gas’s Vital Role Today and in the Future**

* Preserving Affordability
* Maintaining Resilience
* Protecting the Vulnerable from Cold Weather
* Enabling Renewable Power
* Leveraging Innovation

**Climate Business Plan: SEU Implications**

* Energy Efficiency achieves 12% of reductions by 2032, 36% by 2050
* Energy efficiency is by far the largest source of jobs in the energy sector, including construction, production/manufacturing, installation, maintenance and repair
* Build complementary energy efficiency offerings between SEU and Washington (FC 1160)

**SEU GHG Metric Adoption Recommendations**

* Ensure all objectives of the Public Service Commission for Modernizing the District’s Energy Delivery System are considered.
* Fully analyze the intersectional considerations of a transition from energy metrics towards a GHG metric
* Understanding timing impacts and dynamics of GHG accounting assumptions (marginal vs. average emissions rate) and application of energy use reduction metrics vs. GHG reduction for power purchase agreements or other offsets.
* Maintaining the core energy reduction metrics will continue to drive energy reductions and provide more data, including the current SEU pilot program, about the applicability of transitioning to a GHG metric.

***DOEE Presentation on Electrification Edward Yim, Ade Sonaike & Alex Fisher***

Context of Electrification – Clean Energy DC Plan

Necessary “To achieve its 2032 GHG Emissions target, the District will clearly need to shift away from fossil fuels for buildings (natural gas and fuel oil) and transportation (gasoline and diesel) while simultaneously decarbonizing its electricity supply.”

This is based on the three pillars of deep decarbonization (maximum energy efficiency, clean electricity, and electrifying appliances.”

**Supporting Policy Documents**

* IPCC 5th Assessment
* Deep Decarbonization Pathway Project
* US Mid-Century Vision (Obama Administration)
* State Energy Plan and City Climate Action Plan

**Electrification Studies**

There are two tracks of electrification study that DOEE is working on.

* Residential Building Electrification (initial market analysis, cost-effectiveness analysis, impact on low-income communities)
  + Looks at programmatic aspects of electrifying residential buildings and will provide actional information on how best to design and devise fuel switching programs
* Strategic Electrification Roadmap (buildings, transportation, hourly grid emissions, grid assessment, mitigation strategies)

**Electrification Roadmap Updates**

Full study completed by Spring of next year (2021).

* Task 1-3 – Nearing completion
* Task 3 – Will provide a forecast model of hourly emissions in PJM
* Next Steps – Grid analysis and exploring Non-Wires Alternatives (NWA) opportunities

**GHG Factors in Electrification**

* Natural Gas Emission Factors (includes upstream emissions, local system emissions, combustion)
* Electric Grid Emission Factor (PJM / RFCE fuel mix, marginal hourly emission, DC’s purchase mix including RPS)
* Global Warning Potential (100-year timeframe: 28-36 for CH4, 20-year timeframe)

**Natural Gas Segments**

DOEE’s study has accounted for all segments of the supply chain. For the purposes of this conversation it can be broken down into upstream and downstream.

* **Upstream**
  + Exploration and Production
  + Gathering and Boosting
  + Processing
  + Transmission and Storage
* **Downstream**
  + Distribution/Fugitive Emission
  + Stationary Combustion

**Natural Gas – Source Emissions**

* Currently the SEU only takes into account combustion at 11.67 lbs/therm CO2e for a total of 11.67
* DOEE analysis show that is not the actual impact of natural gas on GHG emissions, and DOEE total analysis is a total of 14.25 lbs/therm CO2e. This takes into account the emissions from exploration and production, gathering and boosting, processing, transmission and storage, distribution (fugitive emissions) and combustion. None of these are taken into account currently by SEU metrics.

**Climate Benefits of Fuel Switching using current SEU metric (combustion only) versus using all factors metric**

* Single Family GHG Savings Compared to Code Compliant Gas Furnace (Combustion Only metric)
  + In this scenario the efficient gas and air source heat pump save roughly the same amount of CO2e
* Single Family GHG Savings Compared to Code Compliant Gas Furnace (All Factor metric)
  + In this scenario, the efficient air source heat pump is clearly better for GHG emissions at 710 lbs CO2e versus the efficient gas furnace at 409 lbs CO2e
* Revised numbers have significant impact on how we think about fuel switching and we are going to recommend using the revised numbers for natural gas.

**PSC** Cary Hinton

Chair Corman ask Mr. Cary Hinton, PSC, did they have anything to add. Mr. Hinton said the PSC didn’t submit slides and wasn’t clear that a presentation on the subject was expected and would be available to answer any questions about any proceedings. So, regarding some issues the answer is “no we don’t have any specific recommendations regarding the SEU”.

**Follow-up Conversation**

Chair Corman invited the presenters to participate in the dialogue with questions or statements

about their presentations given. Ms. Dodge suggested Chair Corman give an overview why this panel was called before the Board.

Chair Corman said the advisory board was grappling with the issues as did the auditor. Determining how to build into the SEU performance benchmark direct measures for GHG as opposed to energy savings. Currently, GHG reductions are tracked and we are aware the utilities do track them, but they aren’t one of the performance benchmarks that are either rewarding or penalizing the SEU. There could be a number of ways that we could be addressing a conversion or an incorporation of the GHG reduction benchmark, bearing in mind that a new contract will be coming up soon, and at the point the current first five year contract ends an option period could be exercised. We need to be mindful that SEU performance benchmarks span the five years.

Do any panelists have anything to add before we open up questions?

Mr. Paustian said how about targets we have to get agreement on? How do we treat our RPS in our calculations of GHG emissions from electrification? DOEE was using the marginal emissions.

Mr. Yim stated not in this study. In its DC Plan, DOEE takes contributions and savings from our RPS programs. Having said that the issue isn’t that clear. Categories of GHG factors are in the District’s purchase mix, including to be taken into account in figuring out what emission factors there is little. The RPS has to be taken into account.

Ms. Adams stated there has been a lot of interesting discussion on very complex issues and she would encourage us not to “invent numbers”. As we look at this it is really important that we consistently apply analytics and metrics that we choose as we go through our process. We saw such a range of different and contradictory. She thinks that some of this could be addressed very well or the ongoing proceeding the PSC is conducting now with respect to looking at quantitative and qualitative metrics for evaluating utility focused. She does not see anybody addressing cost and peak electricity.

Mr. Yim responded to Ms. Adams comment about inventing a new approach and respectfully explained that’s not the case. He clarified that we’re simply filling in missing information about the GHG emissions associated with natural gas that other people submit. This is capturing the actual global warning potential, and he is not suggesting anything new.

Chair Corman said an answer period may not be sufficient. We could do a subcommittee after this to follow-up. Would that be acceptable to the speakers? The Sierra Club, Washington Gas and DOEE are available.

Mr. Trabue was asked did he want to add anything to the discussion.

Mr. Trabue echoed the sentiment of the thoughtful presentations. He noted the presenter from the Sierra Club said that “in the Sierra Club’s review the majority of the SEU’s incentives work on gas measures” and he does not know where that conclusion was drawn. He explained the SEU has been spending eighty percent on electric and twenty percent on gas measures. We haven’t finished this fiscal year, so he does not have analysis for this year but guesses it’s about the same.

Chair Corman said she wasn’t clear on the cost of installation compared to operation of air source heat pumps. Mr. Matthias answered it’s cheaper to install an electric system rather than a dual electric and gas system in new construction. You can save the whole cost of connecting grid and monthly service charges. For existing buildings, it depends on the type of home, apartment or single-family home. It also depends on if there is existing duct work in the home that can distribute hot air. It’s a complex question. More about how we can help low-income people. Ms. Dodge said she thinks we really need to make sure that the members of the advisory board have a chance to ask some basic questions about what is being discussed. She noted we have RPS targets and statutes, but doesn’t know (though hopes) if they are being fulfilled actively and in a timely manner.

Mr. Pausitan said the alternative compliance payment is his understanding of what Ms Dodge was talking about, the renewable energy portfolio standards and the extent that we expect there to be large and present gaps be taken into account in the projections for their fulfillment. He said it’s his understanding that it’s not a big issue but maybe PSC can tell us. Ms. Dodge stated maybe this can be pursued in a follow-up.

Chair Corman asked how do they want to do the follow-up. Ms. Dodge suggested the Board meet without the panel on the great material presented today. The Board should review all the information. Chair Corman, the board will get back with the presenters,

The Board will ask for an extension from the DC Council for submitting the SEU Advisory Board Annual Report.

***Other***

***Next Agenda***

* Approval of July 14, 2020 minutes.

***Actions taken by the Board***

* Approval of July 14, 2020 meeting agenda

**Adjournment**

* Chair Corman adjourned the meeting at 12:00 P.M.

*Minutes prepared by: Lynora Hall*