

Mitigation Work Group Buildings Ad Hoc Group

June 4, 2020

Meeting began at 3:00pm online.

Attendees: Facilitator Mark Stewart, Cindy Osorto, Chris Hoagland, Michael Powell, Alex Butler, David Smedick, David St. Jean, Eric Coffman, Jim Grevatt, Richard Louis, Susan Miller, Thomas Walz, William Ellis, Tom Ballentine, Ellen Valentino, Lori Graf, Margo Thompson, Bill Castelli, Drew Cobbs, James Grevatt, Peter Trufahnestock, Christopher Beck, Susan Casey, Kimberlee Drake, Erick Thunell

Introductions:

- This was the first meeting of the ad-hoc subgroup for Buildings - Opening remarks were made by Chris Hoagland, MDE's Climate Change Program manager followed by Mark Stewart, University of Maryland's Sustainability manager who led the discussion via a slide presentation (also posted to this webpage.) Chris said the volunteer Ad Hoc group was formed to help the MCCC Mitigation Work Group take a closer look at the **buildings sector** to identify what targets the state will have to meet. Mike Powell, co-chair of MWG reminded the group that the goals and conditions pertaining to their work are set out in law - in the Greenhouse Gas Reduction Act (GGRA).
- Mark asked the volunteers to begin the discussion by answering the question: "What would a carbon-neutral buildings sector in Maryland look like?"
 - Mark Stewart said that the University of Maryland consumes a large portion of natural gas and has a CHP component.
 - Susan Casey: All ad hoc group documents will be posted in the MCCC Mitigation website when it goes live.
 - Mike Powell: The ultimate plan as a whole has to have a positive economic impact on the state.
 - Chris Hoagland: Things to consider as we deliberate and evaluate economy-wide zero carbon are:
 - How to decarbonize electricity - when, how, where?
 - Then electrify everything else.
 - Cindy Osorto: need to consider affordability, reliability, and any potential disproportionate impacts to low or moderate-income, rural, or disadvantaged communities.
 - David Smedick: in favor of decarbonization, electrification, and building clean, healthy, and affordable homes.

- Tom Ballentine: There are problems on the ground - we don't know how fast buildings can be made carbon neutral; international energy codes will have a lot to do with how buildings can be efficient, and some will create carbon reductions, there are many types of buildings.
- William Ellis: Senior Portfolio Manager for Pepco; cheapest reductions is that which isn't being used; baseline energy use needs to be considered
- Eric Coffman: how do we define carbon neutrality? There are many national and local conservations that we can draw inspiration from
- Susan Miller: Bring in the best practices from other states
- Thomas Walz: Previously presented on buildings for the MCCC Mitigation Workgroup on April 16, 2019, alongside Cara Martin and Dr. Reinhard Rademacher.
- David St. Jean: Experience working with DOE, MEA, and others; database is available to look at state building energy use; chairs the Green Purchasing Committee; future of decarbonization involves state buildings; energy performance contracts with state agencies are underway
- Jim Gravatt: Energy Futures Group, promotes energy efficiency throughout various states and has expertise in EmPOWER; Vision: inclusive of all communities, especially economically disadvantaged communities; this pertains to environmental justice concerns. Maryland EmPOWER programs allows for environmental considerations according to PSC Commissioners
- Drew Cobbs: Looking forward to finding a realistic and cost-effective approach
- Lori Graf: Maryland Building Industry Association CEO suggested that the group look at the new 2021 Code - it's going to be quite different, especially for residential. She offered to have the Home Builders' Association look into cost differences.
- Bill Castelli: interested in retrofiting.
- Peter Trufahnestock: Director of Governmental Affairs for Columbia Gas of PA and MD; found out about the subgroup via the Chamber of Commerce; interested in participating.
- Alex Butler: Policy Associate at the Maryland Association of Counties (MACo).

Background Presentation by Mark Stewart, UMD Office of Sustainability:

- Greenhouse Gas Emissions Reduction Act GGRA Reauthorization (2016) - set



- IPCC is affecting communities disproportionately, including impacting agricultural communities in the Eastern Shore; there is already
- Current GGRA law aims to reduce gross emissions between 80% and 95% from 1990 levels by 2050
- Space heating and water heating takes up the most use for both residential and commercial natural gas end-use.
- California is phasing out natural gas systems for space and water heating systems; they have a net-zero emissions goal.
- Heat Pump Basics - most new homes in the South Atlantic Region already have heat pumps.
- RMI Report: “electrification is cost-effective for customers switching from propane or heating oil...”
- Full Scale Electrification of an entire city or state has affordability considerations; peak demand use of electrification could also affect reliability.
 - WGL: hybrid solution proposed in their Climate Business Plan for DC: hybrid heating, replacing natural gas with renewable gas (RNG), and improving emissions from transmissions and distribution.
 - Gas utilities are developing plans for net-zero emissions.
- Is there enough RNG to decarbonize natural gas? There are limited supplies.
- Industry is the hardest to decarbonize but is also a part of the conversation.
- MWG Work Plan outlined objectives for the Buildings subgroup and is focused on residential and commercial.
- Four mechanisms:
 - All-electric new buildings
 - Energy conservation in existing buildings
 - Electrify heating systems in existing buildings
 - Low carbon heating fuels
- Climate planning is most appropriate when there is a specific target - please begin thinking about whether you have a specific target year for net-zero emissions
- Will be sharing draft recommendations soon
- Looking for speakers to include; studies to include; and we are open to suggestions!

Discussion

- Ellen Vallentino: Some of the answers could be no for the guiding questions. What are we defining as “commercial”? What would be the effects on interruptible load or



demand of electrification? What will the environment look like in the future? She also suggested that the group add manufacturing to their agenda.

- Tom Ballentine: IPCC recommendations should be looked at carefully.
 - Combination of approaches can be considered-mechanical engineers need to be plugged into this conversation.
- David Smedick: Interested in datasets for building sector growth; including commercial growth:
 - Department of Planning has some information
 - Hospitals having reliability energy supply is certainly important
 - Tom Ballentine: Covid has affected the industry and there is some uncertainty about future projections
 - Eric Coffman: Metropolitan Washington Council of Governments (WCOG) just updated their [regional forecast for commercial construction](#).
- David Smedick, Sierra Club: Is there a building and transportation connection? Has MDOT set any specific targets pertaining to buildings?
 - Tom Ballentine: Next building code will consider EV infrastructure
- James Grevatt: is there consideration for locational efficiency?
- Ellen Vallentino: What type of buildings are being defined as commercial buildings?
- James Grevatt: how should we consider cost-effectiveness on various approaches - can environmental impacts be considered?
- Mark suggested inviting experts to speak at future meetings:
 - Lori Graf: 2020 building codes will be coming in soon and there could be an expert-led presentation on what they will include
 - James Grevatt: There could be a presentation on EmPOWER and current utility efficiency programs
- James Grevatt: What makes up some of the cost differences for buildings?
 - Lori Graf: MBIA can find more information
- Mike Powell: GGRA statute states that any recommendations needs to produce a net economic benefit to the State's economy (Environment Article §2-1206)
- Please feel free to send specific questions, comments, or studies prior to meetings so that we can tie those into discussions: stewartm@umd.edu;
cindy.osorto1@maryland.gov
- The meetings will take place the first Thursday of each month through October from 3-5 p.m. Volunteers will receive calendar invitation.

