

Maryland Commission on Climate Change

Mitigation Working Group

April 16, 2019

10:00AM - 12:00PM

Meeting Minutes

Attendance: Secretary Grumbles, Stuart Clarke, Michael Powell, Tad Aburn, Luke Wisniewski (for Brian Hug), Ben Hobbs, Heidi Hawkins, Colby Ferguson, Gerald Jackson, Colleen Turner, Chris Rice, Elliott Campbell, Susan Payne, Cara Martin (Optimized Thermal Systems; panelist), Reinhard Radermacher (UMCP; panelist), Tom Walz (DHCD; MWG member and panelist), David Costello (Energize MD), Hans Schmidt (MDA), David Smedick (Sierra Club), Brandy Espinola (EFC/UMD), Dean Fisher (MEA), Brandon Baik (MEA), David Giusti (MEA), Rich Thometz (WAP/MEEHA contractor), Michael Herzberger (MES), Michael Siers (Towson/RESI), Catherine Menking (Towson/RESI), Steve Hearn (Lilker EMO Energy Solutions), Jeff Silva (unaffiliated), Joe Lutz (MDE), Erick Thunell (MDE), Megan Ulrich (MDE), Jess Herpel (MDE), Lisa Nissley (MDE), and Chris Hoagland (MDE).

Phone: Lisa McNielly, Tom Weissinger, Dave Nemazie (UMCES, STWG)

- 1. Welcome and Introductions** – Secretary Grumbles called the meeting to order at 10:04 and introductions were made around the room and on the phone. In addition, he made the following opening remarks:
 - Announced the opening of an exhibition on climate change, tonight at Morgan State University, managed by Barbara Paca;
 - Noted that we are still working hard on the draft GGRA report but do not have a certain final date for its release at this time; we will welcome robust public comment and debate once it has been released.

- 2. Public Comment**
 - Jeff Silva (unaffiliated; prior inspector for asbestos and mold) - Maryland has previously done well in the solar decathlon competition, and has been placing for decades (news article clipping from 2017 provided); however he is concerned that these construction techniques have not been presented in the field, and should be applied on a large scale in buildings. Regarding mold, expressed concern related to the thermal boundary in housing that collects moisture in the insulation, and can damage the structure.
 - David Smedick (Sierra Club MD) - Noted that the Sierra Club is starting to pay more attention to the buildings sector, especially as improvements are seen in other areas such as energy generation and transportation. In general, he feels that the State needs to be setting long-term targets that are in line with the State's goals; and looking at how to eliminate fossil fuels from the buildings sector, especially engaging the public about personal decisions regarding their homes. He suggested engaging with ECO, as well as

considering how incentives are structured. He will provide additional details in written comments next week.

3. Buildings Panel Introductions and a Facilitated Discussion on Buildings

The panel includes the following experts:

Tom Walz - Multi Family Energy Production Manager, DHCD

Cara Martin - COO, Optimized Thermal Systems, Inc.

Dr. Reinhard Radermacher - Minta Martin Professor, University of Maryland

- For introductory information from Cara Martin and Dr. Reinhard Radermacher, please see background presentation, posted on the MCCC website under MWG meeting materials for this date.
 - Tad Aburn - The long-term benefit and cost-savings are clear, but the up-front capital cost can be a challenge. Asked whether the panelists thought financing, mandates, and/or education/communication were the most important mechanisms for moving forward effectively.
 - Reinhard Radermacher said all of these are important.
 - Cara Martin agreed, noting that educational training is particularly important in her opinion. She provided the example that you need the building maintenance people on board, those on the ground who are actually going to be dealing with the measures, or they will be a barrier to implementation.
- Tom Walz (introductory statement): Some portions of EmPOWER are restrictive to fuel switching; two examples include that shell measures are not allowed for buildings heated by fossil fuels, and replacing non-functional equipment is also not allowed. In order to avoid a perceived impropriety, we are losing opportunities to decrease emissions from residential buildings. EmPOWER Maryland is not aligned with the GGRA goals, and it is important to take this information and make program decisions based on what the designed intent of EmPOWER actually was.

1. *What is an effective and achievable target for decreasing emissions from residential and/or commercial buildings in Maryland?*

- Cara Martin - Looking at the GGRA goals, it appears that approximately 19% of reductions are achieved through EmPOWER, 30% measures within residential/commercial buildings, but only 5% total. This is relatively small, and more is achievable. Looking at other states, few have specific goals for buildings: California does have net zero energy goals for new construction, and NY has one of the only general reduction goals. New construction is important but we *need* to address existing. She did not suggest a specific reduction goal percentage but emphasized that there was room to be more aggressive.
- Reinhard Radermacher -He mentioned that achieving net zero energy buildings in Maryland is possible and that it should be attained as soon as possible.
- Tom Walz - There is lots of work already being done, but there is the potential for more/higher-level engineering analysis. We should expand EmPOWER, and create large-scale funding mechanisms to mitigate risk of investment and buy-down energy rates. We are on a good path and ranked well in the ACEEE; community solar efforts are going well. Also emphasized that the health of citizens is just as important as energy savings. In considering specific goals, we should not put too much of a reduction burden on one sector or another - we need to balance how we

get there. If we maximize what we can do, we will also reduce the error bars. In summary, we need to incorporate a monitoring mechanism, and create financing opportunities.

- Ben Hobbs - Asked, looking at 2030, what portion of reductions could be expected to be from new buildings.
 - Cara Martin stated that the majority of the problems are in existing buildings; she supports new construction standards but existing buildings are probably in the 95% range. Reinhard Radermacher agreed, noting that refurbishing existing buildings is extremely important.
 - Reinhard Radermacher stated that refurbishing existing buildings is extremely important.
- Tad Aburn asked about long-term goals, and how the panelists would recommend phasing the emission reductions from buildings in our long-term State plan.
 - Reinhard Radermacher provided the University of Maryland campus power plan as a good example of a long-term plan for emission reductions in buildings.
- Stuart noted that the panelists so far have been reluctant to indicate a specific target, which is understandable, and also asked regarding whether they had an opinion on whether one should actually be set.
 - Reinhard Radermacher's initial thoughts were a hard goal of 50% by 2020 and 100% emissions reduction by 2030. He continued to state that Maryland's early plan should be to move slowly and deliberately, taking time to learn. Then, we can accelerate our efforts with what was learned and make aggressive measures to reach our goals.
 - Cara Martin stated that she did think the State needed a specific measurable goal to push for, although leaving some room for creativity is important. New construction is obviously easier and it is important for example-setting but existing buildings are the heavy hitters. Providing support mechanisms for renovations, and trying new technology is important. Furthermore, the building sector is used to having to achieve specific targets in savings, etc., so they would be receptive to the specificity.

2. *What specific mechanisms would you recommend for decreasing emissions from residential and commercial buildings to achieve this target?*

- Tom Walz listed several items, including: (1) a comprehensive analysis of existing housing stock; (2) time of sale retrofits; (3) energy star standards; (4) considering savings for lighting upgrades in retrofit cost/benefit analyses; (5) remove certain restrictions from EmPOWER and align it with the GGRA goals ; (6) address split incentives for rental properties ; (7) improve building codes.
- Reinhard Radermacher- We need to set goals and provide funds for incentives as well as education. We should study the savings from houses that run efficiently.
- Cara Martin - We need to make sure you are allowing opportunities for new technologies; there are technologies available and we need to support the market in order to lower the prices. There is the potential for utilities to become involved, and increasing awareness of energy usage to continue to drive savings. We could use more support for education and training.

- Tom Walz asked the other panelists about the difference in efficiency of measures at different temperatures (i.e., as average temperature increases, or the number of high heat days increase).
 - Cara Martin explained that as the temperature increases, so does the demand for cooling, which makes cooling our largest potential savings; we additionally will need to address peak load emissions.
 - Reinhard Radermacher further emphasized that the increase in energy usage is disproportionate to the increase in temperature, because the efficiency of the equipment decreases at greater usage.
 - Cara Martin added that this gets back to the importance of holistic measures; you need to make sure the house has a tight envelope to support total system efficiency, as well as a more efficient cooling system.
- Tom Walz stated that the DHCD reach is large, meaning the potential for impact is large, but we are not doing enough right now. Progress is limited by training and engineering capacity, among other things.
 - Stuart followed up by asking whether Tom was suggesting that programmatic levers are available at DHCD. Tom stated that yes, he believes so, and that they would welcome some additional analysis. MES is currently working to pull data, and create a portfolio of measures to prioritize/emphasize. Additionally, funding is needed, and it must be secure - it's hard to ask companies to do a lot of investing and legwork and then they do not end up with support in the end.
- Stuart asked generally for panelists to let us know (either now or later in writing) if there are any best practices that could be identified - particularly those that other states are already doing.

2. New Business and Wrap-Up

- Summer meeting schedule - Luke noted that the extra summer meeting would be decided at the MWG Steering Committee level, but for members to please hold both dates for the time being.
- There was no additional business from MWG members.

12:10PM Meeting Adjourned