

**Mitigation Work Group
Buildings Ad Hoc Group**
Topic: Discussion on Draft Recommendations
September 3, 2020

The meeting began at 3:00 p.m.

Attendees: Michael Powell, Kim Coble, Mark Stewart, Chris Hoagland, Cindy Osorto, Dean Fisher, Ruth White, Diana Younts, Laura Petrillo-Groh, Erick Thunell, Thomas Walz, Ellen Valentino, Emily Curley, Nick Harbeck, Kirsten Jackson, Cherise Seals, Bryan Howard, Nick Harbeck, James Grevatt, Stephen Holcomb, John Fiastro, Allison Maginot, Christopher Beck, Jennifer Eugene, Maria Frazzini, Liz Feigner, Jamal Lewis, Tom Ballentine, Brian Smith, Caitlin Madera, Cherise Seals, Christopher Russell, David Smedick, David Giusti, David St. Jean, Rep. Lorig Charkoudian, Susan Casey, Donald Goldberg, David St. Jean, Aaron Greenfield, Allison Maginot, Brian Smith, Jennifer Eugene, Peter Trufahnestock, Thomas Marston, Abdulrahman Mohammed

Introduction

- Christopher Hoagland (Climate Change Program Manager, Maryland Department of the Environment) thanked the participants for joining and reminded all that the Buildings Ad Hoc group meetings materials are on the Commission's Mitigation Work Group's [website](#).
- Mark Stewart (Facilitator, University of Maryland): Thanked those who submitted written comments about the draft recommendations to the Mitigation Work Group (MWG) and he committed to distributing a full draft report to the sub group, including more background, next week. Today's meeting will focus on the draft recommendations. September 15 is the deadline to submit comments on both the draft recommendations and the background report. This ad hoc group will submit the first round of discussion points to MWG. In October, the full Commission will discuss any MWG-approved recommendations.

Recommendation 1: Enable fuel switching under EmPOWER

- Mark said the sub group often has discussed EmPOWER in the past. Heat pump incentives are not currently available for customers with fossil fuel heating systems. DOE analysis that was shared shows that electric heat pumps can be the lowest cost option today, especially for customers with oil or propane heating systems.
- Ellen Valentino (Mid-Atlantic Petroleum Distributors Association) said that the state should first certify that the grid of today can build to current capacity. During very cold times, the grid of today can have a difficult time.
- Jim Grevatt (Energy Futures Group) talked about how heat pumps can provide financial benefits in cold climates and various studies have proven this. There is no technical basis for not using heat pumps in Maryland, considering that colder climate zones have had positive experiences.
- Mark agreed with Jim that heat pumps are good for this climate zone.
- Tom Ballentine (NAIOP) asked if they were talking about heat pumps for commercial or residential use. Suggested the group review Maryland data. Said there is fairly high variation. The Rhode Island Service Commission has begun a similar discussion.

- Mark said there are equipment ratings and there are various performances in different zones. Without question, building type and use matters a lot.
- Thomas Marston (MBIA) said that EmPOWER would need to change the way people pay for incentive programs to facilitate fuel switching.
- Thomas Walz (DHCD): The original announcement for EmPOWER Maryland was intended to provide relief for all Marylanders. Many customers have been paying for a surcharge for 10+ years. Customers should be able to receive a benefit.
- Mark: Direct fuel use in residential and commercial buildings has increased in Maryland between 2006-2017. EmPOWER has been excellent in efficiency but there is still room to grow.
- Ellen: Coal plants had to increase capacity which is a Catch 22. There is an environmental cost in increasing electricity. She asked if the draft recommendations are premature considering the recent announcement of coal plants closing.
- David Smedick (Sierra Club) said he heard from Pepco previously that there are ongoing capacity and peak demand considerations from energy management companies. He is confused about Ellen's comment. Agrees that grid reliability is important.
- Chris Hoagland talked about the capacity of the grid and mentioned an NREL study on seasonal peaks that found that even ambitious electrification would not raise MD winter demand to summer levels, so grid capacity not a limiting factor for heating electrification. This is about incentives, not requirements. The first two recommendations are incentive-based rather than prohibitions.

Recommendation 2: Let EmPOWER facilitate beneficial electrification

- John Fiastro (Vicinity Energy) Ratepayers have a lot of questions about EmPOWER. Would customers support programs that would incentivize? The reality is that some folks are paying a lot of money on their electricity bills. Legislators get a lot of questions and energy conversations are always political. There is an equity concern here. Only 20% in gas customers would enjoy financial savings. Natural gas makes up the majority of non-electric users. It looks like the switch to electrification will cost more. Concerned about a cost cap regarding an EmPOWER surcharge. There are methodologies for the different cost benefit pieces. We're not talking about an overall cap.
- Jamal Lewis (Green and Healthy Homes Initiative): Echoed John's concern for equity. He hopes there will be more recommendations made about low-income households that have had historic inequities and that there also is mention of weatherization and energy efficiency. Energy efficiency reduces load in the grid. GHHI advocates for health and safety, including addressing mold issues.
- Ellen said she thinks John and Jamal raise great issues. These programs don't usually come with equity access. Increased insulation makes sense. Not heat pump incentives since people may not be able to afford heat pumps to begin with, with or without the incentives.
- Jim Grevatt said we will not need as much electricity if there is an expansion of heat pump adoption. The MWG was tasked with specifically looking at decarbonization strategies. How do we get there? We have to address cost and design questions.
- Lorig Charkoudian (Delegate District 20) said Maryland ratepayers could do better at leveraging more federal money for equity in terms of energy efficiency. Electrification and cost-effectiveness can work together. A lot of research highlights indoor air quality issues. There is damaging indoor air impacts as well from burning fossil fuels indoors. There is a valid question on where the money comes from.
- David Smedick agreed with Rep. Charkoudian about compatibility to support equity and electrification. Is there a need to add another recommendation? Equitable solutions are important. Low income consumers should be better off after this. Not just avoiding harm. Suggested forming an interagency task force that aligns state agency goals and to find a way to ensure that there will be no additional energy costs for low income populations.



- Tom Ballentine said he thinks these two recommendations have potential since it could be cost-effective to the consumer and building owner. EmPOWER is a good framework in many ways. His concern is defining how to save consumers money over the long-run. Needs to be more direct. Equity concerns should involve a market study in order to better understand costs and how to allocate resources.
- Mark asked the group to send him any definition suggestions. The goal here is to meet the GGRA goals. Electrification of the building sector is one piece.

Recommendation 3

- **Option A: Set 50% heat pump sales share goal by 2025**
 - Mark said that from a greenhouse gas (GHG) perspective, faster adoption of electric heating systems would be beneficial for reducing long-term emissions.
 - Thomas Walz believes there is an intrinsic value here that gets us above the goal. It should include both a greenhouse gas goal as well as a cost effective goal.
 - Bryan Howard (ACEEE): Another thing that should be considered is the availability of low-interest financing for midstream incentives. A number of strategies need to be available.
 - Tom Marston (MBIA) said from the Home Builders' perspective, he support's Bryan's idea that an incentive would not have to be under EmPOWER. You can probably steer a client better if there are financial incentives. Ex: \$500 rebate for a certain water heater.
 - David Smedick said he appreciates setting a target for this sector, to incentivize early adoption within the low-income sector. The starting point is to have health, safety, weatherization and electrification benefits first.
- **Option B: Set residential heat pump retrofit goals**
 - Mark indicated that DOE study shows that heat pump efficiency should continue to increase, so will only become more cost effective over time. This is lifecycle costs.
 - Ellen and Mark disagree about cost.
 - Ellen proffered that she and Mark share data. Ellen represents the backup fuel sources. She believes that the current grid is under pressure and does not sustain our needs today. A certification that the grid will be okay is a critical component.
 - Chris said that there always will be a role for backup fuel sources.

Recommendation 4

- **Option A: Require all-electric new buildings by 2025**
 - Bryan Howard: ACEEE – supports these recommendations.
 - Mark asked, based on 2025 codes, would this recommendation go beyond code?
 - Bryan answered that it could. Code process is consensus-based and has subject matters experts so future codes cannot fully be known.
 - Chris encouraged everyone to read the suggested exclusions for buildings using combined heat and power and district energy systems, and for buildings with unique needs for uninterruptible energy (like hospitals).
 - Tom said he thinks the transition from fossil fuels to all electric is going to be difficult for some buildings, to include peak times. The intent of a cost effective test is good, but he does not see how it incorporates the other trade offs for private building owners. We don't know yet if the state is building to a standard that is two generations behind private industry. Dated standard.
 - Tom said that most of his builder members have an energy model. The commercial market is diverse. Residential question is for someone else. Basing this recommendation on the Rocky Mountain Institute Study....this conflates the finding. There has to be a proof of concept to determine applicability of the scope here. Speak to the residential side. It's already very difficult to push a house through code officials. Don't recognize REM modeling. They like a prescriptive approach. Simple



but expensive for builder to follow the package. Against pushing for a more complicated process for code officials that are already overburdened.

- Thomas Walz: There was an acknowledgement that the building sector would be an initial compromise. It will be difficult. Should focus on incentives on larger projects (commercial and large residential). We have some multifamily housing that has significant engineering capacity and controls. Currently, this recommendation is not consensus ready. We will be revisiting this in the coming years.
- **Option B: Require all-electric new homes by 2025**
 - Rep. Charkoudian said the group seems to be looking at new construction but there are significant investments of natural gas on the eastern shore. She asked if they are considering recommending not adding new fossil fuel equipment and infrastructure? Why is the state incentivizing natural gas? Could be a different recommendation altogether.
 - Mark answered that the subgroup didn't have a specific recommendation that explicitly mentioned prohibition of new fossil fuel infrastructure.
 - Rep. Charkoudain suggested that the group add an explicit statement for no more gas infrastructure. BGE and WGL are looking to expand new natural gas infrastructure. Ex: UMES and Somerset County. Cannot have both strategies.
 - Tom B: Commercial – one presenter said that VRF systems are the answer for commercial applications. Need more study for a broad application. ACEEE said there needs to be more analysis of cost effectiveness. DOD sent a memo with caution on VRF.
 - Jim mentioned that EmPOWER can incentivize new programs and studies.
 - Chris: DOD memo can be added here.
 - Emily Curley (Montgomery County Department of Environmental Protection) said a few jurisdictions are looking into existing building performance standards. Ex: DC and NYC, Washington State, Montgomery County are looking at a local building standard. This is another way to look into this, regardless of fuel use. Mandate on minimum energy performance. Will submit proposed text.
 - Mark: Please do submit text. Subgroup focused less on efficiency opportunities rather than direct fuel use since EmPOWER has been effective historically. Efficiency is the bread and butter of decarbonization.

Recommendation 5: Incentivize net-zero energy all-electric new buildings

- Tom (MBIA): The 2021 ICC Code is a poor energy improvement that is being considered. As he followed the 2018 code cycle, he found that it is heavily weighed towards industry that wants to win. Lobbying was present.
- John Fiastro: If we're talking about incentives for fuel switching or new construction to be electrified, should there be consideration for incentives for combined heat and power (CHP) maintenance and connection to a district energy system that can be more green in long-term? We should consider exemptions as well.
- Mark: Did not have time to dive deeply to CHP and district energy considerations, but those topics could be addressed in an energy transition plan (recommendation 6)
- John: Should consider incentives for district energy. Those incentives would encourage more efficient boilers and electrification of boilers.
- Mark again encouraged everyone to submit written comments.
- Tom B believes that there are interrelated factors that would determine ability to do this. There's a lot of competition for roof space for buildings with over three stories. The PSC may raise the net metering limit. Also suggested that the group can learn from other cities.
- David: This is an option, a bare minimum, but not a requirement. The state should be leading on net zero. Not a mandate.



Recommendation 6: Produce energy transition plan in 2021

- Bryan H: Will send language over but regarding electrification piece, I hope we can include a note on efficiency.
- Tom Ballentine asked how this relates to the DNR PPRP plan that will be done next year.
- Chris: This would complement that effort. This would be more focused on greenhouse gas emissions and electricity. Thank you for flagging this.
- David: There could be expansion here or a different consideration to have equity considerations. Interagency task force could help. What role does the MCCC have in asking for a PSC proceeding? (gas distribution system – ratepayer impacts – attorney general of MASS has asked for this, CA, DC conversations also going on). Should the MCCC play another role in this?
- Rep. Charkoudian: Better PC44 planning should have occurred to consider grid investments. I would like to see more explicit mention of biofuels and RNG. As we're thinking of the role of natural gas, more explicit planning is needed to prevent fracked gas expansion in Maryland.
- Mark: Our set of recommendations to MWG will touch on RNG limitations. It will touch on it not being the silver bullet. We should think carefully about the role of RNG. Where in our systems would there be beneficial use? This could be fleshed out better in this recommendation.
- Chris requested that the group think about the areas where everyone agrees. There are several promising areas. This would go to the MCCC. Not every question will need to be answered in our recommendations. For example, the EmPOWER process has cost effectiveness parameters that will apply and will address the financial cost questions that have come up.
- Mark and Chris thanked those who participated today and said the rest of the work will likely happen offline. This is the official last meeting of the Buildings Ad Hoc group but everyone is encouraged to continue to email comments.

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