

# Maryland Commission on Climate Change

## **Mitigation Working Group**

**August 30, 2018 10:00AM - 3:00PM**

### Minutes

*Attendance:* Michael Powell, Stuart Clarke, Tad Aburn, Brian Hug, Tom Ballentine, Les Knapp, Tom Walz, Susan Payne, Elliott Campbell, Chris Rice, Colleen Turner, Gerald Jackson (for Larry Kasecamp), Jim Strong, Colby Ferguson, Drew Cobbs, Mike Remsberg, Elizabeth Bunn (for Joe Uehlein), Jana Davis, Tom Weissinger, Lisa McNeilly, Tom Dennison, Heidi Hawkins (for Anne Lindner), Ben Hobbs, Gerrit Knaap Senator Pinsky (Commissioner), Treasurer Kopp (Commissioner), John Fiastro (MEA), Earl Lewis (MDOT), Mike Siers (RESI, presenter), Jeff Silva (no affiliation), Doug Aus (Sierra Club MD), David Smedick (Sierra Club MD), David Costello (Energize Maryland), Lindsey Mendelson (Sierra Club MD), Katherine Catalano (Union of Concerned Scientists), Ian Ullman (office of Senator Pinsky), Margie Brassil (office of Dana Stein), Joel Yesley (Climate X-Change), Bihui Xu (MDP), Ken Choi (MDP), James Bradbury (Georgetown Climate Center), Catherine Menking (RESI), Rachel Marks (MDNR), Gary Greening (MDOT/Michael Baker), John Mosheim, Chris Beck (MDE), Erick Thunell (MDE), Joe Lutz (MDE), Hannah Brubach (MDE), Jess Herpel (MDE).

*Phone:* Tamara Toles O’Laughlin, Karen Russell (Climate Change WG of Frederick County), Donald Goldberg

### **10:00AM MWG Meeting Called to Order**

#### **1. Welcome and Introductions – MWG Co-Chairs – 5 minutes**

Brian called the meeting to order and went over the agenda. He noted that, while we are going to limit the time spent on the overview of and brief discussion on the first policy run (in order to make sure we get through the discussion of the recommendations, which is our main goal today), MDE can certainly have a webinar, another meeting, or some other forum to continue discussion at a future date.

#### **2. Public Comment – 20 minutes**

- David Smedick - Supports the part of recommendation R20 regarding a planned/just phase-out of coal, and believes it deserves a separate conversation from the remainder of that recommendation (which includes natural gas). Sierra Club has submitted a [TCI letter](#) which is requested to be distributed to MWG for review [this was printed out and handed to the members during the meeting].
- David Costello - When considering the 40 by 30 modeling, urged the group to pay attention to whether the State expects to meet the 2020 targets, which he would find surprising. He does not believe either methane or sequestration is accounted for appropriately. Much progress so far has been from shifting to natural gas, which can only gain so much more results, and we have much more to do.
- Lindsey Mendelson - Referred to the TCI letter, which many organizations have signed onto. Also encouraged additional, more accessible TCI meeting to allow for robust public comment.
- Katherine Catalano - Attended the TCI listening session that occurred on Monday, which speaks to today’s recommendation on a transportation cap and invest program. Almost all responses at the meeting were positive on this idea, with attendees including many experts, advocates, and other stakeholders.
- Jeff Silva - In 1812, Baltimore confronted the strongest military force of the time; we must match the courage of the soldiers facing the British cannons; we, too, are confronting an overwhelming enemy. Encouraged the MWG to present strong recommendations and stringent requirements.
- Doug Aus - Advocated against widening highways, which encourages more drivers and suburb development. Transportation is now primary contributor to global warming, therefore additional transportation measures needed; like expanding bus service with express routes on the highways, and creating bus-only transit lanes.
- Donald Goldberg - Recommendations for 2030 should consider things that other states are doing, such as the CA 100% renewable law. MWG should consider 100% RPS by 2050 at latest; an economy-wide pricing program; and a market-based mechanism for TCI (particularly tax/invest or fee/invest).

### **3. Overview of Modeling Results** – MDE Staff, E3, RESI – 50 minutes

Chris Hoagland provided an overview of the presentations to follow (including RESI and E3). These presentations are available online under meeting materials. The following information was clarified, and comments were made during the presentations:

- Sensitivity models will be run to provide a sense of the margin of error.
- The largest updates since the last presentation were to building codes, and relicensing Calvert Cliffs, which decreases estimated emissions depending on what type of energy was expected to replace it alternatively.
- This scenario assumed that CAFÉ standards are not rolled back, and that will be a top item for the sensitivity analysis.
- Ben Hobbs expressed concerns regarding the leakage issue of increasing imported power (with electric sector changes, such as through RGGI), and it was clarified that while this is a state and not a regional model, there are components of RGGI such as the ECR and bank adjustments which are expected to account for/prevent a situation where emissions are going down in one RGGI state but just shifting to/increasing in others.
- Senator Pinsky asked why additional VMT reductions are not being considered if transportation is the largest emitter; it was clarified that we can include some additional but that is not what this particular scenario was looking at (this is just the first of several).

### **4. Discussion on Recommendations**

\*see notes in the table below\*

### **5. Forest Carbon Sequestration Update**

Elliott Campbell presented an update from MDNR on forest carbon sequestration. This presentation is available under meeting materials. The final slide of the presentation was MDNR's recommendations, and the first four were approved. The final item was new, and is therefore not listed in the table below.

### **6. Continued Discussion on Recommendations**

At the beginning of the second discussion, Brian proposed two ways to handle the number of recommendations remaining to be discussed (also noting that if anyone had an alternative suggestion, we were open to it): either we can continue with the consensus process, and then at 3:30 end with whatever recommendation we are able to get to; or we can begin using a voting method to help move the discussion more quickly, in the hopes of being able to address all recommendations to be considered. No one voted for the first option, and the majority of members voted for the second option, though some members did not vote. The recommendations that were voted on in this way are marked in the table below with an asterisk.

\*see notes in the table below for specific discussion\*

As we approached the end of the meeting, Stuart Clarke proposed the following for the remaining items. Since these were recommendations that were submitted by his group, and they received little support during the pre-meeting assessment, he moved to vote on removing them from consideration for the 2018 recommendations, and instead tabling them to discuss for potential inclusion in the 2019 work plan. This was approved for items R24, R26, R14, R22, R28, R19, R12, R25, R29, R18, R20, R21, R23, and R30, which are therefore not shown on the table below.

### **7. New Business**

Brian reminded everyone of the upcoming Commission Meetings that they may wish to attend. There was no other business from working group members.

MDE will work to compile and complete the edits discussed, including organizing wordsmithing among relevant parties, and will send the final product to the MWG Steering Committee before submitting to the MCCC Steering Committee on September 5th, with the understanding that there may not be much time for additional review due to the quick turnaround.

**2:30PM Meeting Adjourned**

\* indicates that this recommendation was determined after the point when the MWG members voted to change procedures from consensus to majority voting, in order to allow time to discuss/vote on the remainder of the recommendations

- KEY
- Voted to accept (as-is or with edits discussed)
  - Voted to accept (with edits discussed and minor wordsmithing after by specific parties)
  - Voted to eliminate

ID#	Recommendation	Notes
R9a	The 2020 manufacturing study required by the GGRA should explore the general feasibility of, and mechanisms for potential modifications or enhancements to the current “buy local” provisions in the GGRA Plan, including the use of domestic iron, steel, and manufactured products in energy-related construction.	
R9b	The 2020 manufacturing study required by the GGRA should explore the general feasibility of, and mechanisms for "Buy USA-Made" policies.	
R9c	The 2020 manufacturing study required by the GGRA should explore the general feasibility of, and mechanisms for the development of an in-state supply chain to create lasting manufacturing and other jobs related to renewable energy infrastructure, including (a) committing additional funding for state-certified or otherwise accredited apprenticeship programs to support the workforce needs of clean energy industries and (b) collaborating proactively with industry and unions to develop local manufacturing capacity for offshore wind and solar industries.	-with edits that had been discussed previously at Aug 2nd meeting.
R8	The 2020 manufacturing study required by the GGRA should explore the overall costs and benefits (both economic and environmental) of the Maryland GGRA on the manufacturing sector.	
R41	MDOT should develop tracking of key indicators of greenhouse gas reduction strategies to monitor progress of achieving our goals. Examples include state facilities and fleet adoption of renewable/low-emissions energy sources, ZEV penetration, equity indicators to track participation, congestion levels, VMT per capita, mobility access and adoption of low-emissions vehicle technology for personal use.	-Lisa McNeilly asked why just MDOT; would we want to include other areas/agencies? -Brian noted that would involve a massive re-write and change the intention of the recommendation - would you vote against it as written?
R6	The State's 40 by 30 Plan should include information and analysis on efforts to address social equity and how strategies impact underserved and environmental justice communities. This should address public health, environmental, economic, and job creation impacts.	

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R42	MDOT, MDE, MEA, and the Department of General Services (DGS) should review state fleet procurement procedures and practices and provide direction on electric vehicles (EV), procurement and EV charging station installation guidance and targets by October 2019.	<ul style="list-style-type: none"> <li>-Nancy Kopp suggested adding DBM, since it is on their agenda currently</li> <li>-John Fiastro wanted to add ZEVs (and their filling stations), however it was also brought up by MDOT that there was a specific timeline associated with this recommendation; they will wordsmith offline</li> <li>-All others approved either original or ZEV, as MEA/MDOT will determine.</li> </ul>
R4a	For programs that have been finalized [for inclusion in the 40 by 30 Plan], the GHG reductions and economic benefits should be quantified and included in the 2018 draft GGRA Plan. Examples include the 2018 enhancements to RGGI, the Healthy Soils Program, new programs to address short-lived climate pollutant (SLCPs), and new transportation initiatives in State plans, including the Consolidated Transportation Plan (CTP) and Transportation Improvement Plans (TIPs) adopted by MPOs that include Maryland jurisdictions.	
R1	The State's 40 by 30 Plan should build from the over 100 programs contained in the final 2012 GGRA Plan (the 25% by 2020 Plan), as many of those measures will that are expected to continue generate even deeper reductions after 2020.	<ul style="list-style-type: none"> <li>-Lisa McNeilly - process question - there are later recs that are a slightly different take, and perhaps we like those better or would like them to be merged?</li> <li>-Brian - MDE can rearrange and make sure we combine as needed/makes sense</li> <li>-Gerrit - worth review of how many programs still exist and will generate deeper reductions? Perhaps we can add "following internal review"?</li> <li>-Tad and Mike Powell noted that the inclusion of "build from" and "many will" indicate that it is not implying all existing programs, but rather is acknowledging that this will be a good place to start</li> <li>-When asked whether we would proceed with no change, then, Gerrit noted that he would work with MDE to word-smith.</li> </ul>
R38	Maryland should create a statewide CHP stakeholder working group, led by MEA, to discuss key issues and develop standardized processes across the State of Maryland, and to engage in outreach to smaller utilities in order to provide technical support for CHP projects.	-be sure to define CHP as "combined heat and power"

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R43	The costs and benefits of supporting deployment opportunities of ZEV school and transit buses in Maryland should be researched. The analysis should include: (1) capital, maintenance and operating cost comparisons; (2) research into the viability of zero emission vehicles (ZEVs) as well as hybrid and alternative fuel technologies; and (3) emissions reduction benefit summaries.	-Include working with additional agencies and stakeholders
R39	MDOT should continue to research and evaluate the greenhouse gases emission reduction potential of vehicle and infrastructure technologies, including: connected and autonomous vehicles (CAV); electric vehicles (EVs); and system operations. The evaluation effort should include consideration of safety, congestion, and equity issues including public health, economic, and workforce impacts.	-additional technologies were mentioned, to follow up with MDOT/MEA
R3	The State's 40 by 30 Plan should continue to enhance the process, started in the 2012 GGRA Plan, of looking at measures that may be critical for meeting long-term goals, such as an 80%-90% reduction in GHG emissions or carbon neutrality by 2050.	-Lisa McNeilly believes that we can make this more concise without losing the caveats. -Brian noted that we were simply attempting to reinforce that this isn't the first time we have discussed the issue.
R40	MDOT should continue to enhance travel demand management strategies (TDM), land use / smart growth, active transportation, and intercity travel strategies in collaboration with MDP.	- include other state agencies/stakeholders
R5	The State's 40 by 30 Plan should include explicit discussions of uncertainty. Examples may include emission reduction quantification, economic and job creation analysis, life-cycle emissions and the potency of SLCPs. To the extent possible, these uncertainties should factor into efforts to exceed the 40% by 2030 reduction goal as long as there continues to be net economic benefits and net increase in jobs.	-Ben Hobbs proposed striking all after "goal" in the final sentence -Tad noted the intention was we want to include uncertainty considerations when looking at the deeper reductions, but also acknowledged that the economic requirements are part of the law
R13*	The Commission should urge MDE, in collaboration with other State agencies, to include in the 40 by 30 plan strategies and programs that will ensure that the state meets and accommodates its current EV goals and projections (60,000 EVs by 2020; 300,000 by 2025) with continued vigorous increase after 2025 that is compatible with long-term net zero emissions two to three decades after 2030.	-eliminated as redundant

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<p>R13a R13b R13c R13d* R13e*</p>	<p>As part of the process the insure that the state meets its current EV goals and projections, the Commission should urge MDE to specifically assess: (a) bolstering the State's consumer purchasing incentives for ZEVs and regulatory and financial incentives (for high power/speed ZEV infrastructure installation) with particular attention to investments and incentives for urban and rural residents; (b) advancing policies that employ Maryland's public utilities to aid in efforts to rapidly and equitably expand EV infrastructure in Maryland, with specific targets in rural areas; (c) advancing policies that make it easier to install EV charging infrastructure at multi-family housing locations with attention to high density, urban populations; (d) requiring MDOT and DBM to establish state fleet procurement and EV charging station installation targets and procedures to ensure that no less than 5% of the State's light-duty motor vehicle fleet is comprised of ZEVs by 2020, 25% by 2025, and 80% by 2030; and (e) setting a goal to fully electrify bus transport in Maryland by 2035, including aggressive targets for the rapid deployment of EV school buses, as well as provisions for low-interest financing.</p>	<p>- For the introduction, should change MDE to EVIC; and re-word "to ensure that the state meets" to "to meet the state's"</p> <p>(a) - Nancy Kopp questioned whether this was exclusionary to the suburban population; change "with" to "including". Colleen Turner expressed concern that the wording seems to imply that current practices are discriminatory. Stuart Clarke noted that there is a charge to the MCCC to ensure that certain populations are not ignored; we are asking to include assessments, and have the conversation. Substituting the term "challenging areas" was discussed.</p> <p>(b) - John Fiastro noted that this is something the PSC is currently discussing, and there may be an issue with the timing of the recommendation, the role of utilities, and presupposing an outcome. Stuart noted that we are just discussing an assessment, not stating <i>how</i> we would make it happen. MDOT and MDE also expressed a desire to have this as something we work on next year; for MDE to assess, or keep discussing, but not advocate for particular policies. Remove the word "advancing". Drew Cobbs noted he does not like this one. Nancy Kopp stated that even if the PSC has an order, the Commission can still propose that the state take it further.</p> <p>(c) - Nancy Kopp asked whether there was a specific percentage goal that could be pursued. Colleen noted that it will first be important to identify barriers to charging, which can include lack of dedicated/permit parking, multi-family housing, HOAs, range anxiety, and more.</p> <p>(d) - Voted to remove, with preference for R42.</p> <p>(e) - merged with R43. Add collaboration with county governments and boards of education</p>
<p>R15a</p>	<p>The Commission should urge MDE to include in the 40 by 30 plan include in the 40 by 30 plan specific goals, objectives, action plans, and evaluation and reporting protocols in the area of ensuring equitable distribution of economic benefits produced by climate action strategies, policies, and programs.</p>	<p>-Earl - consider using "promoting" or "working towards" instead of "ensuring"?</p> <p>-Tad expressed that much of this is what we are already doing, and suggested that it is repetitive of what is already in R6.</p> <p>-Combined with R6.</p>

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R15b* R15c* R15e	The Commission should urge MDE to include in the 40 by 30 plan include in the 40 by 30 plan specific goals, objectives, action plans, and evaluation and reporting protocols in the area of (b) ensuring the production of sustainable economic benefits from climate action strategies, policies, and programs; (c) addressing economic dislocations caused by climate strategies, policies and programs; and (e) improving resilience in vulnerable communities.	- Intro should replace “in the area of” with “related to” (e) - question of whether this is MWG purview or should be taken up by ARWG; agreement that this will be reviewed by S.C. and members of ARWG prior to inclusion in report, so this is acceptable. Tom Dennison concerned regarding resilience/reliability of the electric system, which is reviewed annually by the PSC. It was clarified that we mean the resilience of communities, not of the electric system itself. However it was agreed to change the term to avoid confusion. Lisa McNeilly suggested "response to stressors and shocks".
R15d*	The Commission should urge MDE, in collaboration with other State agencies, to include in the 40 by 30 plan specific goals, objectives, action plans, and evaluation and reporting protocols in the area of reducing energy burdens in low-income households.	
R7	The State's 40 by 30 Plan should include analysis and information on efforts designed to ensure a just transition for fossil fuel dependent workers and other workforce-related issues linked to the State’s efforts to reduce GHG emissions.	
R10	The Commission should urge MDE, in collaboration with other State agencies, to seek and work with relevant assistance from Maryland academic institutions to develop a robust evaluation component as part of the 40 by 30 plan. A sound evaluation component would include goals, objectives, indicators, metrics, implementation benchmarks, timelines and reporting protocols that would allow for ‘clear and complete understandings of the strengths, weaknesses, successes, and shortcomings of the strategies and programs that the state is employing’.	-Tad noted that it makes it sound like the current process is not good but he can live with it; much of this is already covered in the law.
R11	The Commission should urge MDE, in collaboration with other State agencies, to include in the 40 by 30 plan a section that is specifically focused on identifying and assessing longer-term greenhouse gas emission reduction strategies. This section should explicitly address steps that can be taken to insure that proposed 40 by 30 programs and strategies are compatible with achieving zero net emissions in the 2050 to 2060 timeframe.	-Tad noted that it was similar to R3, and asked whether we have captured everything in R3 already. Brian asked if it was okay for MDE to combine. -Drew Cobbs stated he prefers R3. -Merged with R3
R4*	The State's 40 by 30 Plan should include new programs that have been discussed by MWG and may have been finalized by State or legislative action.	

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R4b*	For evolving programs that have been discussed [for inclusion in the 40 by 30 Plan] but not adopted, the draft GGRA Plan should provide available information as well as pros and cons on each of these measures and ask for specific comment. Examples include a carbon tax, the “Grid of the Future” concept being considered by the Maryland Public Service Commission (PSC) and a market-based program to address transportation emissions.	
R2*	The State's 40 by 30 Plan should strive to achieve GHG emission reductions greater than 40% by 2030 as long as there continues to be net economic benefits and a net increase in jobs.	
R17*	The Commission should urge MDE, in collaboration with other State agencies, to include in the 40 by 30 plan a section that is explicitly focused on ‘just transition’.	
R17c*	The ‘just transition’ section in the 40 by 30 plan should identify strategies, policies, programs and actions that can be taken to mitigate negative impacts (including related public health concerns) and expand and accelerate positive impacts.	
R17a*	The ‘just transition’ section in the 40 by 30 plan should identify fossil-fuel dependent workers and communities in Maryland.	
R17b*	The ‘just transition’ section in the 40 by 30 plan should identify, as specifically and quantitatively as possible, the existing and prospective GHG reduction programs and policies that may or do have negative or positive impacts on these groups.	
R31	MDE, MDNR and MDA should utilize best available scientific data on land based carbon sequestration and GHG emissions for existing GGRA programs, in collaboration with the UMD/NASA Carbon Monitoring System program, US Forest Service, and the MCCC Science and Technical Working Group.	-edited based on DNR slides presented/discussed
R34	MDE, MDNR, and MDA should adopt the term “Natural and Working Lands” to refer to all GGRA programs concerning land based carbon sequestration and avoided emissions of carbon or other GHGs. This will allow Maryland to better align with the effort coordinated by the US Climate Alliance.	
R32	MDNR should add a program on the carbon benefit of land conservation and avoided forest conversion through compliance with Maryland’s Forest Conservation Act.	-edited based on DNR slides presented/discussed

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R33	MDNR and MDE should continue tracking progress of wetland restoration and biomass to energy but not project a carbon reduction associated with these programs, due to uncertainty in wetland methane emissions and establishment of new biomass to energy facilities in the state.	-edited based on DNR slides presented/discussed
R16*	The Commission should urge MDE, in collaboration with other State agencies, to include in the 40 by 30 plan a section that is explicitly focused on 'social and environmental justice'. We'd urge that this section be developed through outreach and in partnership with urban and rural communities that have experienced particular socio-economic disadvantage and environmental burden.	
R16a*	The 'social and environmental justice' section in the 40 by 30 plan should specifically identify the strategies, programs, and actions in the plan that are expected to advance social and environmental justice objectives.	
R16b*	The 'social and environmental justice' section in the 40 by 30 plan should specifically identify the objectives that these strategies, programs, and actions are expected to advance.	
R16c*	The 'social and environmental justice' section in the 40 by 30 plan should specifically identify the process by which progress towards these objectives will be assessed.	
R27*	The Commission should urge the General Assembly and the Governor to enact, by 2020, specific programs to implement more climate friendly agricultural practices, including regenerative agriculture and other practices that sequester carbon by improving soil health.	-Susan Payne stated that, since the Healthy Soils Act has been passed, and is being implemented, there is nothing else needed at the current moment. She moved to strike this recommendation. Colby Ferguson concurred.
R35*	Maryland should expand net-metering from CHP to 10 MW; if not for all CHP customers then potentially for critical customers such as data centers, the government, and/or critical infrastructure including: hospitals, emergency shelters, wastewater treatment assets, and public safety/correctional assets.	- MEA proposed slightly altered language, removing the specific MW as well as the examples that follow, with preference for the suggestion from PJM, who is considering this matter currently. - It was also suggested that it makes more sense to specify wholesale-rate net metering.
R36*	The key to a stable and growing CHP market in Maryland is long term consistency in order to overcome the large upfront costs and long cost recovery period; and in order to develop an educated and skilled CHP workforce. Maryland should include CHP and other renewable technologies that generate useful thermal energy at a certain efficiency (>60%) which are connected to Maryland's distribution system in the Maryland RPS's first tier ("Tier 1").	

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