Comparison of the Proposed Recommendations for the 2023 MCCC Annual Report to Recommendations in the National Academies of Sciences, Engineering, and Medicine 2023 Report

Summary

The proposed recommendations from the Maryland Commission on Climate Change (MCCC) and the National Academies of Sciences (NA), Engineering, and Medicine 2023 Report, Accelerating Decarbonization in the United States: Technology, Policy, and Societal Dimensions, cover various aspects of addressing climate change and achieving sustainability. Overall, both sets of recommendations share common goals and principles, including equity, public awareness, and climate education. Common themes are identified below, followed by a table (Table 1) aligning specific NA recommendations that are similar or support proposed MCCC recommendations.

1. Transportation and Electrification:

- Both sets of recommendations emphasize the adoption of electric vehicles (EVs) and the expansion of EV infrastructure.

2. Equity and Inclusivity:

- Both sets of recommendations emphasize the importance of addressing the needs of disadvantaged communities and ensuring equity in climate actions.
- The NA recommendations propose various measures to promote equity, including the Justice40 Initiative, multi-level capacity building, equitable technical assistance, and evaluating the equity impacts of just transitions.
- The MCCC recommendations echo this focus on equity, suggesting a Climate and Equity Innovation Fund and emphasizing the inclusion of vulnerable populations, such as those with disabilities and low-income individuals, as an integral part of the state’s response to climate change.

3. Clean Energy and Decarbonization:

- Both sets of recommendations support the transition to clean energy and the reduction of greenhouse gas emissions.
- The NA recommendations recommend measures like economy-wide carbon taxes, limiting power-sector greenhouse gas emissions, and supporting the expansion of renewable energy resources, which align with the MCCC's emphasis on clean transportation, decarbonization incentives, and climate curriculum development.

4. Education and Public Awareness:

- Both sets of recommendations highlight the importance of climate education and public awareness.
- The MCCC recommends advancing climate curriculum in schools and a public awareness campaign, while the NA recommends establishing an Energy Systems Education Network and promoting inclusive dialogue at national and regional levels.

5. Adaptation and Resilience:

- The MCCC recommendations emphasize the integration of resiliency measures into local comprehensive plans and the importance of community engagement, aligning with the NA's focus.

Table 1. Proposed Maryland Commission on Climate Change (MCCC) recommendations for the 2023 annual report paired with similar or supporting recommendations from the National Academies of Sciences, Engineering, and Medicine Report, Accelerating Decarbonization in the United States: Technology, Policy, and Societal Dimensions.

Proposed MCCC recommendations for 2023 Annual Report	**National Academies 2023 Report recommendations**
Mitigation Working Group	
1: Create the following incentives to help Marylanders buy new and used EVs	**9-1:** Accelerate the Adoption of Battery Electric Vehicles **9-5:** Enhance Transportation Equity and Environmental Justice Through Programs, Planning, and Services
2: Create a Fleet Electrification Technical Assistance Program	**2-4:** Build Multi-Level Capacity to Support Community-Led Transitions **2-5:** Develop Equitable Technical Assistance Guidelines **13-1:** Establish an Ongoing Process to Integrate Feedback into Federal Application and Technical Assistance Processes
3: Create a Dealer Engagement Program	**9-1:** Accelerate the Adoption of Battery Electric Vehicles **9-5:** Enhance Transportation Equity and Environmental Justice Through Programs, Planning, and Services
4: Develop EV and V2G readiness standards	**9-4:** Pursue Infrastructure Design, Standards, Specifications, and Procedures

	That Effectively Reduce Transportation Carbon Emissions **9-5:** Enhance Transportation Equity and Environmental Justice Through Programs, Planning, and Services
5: Implement the Advanced Clean Trucks rule	**9-1:** Accelerate the Adoption of Battery Electric Vehicles
6: Implement the Advanced Clean Cars II rule	**9-1:** Accelerate the Adoption of Battery Electric Vehicles
7: Transition locally operated transit systems to zero-emissions buses	**9-1:** Accelerate the Adoption of Battery Electric Vehicles **9-4:** Pursue Infrastructure Design, Standards, Specifications, and Procedures That Effectively Reduce Transportation Carbon Emissions
8: Support and enforce the 2025 electric school bus mandate	**9-1:** Accelerate the Adoption of Battery Electric Vehicles **9-4:** Pursue Infrastructure Design, Standards, Specifications, and Procedures That Effectively Reduce Transportation Carbon Emissions
9: Consider a real property tax deduction or credit for decarbonization improvements	
10: Study using increased tax revenues to support BEPS compliance	
11: Align EV infrastructure incentives with owner/tenant responsibilities	**9-1:** Accelerate the Adoption of Battery Electric Vehicles **9-4:** Pursue Infrastructure Design, Standards, Specifications, and Procedures That Effectively Reduce Transportation Carbon Emissions
12: Transition to electric MARC trains	**9-4:** Pursue Infrastructure Design, Standards, Specifications, and Procedures That Effectively Reduce Transportation Carbon Emissions
13: Allow the state to regulate greenhouse gas emissions from manufacturing	
14, 15, 16 same as 9, 10, 11	
17: Provide funding for EV readiness projects	**9-1:** Accelerate the Adoption of Battery

	Electric Vehicles
18: Fund EV incentives with increased registration fees on light-duty fuel-burning vehicles	**9-1:** Accelerate the Adoption of Battery Electric Vehicles
19: Modify STRIDE to reduce ratepayer costs and facilitate electrification	
20: Align state spending with climate goals	
21: End SEIF support for fossil fuel projects	
22: Remove municipal solid waste incineration as an eligible source in RPS	
23: Require that state funds are not used for fossil fuel projects	
24: Sunset financial incentives for fossil fuel appliances/systems in EmPOWER	
Adaptation and Resilience Working Group	
1: State agencies should incorporate Next Generation Adaptation Plan Justice, Equity, Diversity, and Inclusion priorities and milestones into their annual reports on greenhouse gas reduction and impacts of climate change.	**5-1:** Encourage Prospective, Inclusive Dialogue at National and Regional Levels **6-6:** Support Planning, Public Participation, and Investment in Modernizing Local Grids
2: Using the NextGen Adaptation Plan as a guide, the general assembly should mandate that resiliency measures be integrated into local-level comprehensive plans.	**5-2:** Accelerate the Development, Implementation, Assessment, and Sharing of Energy System Policy and Approaches That Deliver Local Benefits **5-4:** Address Barriers to Local Benefits from Renewable Energy Facilities
3: The ARWG should form an Interagency Funding Task Force as a subgroup to implement the priorities identified in the Next Generation Adaptation Plan.	
5: State agencies that are represented in the ARWG should prioritize funding to support the hiring of people with cultural competency to act as local-community liaisons that serve to communicate and discuss climate change impacts in low-income communities.	**2-4:** Build Multi-Level Capacity to Support Community-Led Transitions **5-2:** Accelerate the Development, Implementation, Assessment, and Sharing of Energy System Policy and Approaches That Deliver Local Benefits **5-4:** Address Barriers to Local Benefits from Renewable Energy Facilities
6: The General Assembly should amend the statute governing the Maryland Commission on Climate Change	

formal membership should be amended to add representation from the Maryland Department of Health, Department of Commerce, and Department of Labor. In current MCCC legislation, the Departments of Health, Commerce, and Labor are not involved in decision making processes and are not required to write annual reports on the status of any programs that support the state's greenhouse gas emissions goals or address climate change.	
Education, Communication and Outreach Working Group	
1: A Well-Funded Public Awareness Campaign-we strongly recommend allocating a budget of $10 million to the Maryland Department of the Environment (MDE) to engage in a collaborative public awareness campaign designed with professional agencies. The campaign's scope should encompass a wide range of initiatives, including an interactive website, consumer navigators**,** media advertisements, billboards, and more 1. Providing easily accessible information about federal, state, and local incentives for clean energy adoption and building resilience. 2. Encouraging homeowners, landlords, and residents in single and multiple dwelling buildings to explore clean energy options without imposing additional burdens on renters or those with energy-related financial hardships. 3. Raising awareness about climate, resilience, energy-efficiency, and sustainability resources and programs designed to support vulnerable communities.	**1-3:** Identify and Provide Resources for a Central Entity to Provide Timely, Public-Facing Information on the Nation's Progress Toward Decarbonization **2-5:** Develop Equitable Technical Assistance Guidelines
2: Advancing Climate Curriculum and School Action Plan-the General	**4-1:** Support the Development of Net-Zero Curriculum and Skill Development Programs for K–12 Students

Assembly codify and fund climate change education as a mandatory education requirement for schools. A separate budget allocation of $2 million is recommended to support Maryland schools in developing and implementing a climate curriculum and $2 million to develop and implement school climate action plans.	**5-10:** Establish an Energy Systems Education Network
3: ECO recommends that the Maryland General Assembly proclaims the first week of April, coinciding with Earth Month, as "Climate Education Week."	
Science and Technical Working Group	
1.1: The state should consider developing a Ready-Set-Go framework for public health adaptation based on early warning systems leveraging subseasonal-to-seasonal (S2S) forecasts. Early health warnings with seasonal lead time should inform contingency planning, and personnel/volunteer training (Ready phase), while sub- seasonal lead time should inform resource allocation, and personnel/volunteer activation (Set phase). Finally, warnings with short range lead time (days) should inform the activation stage, including evacuation, opening of shelters, and distribution of aids (Go phase).	**6-6:** Support Planning, Public Participation, and Investment in Modernizing Local Grids
1.2: The state should issue a report on the background, status, and needs associated with the CDC funding for the Climate and Health Program. Additionally, the state should compensate for the loss of CDC funding for the Climate and Health program within the Maryland Department of Health to enhance Maryland's public health preparedness to climate change.	
1.3: The Maryland Climate and Health Profile Report, published in 2016, should be updated by the Maryland Department of Health and Mental Hygiene in collaboration with university expertise every five years to accommodate more recent scientific evidence and provide relevant future	

projections of health burden in Maryland, with a particular emphasis on climate justice by implementing meaningful community engagement.	
2: Establish a Climate and Equity Innovation Fund	**2-4:** Build Multi-Level Capacity to Support Community-Led Transitions **2-5:** Develop Equitable Technical Assistance Guidelines **6-7:** Invest in Research, Development, and Demonstration (RD&D) of On-Demand Electric Generating Technologies and Long-Duration Storage Technologies **7-6:** Increase Research, Development, Demonstration, and Deployment for Built Environment Decarbonization Interventions **8-7:** Release a Comprehensive Research, Development, Demonstration, and Deployment (RDD&D) Program for Biomass Energy with Carbon Capture and Storage (BECCS) **9-6:** Support Advances in Battery Design and Recycling, Fuel Cell Electric Vehicles (FCEVs), and Net-Zero Liquid Fuels **10-3:** Spur Innovation to Achieve Price-Performance Parity for Low-Carbon Solutions
3: Inclusivity of All Marylanders Populations that are most vulnerable to the impacts of climate change include individuals at the lower income levels, minorities, immigrants where English is their second language, and those with disabilities, among others. The reasons for these disparities vary but include the inability to financially afford adaptation strategies, the lack of access to information, and inequitable distribution and access to programs from governments, non-profits, and the private sector. Consequences of these vulnerabilities can exacerbate health disparities. Therefore, prioritization and support should be given to	**2-1:** Codify the Justice40 Initiative **2-2:** Develop a Federal Baseline Set of Metrics for Disadvantaged Communities for Program Design and Evaluation **2-3:** Implement Federal Legislation for Equitable Outcomes **2-4:** Build Multi-Level Capacity to Support Community-Led Transitions **2-5:** Develop Equitable Technical Assistance Guidelines **5-4:** Address Barriers to Local Benefits from Renewable Energy Facilities **5-8:** Address the Priorities of Native American and Environmental Justice Communities

MDE's current effort to identify communities disproportionately affected by climate impacts and to ensure they are adequately accounted for and included in mitigation and adaptation planning. This is an integral part of the equity and underserved community underpinnings of the 2022 Climate Solutions Now Act and the State's response to climate change.	**6-4:** Provide Rate Options to Encourage Flexible Demand While Ensuring Affordable Electricity **6-6:** Support Planning, Public Participation, and Investment in Modernizing Local Grids **7-3:** Expand and Evaluate the Weatherization Assistance Program (WAP) **9-5:** Enhance Transportation Equity and Environmental Justice Through Programs, Planning, and Services **11-1:** Expand and Extend Funding and Financing Assistance for Actions Benefiting Low- Income and Disadvantaged Households and Communities **11-3:** Address Limited Access Faced by Low- Income and Marginalized Households