Maryland Energy Administration
Supplemental Comments Addressing Proposals in the Draft Building Energy Transition Plan

NOTE: MEA's overall comments were submitted on September 10, 2021 -- these comments supplement those by providing detailed comments on the recommendations included in the draft Energy Transition Plan

September 29, 2021

Additional Macro Comments:

According to E3's Building Study 13% of economy-wide GHG emissions are due to direct-use emissions from buildings.[1] There are other options for more cost-effective GHG reductions in other sectors that may be more effective, achievable and practical than the premise that 100% elimination of direct combustion in buildings is desirable. There are substantial potential gains due to efficiency without resorting to exclusions of specific fuels or technologies.

E3's study overall indicates all three paths of high methane decarbonization, high electrification and electrification with fuel back-up provide similar ends at a similar rate per slide 9[2] From a purely analytical perspective, based on the study results, this would indicate that looking at the most practical and least cost options would optimize benefit/cost. Per E3 Electrification (Slide 38) with Fuel Back-up "shows the lowest overall costs while also reducing reliance on technologies that have not yet been widely commercialized or that are uncertain in their scaleability" indicating this scenario should receive substantial consideration.

1. Adopt an All-Electric Construction Code

MEA Comments: ***MEA does not support an all electric construction code****.* MEA firmly supports decarbonization, and in certain circumstances electrification as one of a series of possible solutions where cost effective and not in conflict with affordability and reliability.

The NBI Building Decarbonization Code provides an electric pathway but is not exclusive to one fuel. MEA believes the NBI Building Decarbonization Code as an overlay of the 2021 International Energy Conservation Code (IECC) is a possible alternative but should be carefully evaluated for life cycle cost/benefit.

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[1] https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MWG_Buildings%20Ad%20Hoc%20Group/Maryland%20Buildings%20Analysis%20Slide%20Report.pdf

[2] IBID

MEA also believes that Maryland must first address the emissions portfolio within the PJM service territory before stringently prescriptive building codes mandating electrification are adopted. At the time of the last subgroup meeting fossil fired electrical generation within PJM outpaced wind and solar generation assets combined by a ratio of 11:1.

2. Develop a Clean Heat Retrofit Program

MEA Comments: MEA opposes as drafted. MEA believes there is potential for fuel switching where greenhouse gas benefits can be assessed and consumers benefit from lower cost, however EmPower's original goals of efficiency and demand reduction need to be considered.

MEA is concerned that no cost benefit analysis has been conducted on mandated incentives for electrification, nor on a mandate for the PSC to make utilities push ratepayers to purchase electric heat pumps against a baseline of existing EmPOWER programs. EmPOWER has been one of the longest serving policy instruments for reducing carbon emissions in the state, and serves an additional purpose of preparing the grid for further deployments of clean energy through reduced loads. The current Future Planning Workgroup underway before a Maryland Public Service Commission appointed administrative law judge is the appropriate venue for discussing the future of natural gas and long term goals of the EmPower Program. It should also be noted, none of the EmPOWER applications have had any sort of empirical work conducted to quantify the differences in the costs and benefits between carbon emissions reductions and costs as the program stands, versus what is being suggested in these proposals. Any proposals cannot ignore the existing, established benefits of the EmPOWER program for the grid, equity, carbon emissions, and health benefits.[3] Further, including data through 2020, the EmPOWER program has saved approximately 11,971,724 MWh and the carbon emissions associated with each MWh since program inception.

B. Allow beneficial electrification through EmPOWER beginning in 2024

MEA Comments: MEA believes that weatherization should be prioritized for low-income households before beneficial electrification, if electrification is cost-effective in these retrofits it may be considered as an alternative. In addition, EmPOWER's large, unamortized balance of roughly $800 million should be addressed before either weatherization or beneficial electrification are added to EmPOWER's portfolio. It should also be noted that because EmPOWER is uniformly funded amongst residential ratepayers its financial impacts are disproportionately felt amongst low-income ratepayers. EmPOWER is already a strong program, with well-established EM&V, and thorough review process, that has, as noted, been responsible for massive reductions in carbon emissions since its inception. As noted in (A) the Future Programming Workgroup is the most appropriate venue for this discussion.

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[3] https://www.epa.gov/statelocalenergy/public-health-benefits-kwh-energy-efficiency-and-renewable-energy-united-states

According to the Maryland Building Decarbonization Draft Study that was published September 3, 2021 by Energy Environmental Economics it was estimated that Meeting electric loads in the High Electrification scenario requires around $2-$3 billion of annual incremental system costs. However, the September 16, 2021 updated version now states that meeting electric loads in the High Electrification scenario requires around $3-$4 billion of annual incremental system costs. This is a difference of $1 billion dollars and highlights that the analysis is potentially informative but additional work is needed to understand the magnitude of potential costs related to benefits.

C. Target 50 percent of residential AC and water heater sales to be heat pumps by 2025, 100 percent by 2030 (modified MCCC recommendation from 2020)

MEA Comments: MEA does not support a purely electrification focused goal for heating system replacement. The goal is unrealistic and it's unclear what the cost/benefit of this effort would be, especially as incentives would likely need to be applied. Also while heat pumps provide promise for new construction in properly designed systems there will be performance and practical challenges to retrofits in the bulk of the housing stock which is already in existence. For example, heat pump water heaters have requirements for space and installation that may force a customer to use a costly conventional electric water heater if a gas option is not available.

MEA suggests a better approach may be to develop tools to educate consumers on the costs and benefits of different fueling options for heating and cooling, including a hybrid heating scenario which was generally the lowest cost option highlighted in the E3 analysis.

D. Discontinue use of the Strategic Energy Investment Fund (SEIF) for expanding fossil fuel use and infrastructure

MEA Comments: MEA categorically disagrees with this recommendation. Restricting the use of SEIF funds limits the effective use of these funds to maximize decarbonization, may risk unintended consequences that limit the growth of clean energy markets, and limit the deployment of energy efficiency and weatherization to low-to-moderate income homes and other efforts.

Specific to gas, as has been mentioned in other fora, the gas expenditures from the SEIF result from a PSC Order, and must be spent as prescribed. Gas-related work has been cleared at the Public Service Commission and the Board of Public Works, as matters of record. Other restrictive action and attempted interference in the general assembly earlier this year was also found to interfere with AltaGas's "vested rights" and carries serious concerns that such behavior would invite litigation.

E. Establish a comprehensive retrofit program for low-income households

MEA Comments: MEA currently operates the Low-to-moderate income ("LMI") grant program which is a competitive grant program that provides funding to local governments and non-profit organizations to complete whole home retrofits for LMI Marylanders. This program also allows for health and safety measures to be installed to enable cost-effective energy efficiency measures. Per our September 10th, 2021 comments this program has been effective and successful and we are working to scale up the volume of homes retrofitted as well as providing options for beneficial electrification, where cost effective, for homes that are exposed to high cost fuels such as propane and fuel oil. MEA is piloting a solar add on competitive grant in Fiscal Year 2022 to encourage coupling solar with these retrofits. Weatherization programs should focus on reducing energy cost and consumption while improving health, electrification should only be considered where a clear reduction in operating costs can be demonstrated in a retrofit.

This program is one of MEA's most popular programs and is always substantially over subscribed. According to the 2021 Maryland Congressional District Housing Profile completed by the National Low Income Housing Coalition it is estimated that Four Hundred Eighty Eight Thousand Nine Hundred Seventy-Six (488,976) Renters are at 80% Area Median Income ("AMI") or below in the State of Maryland[4]. According to a report completed by the American Council for an Energy-Efficient Economy in March 2014, "It is estimated that project costs range from about $50,000 to well over $100,000, often including renovations or improvements that are not directly energy related.[5] According to the EIA, "More than 4 out of 10 Maryland households use natural gas as their primary fuel for home heating"[6] While there are many other data points to consider, these are indicative of the real world challenges that those seeking to decarbonize low-income housing, as well as housing in general, face.

EmPower and the SEIF, while important instruments to advance energy efficiency, clean energy and other uses. The SEIF is a powerful tool but pales in comparison to the degree of funding needed to ensure that LMI Marylander's do not feel the brunt of escalating natural gas delivery and commodity charges without substantial planning and funding from dedicated of comparable scale to the desired goal.

3. Create a Building Emissions Standard

MEA Comments: MEA does not currently support a building emissions standard but believes a continued dialog on continued transparency of energy consumption and cost data for

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4 https://nlihc.org/sites/default/files/Housing-Profiles/Congressional-District-Housing-Profile-MD.pdf

5 Residential Deep Energy Retrofits, American Council for an Energy Efficeint Economy https://www.aceee.org/sites/default/files/publications/researchreports/a1401.pdf

6 Maryland State Energy Profile, Energy Information Administration https://www.eia.gov/state/analysis.php?sid=MD#:~:text=Maryland%20ranks%20among%

commercial buildings, renters and potentially homeowners is worthwhile and that any effort should examine issues of privacy and market impacts.

MEA is also concerned that no Maryland cost-benefit analysis has been conducted on the net zero proposals and to what degree and in what manner the state should support such activities. MEA already provides technical advice and financial grants to support building owners to increase efficiency and lower emissions, financing options are available through Property Assessed Clean Energy Programs and local government operated Green Banks to foster retrofits.

4. Create a Clean Heat Standard

MEA Comments: MEA notes that the Colorado legislation provides for lowest reasonable cost, cost benefit analysis and green and blue hydrogen development. MEA believes that natural gas is distinct from heating oil and propane because its delivery is not made via diesel transportation vehicle and has drastically lower carbon emissions compared to other generating sources. MEA encourages the authors of the report to investigate the potential near term benefits of certified gas, as MEA has suggested in the last two meetings. MEA encourages the authors to examine the natural gas D.C. climate business plan for additional information.

5. Develop a Utility Transition Plan

MEA Comments: MEA opposes this proposal due to the potential for unintended impacts to ratepayers. The impacts of any potential transition from one fuel to another and the implications to affordability and practicality as well as the GHG reductions that would stem from any action. MEA does believe that it would be beneficial for the natural gas utilities in the state to provide their own decarbonization strategies for consideration; WGL and Altgas provided a similar study "Natural Gas and its Contribution to a Low Carbon Future" for the District of Columbia. If a utility transition plan proceeds, it will likely require some degree of accelerated depreciation, compensation for stranded assets and resources for a final conversion of remaining buildings and homes that will have unquantified costs. These costs will either fall on shareholders, ratepayers or government agencies.

These issues as evidenced by slides **23, 24, 26, 27, 29, 30, 31, 33** of E3's Final Maryland Building Decarbonization Study are indicative of the complexity, investment needs and potential ratepayer impacts of various electrification options.[7] However, it is important to note in all scenarios High Decarbonization Methane and Electrification with Fuel Back-up offer the best balance of cost and greenhouse gas reductions. At a minimum this information should be included in the transition plan.

Finally, there is, in effect, already a utility transition plan in existence: Maryland's Renewable Portfolio Standard (RPS). The state's RPS creates statutory obligations for load-serving entities

[7] Maryland Building Decarbonization Study, FInal Report 9/16/2021.

in the state to procure cleaner energy over time. The latest modification to this policy instrument was made in 2019 with the passing of the Clean Energy Jobs Act (CEJA).

6. Offer incentives for net-zero energy all-electric new buildings (MCCC recommendation from 2020)

MEA Comments:

MEA already supports Low-to-Moderate Income Community Solar Program by providing funds to help defray the costs and ensure low-to-moderate income subscribers see a net cost savings compared to conventional energy supply. This is one of MEA's most successful programs and the agency is working to scale up opportunities for projects that provide benefits to LMI Marylanders.

7. Lead by example through the electrification and decarbonization of state buildings (modified MCCC recommendation from 2020)

MEA Comments: MEA is pleased to see that this proposal includes a cursory cost-benefit analysis. However, the recommendation doesn't propose where the "necessary funds to address any additional costs incurred, net of utility incentives, from switching to low-carbon fueled equipment" should come from. MEA notes again that this recommendation is contrary to MEA policy positions endorsed by the Public Service Commission and the Board of Public Works. MEA also again notes that Maryland must first address the emissions portfolio within the PJM service territory before stringently prescriptive measures mandating expensive electrification retrofits without a clearly defined funding stream that does not impact funds that are already scheduled to benefit Marylanders including LMI.

8. Prioritize an equitable level of benefits for all Marylanders (MCCC recommendation from 2020)

MEA Comments: MEA believes enhancing collaboration is worth further discussion and equity should be incorporated broadly into state and local programs. However, a definition of what equity and energy equity that includes environmental and economic justice is essential. MEA agrees that there should be collaboration among the agencies and the General Assembly to ensure that all decisions should be made at an equitable level of benefits to limited income households. Multiple mechanisms exist and MEA looks forward to continuing in the dialog wherever and whenever it can help advance the state's clean energy, energy use reduction goals as well as reliability and affordability priorities. As previously noted existing funding sources are miniscule compared to the funds needed to address inequities in energy cost related to income. MEA would support a formal study to quantify the energy needs of low to moderate income Marylanders, including renters, to fully understand the scope and scale of resources needed, leveraging program experience from our long standing LMI EE program and collaborative efforts with the building industry and government stakeholders.

9. Improve interagency coordination for holistic building retrofits (MCCC recommendation from 2020)

MEA Comments: MEA believes that there should be coordination between agencies; and welcomes input regarding its program and policy initiatives that aim to improve the deployment of energy efficiency and climate impacts in the residential and commercial building sector. Again, MEA notes that massive heating retrofits prescriptively mandated to be accomplished via electrification must come after the emissions portfolio within the PJM service territory is addressed and should identify funding sources so that costs are not passed on to ratepayers or taxpayers.

10. Allow local jurisdictions to set higher fines for non-compliance on building performance

MEA Comments: MEA has no comments on this draft recommendation.

11. Sunset financial subsidies for fossil fuel appliances within EmPOWER

MEA Comments: MEA believes that these comments should be considered by the EmPOWER Future Planning Workgroup, but that efficiency upgrades to natural gas equipment reduce greenhouse gas emissions. MEA is also concerned that in many cases numerous customers who currently have existing fossil heating systems may be deterred from selecting highly efficient equipment due to a lack of incentives. This may cost short term progress towards GHG reductions for the hope of uncertain opportunities with unquantified benefits and costs.

12. Use federal funds for comprehensive retrofits of low-income housing

MEA Comments: MEA has no objection to this recommendation as long as electrification is not prescribed where function and cost effectiveness is not clear. MEA agrees that federal funding should support, among other priorities, comprehensive retrofits for Maryanders. MEA believes that health and safety measures need to be completed to facilitate cost-effective energy efficiency upgrades. However, it is not clear that electrification will always be the low cost and low carbon approach in these scenarios. Any retrofits should o seek out the lowest cost and great carbon reductions in the retrofits.

13. Offer tax credits or other incentives for enhanced energy efficiency in new construction

MEA Comments: No comments, defer to local governments.

14. Allow above-code green programs to comply with the state-adopted International Energy Conservation Code (IECC)

MEA Comments: MEA has no objections to this proposal subject to further fleshing out. MEA believes that the state should be building more energy efficient homes that residential buildings constructed above-code should comply with the State Adopted IECC and that the code process going forward is the most effective mechanism to establish base code requirements. Creating carefully crafted above code options, considering the need for scaling, that are available to jurisdictions that wish to adopt "stretch" goals enables early market development.

15. Allow a portfolio approach to renewable energy generation

MEA Comments: No additional comments.

16. Evaluate property tax assessment processes to support decarbonization efforts

MEA Comments: MEA believes that local governments should value real estate assets and issue tax credits in their best discretion and has no objection to this non-prescriptive recommendation. MEA notes that costs passed on to ratepayers and tax payers for expensive and prescriptive electrification retrofit mandates should be avoided.

17. Identify locations that need grid upgrades to accommodate new all-electric buildings

MEA Comments: MEA believes this needs more discussion and a broader lens towards decarbonization. MEA believes that proprietary new business data held by electric utilities will not be surrendered to unidentified entities (presumably MDE) contemplated in this recommendation absent a statutory mandate, which MEA would also disagree with for these purposes. MEA supports certain all-electric new builds and fervently supports EV charging equipment coupled with new construction. It is also unclear how this would be operationalized: there is nothing on the grid or in utility analysis that would indicate the sort of need described here, especially since it could overlap with general reliability needs or other engineering-related issues.

18. Accelerate development of low-carbon fuels

MEA Comments: MEA supports incorporating low carbon fuels into a building transition plan. MEA believes that the state should incorporate anaerobic digestion, certified natural gas and power-to-gas and green hydrogen technologies to this plan. The development of low carbon fuels creates markets for waste products that would have other deleterious impacts to water quality etc. MEA notes that certified gas is not mentioned once in decarbonizing building's draft plan; and that hydrogen is said to be "limited and expensive." Pending federal legislation provides for billions of dollars in hydrogen subsidies. Furthermore, low carbon fuels are also receiving billions of euros in funding in several EU programs, creating opportunities for more cost effective technology transfer, bolstering markets and incentivization of growth.