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### **Comments on the Draft Building Energy Transition Plan (September 2021)**

Dear Ms. Osorto,

On behalf of the Sierra Club, we thank you for the opportunity to provide comments on the Draft Building Energy Transition Plan, distributed on September 3, 2021. We appreciate the opportunity to participate in the Maryland Commission on Climate Change's Buildings SubGroup this year and look forward to further discussion on the draft report.

In the subsequent sections we provide supportive comments of particular policy recommendations, concerns regarding other policy recommendations, and offer important critique of certain underlying assumptions and ultimate conclusions of the E3 building decarbonization analysis.

#### ***E3 Maryland Buildings Decarbonization Study***

In previous comments, Sierra Club detailed important questions and concerns regarding opaque assumptions, inputs, and omissions within the E3 analysis. Many of those questions and concerns have not been addressed and we will not repeat them in this letter; however, we have provided our previous comments for reference.<sup>1</sup> In addition to previously-submitted comments, we are concerned that:

- The analysis does not appear to account for the energy intensity and potential emissions associated with the creation of renewable and synthetic gases that would replace fossil gas in the coming years. The analysis appears to simply assume that all fossil gas alternative fuels have a positive climate impact; however, the creation of fossil gas alternatives can result in significant energy demand.
- The assumptions made in the analysis, including the choice to avoid building shell improvements in the hybrid (electrification with fuel backup) scenario, could result in a severe negative impact on consumers, particularly low-income consumers.
  - The hybrid scenario, inherently, will keep significant gas infrastructure in place to respond to a limited number of winter peak load hours and utilize fuel that is approximately twenty times more expensive than fossil gas prices. This dynamic, according to the analysis, results in a scenario in which utility bills for customers that remain on the gas system, even for customers only using fuel for “backup,” are higher than customers’ bills utilizing an all-electric approach. This dynamic may very well result in middle- and upper-income consumers leaving the gas

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<sup>1</sup> Our previous comments informally referenced “other analyses” that conclude the high costs and limited availability of fossil gas alternatives make those fuels unviable as alternatives to electrification solutions. We would like to provide such a report as a reference now -- [Rhetoric vs. Reality - the Myth of "Renewable Natural Gas" for Building Decarbonization Report](#) (Sierra Club and Earthjustice, July 2020).

system for the electric system, which realizes lower bills (slide 32). In turn, limited income consumers in Maryland that do not have the up-front capital to quickly leave the gas system are left with less efficient buildings due to a lack of building shell upgrades and ever-increasing gas utility costs. The analysis is not conducted in a way to capture the potential shift in higher-income consumer choice when that block is faced with paying for a significantly more expensive product and has the ability to choose a less expensive product (electricity). The lack of building shell upgrades and inflexibility of the analysis to evaluate a shrinking customer base due to increased prices present a concerning inequitable outcome.

- The SubGroup has been notified that E3 is completing an updated analysis to consider the impacts of methane leakage associated with the three scenarios. We appreciate this additional analysis and look forward to the results; however, it is not known what inputs will be used for this additional analysis. Consistent with comments presented to the MCCC in the past, we urge the updated analysis to evaluate the impact of methane leakage based on 20-year global warming potential and a system leakage rate of at least 3 percent.

We continue to raise concerns regarding the assumptions, inputs, and omissions in the analysis because the implications are significant, particularly for the medium- and long-term policy and planning recommendations. The implications of an individual consumer bearing the responsibility for financially and mechanically maintaining multiple heating systems are not clearly considered in the analysis, nor does the analysis evaluate the societal and public health costs associated with the continued combustion of fossil gas alternatives.

The critical compounding factors highlighted in these comments and previous letters – particularly the assumption that building shell upgrades will not be applied in a hybrid scenario and the opaque (but seemingly conservative, when compared to recent analysis from Pepco<sup>2</sup>) assumptions for peak load management – likely tilt the scales significantly in favor of a hybrid approach and do not properly value the benefits of the high electrification scenario.

### ***Core Recommendations of the Transition Plan***

#### **1. Adopt an All-Electric Construction Code**

Sierra Club supports the adoption of an all-electric new construction code in Maryland beginning in 2024. Data presented to the SubGroup over the previous two years support this recommendation, including new analysis from E3 that is specific to Maryland. We request that, at a minimum, the recommendation be strengthened to more clearly define that any cost-effectiveness tests for commercial buildings include an eventual sunset clause and that while any such tests exist, they incorporate the social cost of carbon and social costs of other pollutants associated with the combustion of gas in heating systems and appliances.

#### **2. Develop a Clean Heat Retrofit Program**

This recommendation includes numerous positive and important proposals, but also lacks some critical specifics. Sierra Club continues to support the MCCC's recommendations

from 2020 that call for EmPOWER reform that allows for, encourages, and incentivizes fuel-switching from fossil-fuel systems and appliances to efficient electric alternatives. We would strongly recommend that Part A include a specific call-out to proactively encourage customers with gas heating systems, or propane and oil systems, and related appliances to replace those systems with efficient electric alternatives. The 2030 GGRA Plan explicitly states the need to replace fossil fuel systems with efficient electric alternatives and Part A should include a reference to all fossil fuel systems, including fossil gas.

Part D presents a positive reform to the Strategic Energy Investment Fund (SEIF). SEIF should not incentivize or subsidize fossil fuel systems, including the expansion of fossil gas use and infrastructure. We would recommend this portion of the recommendation prioritize efficiency and fossil-to-electric system electrification retrofits for low-income households.

The Clean Heat Retrofit Program appears to be focused on meeting an incomplete metric of percentage of new air conditioning sales. However, this metric is inconsistent with the GGRA Plan's call to action to "converting fossil fuel heating systems to efficient electric heat pumps that are powered by increasingly clean and renewable Maryland electricity." The percentage of sales metric does not directly translate to the replacement of fossil fuel systems. This metric also includes scenarios in which an existing heat pump is replaced with a new heat pump, which is also not a translation of the GGRA Plan's call to action. In fact, the proposal actively encourages the continued operation and maintenance of hundreds of thousands of fossil fuel space heating systems by focusing solely on a goal of upgrading cooling systems. We are concerned that this goal may be in contradiction with the GGRA Plan's goal to convert fossil systems to efficient electric alternatives.

The Clean Heat Retrofit Program should be based on metrics that are based on moving buildings off fossil fuel systems and installing new efficient electric alternatives. For example, to decarbonize the residential building sector the Clean Heat Retrofit Program should leverage existing and create new incentives to retrofit tens of thousands of Maryland households off the fossil gas (and other fossil fuel) system and install efficient electric alternatives to replace those systems. The American Housing Survey from the US Census Bureau estimates that over 1.1 million housing units in Maryland use a fossil fuel as the primary heating fuel, with approximately 75% of those connected to "piped gas." To better measure a Clean Heat Retrofit Program the metric for success should instead be a goal of retrofitting 45,000 Maryland households per year off the gas system and other fossil fuels to efficient electric alternatives.

Finally, the Clean Heat Retrofit Program should explicitly prioritize the establishment of a comprehensive retrofit program for limited income consumers and affordable housing that results in little-to-no up-front costs to the qualifying limited income consumer. A comprehensive retrofit program would ensure the electrification of the households, but it would also align other health, safety, structural, and weatherization resources and retrofit needs. The MCCC has stated its dedication to environmental justice and equity – the Clean Heat Retrofit Program that is recommended for adoption should be rooted in delivering energy affordability, health and safety benefits, and climate-friendly technologies to limited income consumers and affordable housing in the state. This recommendation could be enhanced by incorporating themes and specifics from some of the Additional Recommendations, including numbers 8, 9, and 12, as well as the adoption of a more robust energy affordability metric like the Percentage of Income Payment Plan adopted in other states like Virginia.

### 3. Create a Building Emissions Standard

Building emissions and energy performance standards present an effective tool to achieve sector decarbonization if they are developed with a focus on equity, a transition off fossil fuels to efficient electric alternatives, and ambitious but achievable timelines. The program recommended in the draft plan does not adequately address those factors and instead proposes an encouragement of fuel-combustion technologies rather than a structure that heavily encourages and incentivizes compliance pathways that achieve deeper decarbonization targets through electrification. Further, the compliance timeline for the proposal could result in significant aggregate emissions, as it does not require compliance until 2045. Interim targets should be required, including encouragement to meet interim targets via electrification pathways. The creation of tax credits, subsidies, and incentives to support compliance are positive steps, but those should be focused on solutions that result in the replacement of fossil fuel systems to electric and that help ensure energy affordability for limited income Marylanders. An emissions standard could be created for the state to meet building sector decarbonization targets but the proposal in the draft plan does not align with the GGRA Plan's call to action to convert fossil fuel heating systems to efficient electric heat pumps.

### 4. Create a Clean Heat Standard

The creation of a clean heat standard as proposed in the draft plan is not in alignment with the GGRA Plan's action plan that calls for the state to convert fossil fuel heating systems to efficient electric heat pumps. This program would create incentives for polluting and potentially harmful industries. We would recommend the MWG and MCCC not adopt this recommendation as it is currently proposed.

### 5. Develop a Utility Transition Plan

Long-term utility transition planning for the gas system is critical to ensure an equitable decarbonization of the building sector. Of the components included in the draft plan, we believe the emphasis should be placed on consumer protections for LMI Marylanders, gas system divestment and responsible phase-out, and demand management and load flexibility solutions to reduce peak demand. We do not believe that the utility transition plan should be charged with identification and creation of rate structures to incentivize the hybrid/fuel backup scenario, due to our previously described concerns with the hybrid/fuel backup scenario conclusion and potential implications. A utility transition plan should further evaluate alternative business models for gas utilities who wish to continue operations in an electrified Maryland.

### ***Additional Recommendations***

There are numerous recommendations in the Additional Recommendations section that are important to support and carry forward. While many of these require additional conversation on the details and implementation intricacies and could be combined with some of the Core Recommendations, we do want to offer initial support for recommendations that are clearly designed to equitably transition homes and businesses off fossil fuel systems and appliances to clean electric alternatives. This includes incentives for net-zero-all electric new buildings (Recommendation 6), required electrification and decarbonization of state buildings (Recommendation 7), prioritization of an equitable level of benefits for all Marylanders (Recommendation 8), improve interagency coordination for holistic building retrofits (Recommendation 9), sunset of financial subsidies for fossil fuel appliances within EmPOWER

(Recommendation 11), use of federal funds for comprehensive retrofits for low-income housing (Recommendation 12).

### ***Conclusion***

The work of the SubGroup, E3, and participating stakeholders has been extensive and we appreciate the investment the MCCC and E3 has made into examining pathways to decarbonize the building sector. After research and careful consideration, Sierra Club has actively encouraged the MCCC to proactively recommend policy solutions that specifically and intentionally transition homes and businesses off fossil fuel heating systems and appliances to efficient electric alternatives for over two years. We are excited that the work of the SubGroup has reached many of the same conclusions and that the 2030 GGRA Plan explicitly relies on the conversion of fossil fuel heating systems to efficient electric heat pumps powered by clean electricity.

At the same time, we are concerned that the primary conclusion of the Building Energy Transition Plan to utilize a hybrid heat pump and fuel-backup approach is based on unrealistic assumptions or omissions about building shell upgrades and peak electricity demand management. The potential implications of pursuing a strategy that retains large swaths of the gas system to respond to a minimal number of modeled peak demand hours in the winter could result in significant inequitable and costly outcomes.

We encourage and appreciate the draft plan's efforts that focus on fully electrifying end uses that currently rely on fossil fuels in the state's building stock and equitably manage the shrinking of the gas system; however, we are concerned by recommendations and conclusions that result in the use of expensive and polluting gas products like the those that encourage the fuel-backup scenario.

Thank you for this opportunity to provide comments on the Draft Building Energy Transition Plan and for your work with stakeholders and consultants through this process. We look forward to continuing to work with you, E3, and other stakeholders in this sector.

Sincerely,

David Smedick  
Acting Deputy Regional Campaign Director  
Sierra Club