

September 10, 2021
Maryland Department of the Environment
1800 Washington Blvd
Baltimore, MD 21230

Re: Feedback on the draft Maryland Building Energy Transition Plan, RMI

On behalf of RMI, we respectfully submit this feedback regarding the draft of the Maryland Building Energy Transition Plan.

Summary

Last week, a discussion draft of the Maryland Building Transition Plan (“The Plan”) was released, which maps out recommendations for deep building decarbonization measures to achieve the state’s greenhouse gas reduction goals.

RMI has been present for and regularly attends the Buildings Ad-hoc Working Group, listening to and participating in the stakeholder process that provided input for the Plan. We applaud the Plan’s emphasis on promoting all-electric new construction and its proposal for long-term gas planning. However, we also offer the following points of feedback on the draft for further discussion by the working group:

1. Modify overly specific language prescribing a policy that incentivizes customers to stay on the gas system.

In the study results (Utility Rate Structure) and the recommendations (Utility Transition Planning) sections, the report specifically recommends “policy design that incentivizes customers to employ dual fuel heating systems.”

While we appreciate the intention of this language – to limit winter peak electricity demand and avoid inequitable outcomes of customer defection from the gas system, we recommend a higher level description of this goal. For example, *“careful policy design that incentivizes customers to electrify while managing winter peak demand, such as with dual-fuel systems, weatherization, or demand flexibility.”*

Two reasons we believe this modification is important:

- a. The current language risks sending a mixed signal to policymakers. The dominant changes to Maryland’s current rate structure need to be that it incentivizes significantly less gas usage and encourages large-scale electrification. Maryland simply cannot achieve its climate or equity goals without such a change.
- b. Individual customers may achieve gas demand reductions and winter peak management in a variety of ways: fossil fuel backup, weatherization, demand flexibility, distributed energy resources, etc. Broadening the language acknowledges important co-benefits that customers may prioritize (health, resilience, energy democracy). It also acknowledges that rapidly evolving costs could change the most cost-effective measure.

Lastly, we recommend that the Utility Transition Planning section separately highlight the need to ensure an equitable transition for low-income customers as gas rates rise, given increasing energy burden and the possibility of higher income customers leaving the gas system altogether. This is a critical challenge to address, but has a number of possible solutions and should not be limited to reliance dual-fuel systems.

2. Expand the Clean Heat Standard for gas utilities to address total building emissions and include a 2025 target

The Plan currently proposes an escalating fuel carbon intensity requirement in its clean heat standard for gas utilities.

However, Maryland would be better served by clean heat standards that reduce total emissions from buildings over time, like those introduced in Colorado earlier this year. Colorado's policy for gas utilities contains several distinguishing features that meet the goal of a renewable natural gas standard, while providing greater accountability for emissions reduction and flexibility on pathways to get there.

First, by grounding the standard in emissions reductions and including targets for both 2025 and 2030, the policy increases the accountability of gas utilities to deliver the flattening and reduction of direct emissions in buildings.

Second, the policy pushes utilities to plan for a future with lower gas usage and emissions (as implied by the E3 study) and encourages consideration of non-pipe alternatives to meet climate goals. Colorado's standards require the utilities to utilize "clean heat resources," such as green hydrogen, efficiency, and electrification in their plans.¹ As a complement to this, the state also passed a beneficial electrification bill that directs Colorado's Public Utility Commission to mandate that utilities promote electrification through the state's demand-side management model.²

Last but not least, the Colorado policy caps the use of recovered methane as a portion of the required 2025 and 2030 emissions reductions. Utilities need to present early investments that have the potential to deliver the deep reductions required 2030 and beyond.

3. Modify the Core Recommendations for the Clean Heat Retrofit Program to clarify the investments and policies needed to ensure a successful energy transition.

a. Outline heating electrification milestones / targets for fossil fuel homes specifically

The currently proposed space heating targets could set clearer signals for the scale of fuel switching projects required. For example, the suggested target of "50% of residential AC sales as heat pumps by 2025" could be achieved solely by swapping heat ACs for heat pumps in households that already have electric heating.

¹ Mike Henchen and Erin Overturf. Policy win: Colorado's innovative clean heat standard will force gas utilities to clean up their act. 2021. Canary Media. <https://www.canarymedia.com/articles/policy-win-colorados-innovative-clean-heat-standard/>

² Colorado General Assembly. SB 21-246: Electric Utility Promote Beneficial Electrification. 2021. <https://leg.colorado.gov/bills/sb21-246>

Milestones in this roadmap can send an important signal to the legislature and state agencies about the type and pace of action required.

We would suggest at least one milestone specific to electrification of homes currently heated by fossil fuels: for example, 350k Maryland homes by 2030 (i.e. out of a base of 1.25M homes that currently use gas, oil, or propane for primary heating). Such a goal is consistent with replacing 50% of end-of-life ACs with heat pumps by 2025 and 100% of them by 2030.

It could also be connected to the proposed emissions reductions in the Clean Heat Standard section above and a beneficial electrification bill focused on electric utilities.

b. Discuss water heating market transformation

One clear takeaway from the E3 study is that a near-complete transition off gas for water heating is an important and cost-effective solution. Given the clarity of this takeaway, it could be helpful to have a specific breakout about transforming water heating in Maryland.

First, the residential water heating targets are very clear, and seemingly consistent across the Electrification with Gas Backup and Full Electrification scenarios. They are also material to Maryland's climate goals: looking at residential gas use from the EIA's Residential Energy Consumption Survey, water heating accounts for 24% of all residential gas usage.³

Second, there is a potentially fruitful policy discussion on opportunities to invest in transforming the water heater contractor ecosystem, supply chain, etc. Maryland can also participate in recently launched initiatives like the Advanced Water Heater Initiative, which are focused on technology innovation, accelerating market readiness, and cost compression.

c. Clarify scenarios in which full electrification is more cost-effective over electrification with gas backup

The Plan states that heat pumps with fuel backups are most cost-effective for building retrofits. However, the Plan also proposes allowing beneficial electrification retrofits through programs like EmPOWER. The Plan should clarify situations under which full electrification is more cost-effective and preferred. Factors that could be considered are: the age of the building, the state of the building's electrical wiring system, and the state of the building's shell.

4. Modify the utility transition plan proposal to more clearly focus on reducing emissions and gas usage.

³ U.S. Energy Information Administration. Residential Energy Consumption Survey (RECS). 2015. <https://www.eia.gov/consumption/residential/data/2015/index.php>. We used the weighted average of total gas use for water heating as a percent of all gas use in the Mid Atlantic and South Atlantic. This approach is consistent with the use of RECS data in the 2020 Maryland Buildings Subgroup report, footnote 20 on page 10.

We applaud the Plan's inclusion of a utility transition planning proposal and for the proposal's focus on protecting ratepayers. We recommend clarifying a core objective in directing utilities to find ways to reduce gas demand and gas system emissions.

We suggest adding a key component on required certainty of emissions reduction and emphasize that the Public Service commission can amend or reject transition plans that do not appropriately meet emissions targets.

We appreciate your time and attention. Should the Maryland Department of the Environment have further questions, RMI will gladly assist.

Sincerely,

Amar Shah
Manager, Carbon-Free Buildings Program
Ashah@rmi.org

Ashita Gona
Associate, Carbon-Free Buildings Program
Agona@rmi.org