Comments on the Discussion Draft of the
Building Energy Transition Plan

From the Mid-Atlantic Propane Gas Assn. (MAPGA) and the
Mid-Atlantic Petroleum Distributors Assn. (MAPDA)
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MAPDA and MAPGA represent local, family-owned energy businesses throughout Maryland. These stakeholders are an important part of the community. As members of the community and as energy providers, we have significant concerns with this draft and the recommendations of the Building Energy Transition Plan.

Specifically, we are concerned about three key conclusions of the report:

1. **The report and recommendations are made without any study of bioheat/biofuels.** The report's recommendations of all-electric residential/commercial energy cannot be made without including an analysis of biofuel/bioheat.

2. **The current grid capacity and its weaknesses will have a direct effect on the efficacy of the recommendations in the report**. Grid capacity has not been addressed in the report's recommendations. A simple survey of electric companies on outages and temperature related interruptibles would provide insight to craft the recommendations. We believe this is an easy survey to conduct. It should ask how many times electric companies moved large users to alternative fuel in the past five years. That clear question, coupled with specifics on how those electric companies have strengthened their systems, will help policy makers understand the capacity of the current grid and the likelihood of future outages.

3. **Heat pumps will be costly and require a secondary heat source if families are to be kept warm in the winter and cool in the summer.** The incentives outlined for fuel switching will be largely used by individuals who can afford transformational remodeling of their homes. In short, the incentives will lean towards benefiting the wealthy.

Additional comments:

1. **The Study results: Construction and Retrofit Costs** (section) runs counter to the **Study Results: Consumer Costs.** The charts and data in the different sections conflict. This reflects poorly on the data and estimations in the report and casts the entire document in doubt.

2. **The costs comparisons on Figure 4. And Figure 5. are low and do not account for a large number of variables that have "associated costs" when retrofitting to a heat pump.** There is a great deal of confusion regarding the actual cost of conversion to whole house electric heating. The highly referenced American Council for an Energy-Efficient Economy (ACEEE) Study[1] stated

[1] "Energy Savings, Consumer Economics, and Greenhouse Gas Emissions Reductions from Replacing Oil and Propane Furnaces, Boilers, and Water Heaters with Air-Source Heat Pumps", Steven Nadel, July 2018, Report A1803

"For ductless heat pumps, costs come from an ACEEE analysis of a Massachusetts database[2] of installed costs for this equipment. We looked at homes installing two or more multi-head heat pumps, finding an average cost of $7,065 per heat pump." Further review of the Massachusetts database revealed that only 7.2% of the homes converted had the capacity to serve the heating load. Note the average cost of these whole home conversions was $21,572[3] and the median size was 1,912 square feet. It should be noted that there was no data regarding what was done with the incumbent heating system. Generally, in Massachusetts the existing heating system was kept functioning and likely provided standby heating during cold weather.

A recent review[4] of New York State Energy Research and Development Authority (NYSERDA) 2017-2019 Air Sourced Heat Pump Program showed that, of the 9,730 applications for rebates, 5,756 were from single family homes. Only 6.7% of these homes installed systems with the capacity to heat the entire home. The remainder of the applications were for systems that partially heated the home. The NYSERDA Program whole house heating conversion cost for a 2,000 to a 2,500 square foot home averaged $21,926[7]. Note: 45% of these whole house applications specifically indicated that another system was used as a secondary heat source and the remaining applications did not complete this section of the application.

3. **The study group omitted the environmental impact and costs of bioheat and biofuels from the report**. How can a forward-looking policy on home and commercial heating be developed without the study and look at biofuels?

[2] Review was conducted by Diversified Energy Specialists.
[3] This cost is for heating only and does not necessarily include the standby electric heating requirement for low ambient temperature operation, nor does it include a heat pump water heater.
[4] Review was conducted by Diversified Energy Specialists.