



New Jersey Propane Gas Association

MEMORANDUM

TO: Commissioners of the New Jersey Board of Public Utilities

FROM: Michael Merrill
President, the New Jersey Propane Gas Association

DATE: September 9, 2019

RE: *Comments Regarding the Draft 2019 Energy Master Plan: Policy Vision to 2050*

On behalf of the New Jersey Propane Gas Association (NJPGA), an organization whose mission is to educate the public, media, the industry, and elected officials on the safety and efficiency of propane and related products, we respectfully submit comments and suggestions with respects to the Draft 2019 New Jersey Energy Master Plan: Policy Vision to 2050 (EMP).

A laudable vision with lofty goals, the EMP fails to recognize the role propane can serve as an affordable, low-carbon solution, offering consumers with additional market options. Specifically, our comments will focus on several sections, including:

- **Goal 1.1.1:** Support the deployment of 333,000 light-duty electric vehicles on the road by 2025, per the Zero Emission Vehicle Memorandum of Understanding (MOU);
- **Goal 1.1.5:** Rollover the state light-duty (passenger) fleet to electric vehicles;
- **Goal 1.1.8:** Partner with industry to develop incentives to develop the medium- and heavy-duty vehicle fleet with battery or fuel cell technology, or to support research and development (R&D) that will enable such electrification;
- **Goal 4.1.1:** Expand and accelerate the current statewide net zero carbon homes incentive programs for both new construction and existing homes;
- **Goal 4.1.3:** Develop electric vehicle (EV) Ready and Demand Response Ready building codes for new multi-unit dwelling and commercial construction;
- **Goal 4.2.1:** Incentivize transition to electrified heat pumps, hot water heaters, and other appliances; and
- **Goal 4.2.2:** Develop a transition plan to a fully electrified building sector.

Comments with Respect to Goal 1.1.1

While we certainly share the desire to transition to more fuel-efficient cars that run on cleaner energy sources, Goal 1.1.1 fails to incorporate propane-powered cars into its vision. Propane allows for immediate emissions reductions over gasoline and diesel fuel, while requiring a far lower infrastructure investment than natural gas. In fact, newly developed engines which use propane autogas have been found to operate at a level 90 percent cleaner than the required EPA standards.¹ This goal should incorporate vehicles which use propane as fuel, as this technology, which has already been developed, will spur on immediate emissions improvements with a much lower investment than transitioning to only electric vehicles.

Comments with Respect to Goal 1.1.5

Similar to our previous comments, this goal also fails to include propane-fueled light-duty vehicles in its vision for the state. Propane technology has already proven successful in the real world as a near-zero emissions energy solution, and an inclusion of propane vehicles in this rollover of the state vehicle fleet would allow for the immediate reduction of carbon emissions.²

Comments with Respect to Goal 1.1.8

It is critical that the state retain access to propane-powered medium- and heavy-duty vehicles for the its vehicle fleet. Both statistical models and real-world testing data conducted by West Virginia University have proven that switching from diesel buses to modern propane autogas buses results in the reduction of up to 96 percent of NO_x emissions.³ There are also economic benefits which can be reaped by transitioning to propane buses. For example, one Georgia school district found that it saved \$3,500 a year per bus in fuel and maintenance costs. These clear environmental and financial advantages help to explain why districts across the country are making the switch to propane buses, and New Jersey should be a leader in this field as well. Limiting the potential for propane-fueled buses and trucks to be utilized, as Goal 1.1.8 currently does, will deprive the state of an affordable, energy-efficient option which is already lowering emissions today.

Comments with Respect to Goal 4.1.1

While this goal's objectives are certainly commendable, its implementation could have the unfortunate consequence of limiting consumer choice, and thus preventing homeowners from accessing propane technologies. Propane is a far more environmentally friendly energy source than many of its alternatives, such as heating oil, and it provides consumers throughout the state with an affordable, low-carbon solution.⁴ Additionally, it is much easier for consumers to switch to propane appliances than to completely rehabilitate their homes to allow for less efficient electric appliances. Goal 4.1.1 should ensure that residents of the state of New Jersey are not discouraged or prevented from transitioning to propane, and that the state does not pass up on the

¹ <https://propane.com/resource-catalog/resources/cleaning-up-the-transportation-industry-fact-sheet/>

² <https://propane.com/resource-catalog/resources/cleaning-up-the-transportation-industry-fact-sheet/>

³ <https://propane.com/resource-catalog/resources/cleaning-up-the-transportation-industry-fact-sheet/>

⁴ <https://propane.com/resource-catalog/resources/residential-emissions-advantages-one-sheet/>

very real opportunity to help limit carbon emissions immediately.

Comments with Respect to Goal 4.1.3

As stated previously, when discussing limiting the emissions of pollutants by vehicles, the EMP should incorporate propane vehicles into its vision.⁵ This goal should thus mention propane-powered cars and buses when encouraging the state to consider “new legislation or incentives” seeking to promote innovative vehicle technologies which decrease pollution.

Comments with Respect to Goal 4.2.1

While Goal 4.2.1 implies that electric appliances are more effective at reducing pollution than those powered by propane, much of the scientific data seems to refute that assumption. In fact, the Gas Technology Institute conducted a study which found that propane furnaces produce 50% less greenhouse gas emissions than electric furnaces.⁶ The overwhelming trend of the data, which also showed that propane ranges produce 83% less SO_x emissions than their electric counterparts, suggests that when it comes to limiting the emissions of greenhouse gases, SO_x compounds, and NO_x compounds, propane is the most efficient energy source for homes.

Furthermore, this goal suggests that electric power is always cheaper than propane in terms of heat pumps, hot water heaters, and other appliances. But in actuality, the Propane Education and Research Council has found that Energy Star propane water heaters save approximately 13-16 percent in annual costs compared with electric heaters.⁷ Taken in combination with the 35-60 percent reduction in CO₂ emissions accomplished by these propane heaters compared with standard electric units, propane is clearly a viable and effective energy source for consumers. Therefore, it is critical that the residents of New Jersey retain access to propane as an energy source for their home appliances, in order to maximize consumer choice and allow for residents to have as many energy-efficient options at their disposal as possible.

Comments with Respect to Goal 4.2.2

Once again, this goal relies on the assumption that electric appliances are better at limiting the emission of pollutants than those fueled by propane. Yet when taking into account all of the energy required to extract and process fuel, the Propane Education and Research Council’s data shows that it takes 2.61 units of electricity to produce and deliver one unit of energy to a home, versus just 1.01 units of energy for propane.⁸ Thus, the EMP should look to incorporate propane technologies into its vision for a low-emissions energy future for the state of New Jersey.

In conclusion, the 2019 Energy Master Plan is a bold strategy designed to allow New Jersey to be a leader in reducing carbon emissions, and thus it is critical that both the state and its residents have all low-carbon options at their disposal. Propane is a cost-effective energy source

⁵ <https://propane.com/resource-catalog/resources/cleaning-up-the-transportation-industry-fact-sheet/>

⁶ https://www.aga.org/sites/default/files/ea_2017-03_appliance_cost_and_emissions_comparison_2016_0.pdf

⁷ <https://propane.com/resource-catalog/resources/pull-the-plug-on-electric-water-heaters-campaign-bundle/>

⁸ <https://propane.com/resource-catalog/resources/zero-net-energy-infographic/>

which is already helping to mitigate carbon emissions, and propane should continue to be a viable option for all energy consumers.

Thank you for your kind consideration of our comments. Should you have any questions or require additional information, please do not hesitate to contact us.