

May 20, 2022

Draft Scoping Plan Comments  
NYSERDA  
17 Columbia Circle  
Albany, NY 12203-6399

**Re: Climate Action Council Draft Scoping Plan**

**COMMENTS OF THE NEW YORK PROPANE GAS ASSOCIATION**

On behalf of the New York Propane Gas Association (NYPGA), which represents propane marketers, suppliers and equipment manufacturers across New York, we appreciate the opportunity to provide comment on the New York Climate Action Council's Draft Scoping Plan. Our members provide clean-burning and critical energy to residential, commercial and agricultural customers in the state. New York's propane industry employs thousands of workers and generates more than \$1.7 billion in economic activity annually.<sup>1</sup>

NYPGA commends the state for its desire to reduce greenhouse gas (GHG) emissions, promote energy efficiency, improve air quality and foster healthier, more vibrant communities. We understand that this draft scoping plan will serve as a framework for how the state will reduce GHG emissions, consistent with the Climate Leadership and Community Protection Act, but are concerned with many components of the plan, including recommendations to eliminate common propane applications. Unless significant changes are made, this climate plan will end up hurting both businesses and the energy-consuming public.

**I. Clean American Energy**

Propane can play an important role in New York's clean energy transition and future. It can help the state achieve many of its environmental, climate and public health goals, as set forth in the Climate Action Council's (Council) draft scoping plan. Propane burns cleanly, efficiently and has a low-carbon content.<sup>2</sup> As a less carbon-intensive fuel, the state could achieve immediate GHG reductions in the thermal sector if more consumers simply replaced their antiquated fuel oil heating systems with efficient propane equipment. The carbon reduction opportunities are real and substantial. More than 2.3 million New York households use fuel oil or kerosene to meet their primary space heating needs.<sup>3</sup>

The scoping plan gives the impression that, from an environmental standpoint, there is no discernable difference between traditional energy sources. This simplistic view fails to appreciate

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<sup>1</sup> [https://www.npga.org/wp-content/uploads/2020/06/NEW-YORK\\_Propane-1-Pager\\_2020.pdf](https://www.npga.org/wp-content/uploads/2020/06/NEW-YORK_Propane-1-Pager_2020.pdf)

<sup>2</sup> <https://www.eia.gov/tools/faqs/faq.php?id=73&t=11>

<sup>3</sup> <https://data.census.gov/cedsci/table?q=home%20heating%20fuel&g=0400000US36&tid=DECENNIALSF32000.H040>

propane's positive environmental characteristics. Propane is nontoxic and vaporizes the moment it is released from a pressurized cylinder. As such, it presents no threat to soil, surface water or ground water.<sup>4</sup> This helps protect and preserve our critical land and water resources. In addition to protecting natural resources from contamination, propane can also prevent their destruction. For example, more than 82,000 households in our state still rely primarily on wood to keep warm.<sup>5</sup> This, despite the fact that wood smoke contains high levels of particulate matter that can negatively affect respiratory and cardiovascular systems, and degrades local air quality.<sup>6</sup> In comparison, propane's combustion produces virtually zero particulate matter.<sup>7</sup> For residents living beyond the natural gas distribution system, using propane instead of firewood protects trees, which are natural carbon sinks, prevents deforestation and a reduction in woody habitat for plants and animals. This is beneficial from not only an air quality perspective, but an ecological one as well.

In order to achieve their emission targets, the Council also endorses strategies to reduce fugitive methane emissions from the energy sector.<sup>8</sup> Methane is an extremely potent GHG and its 20-year global warming potential (GWP) is 84 times more powerful than carbon dioxide.<sup>9</sup> Propane, however, is a non-methane energy molecule, so it is truly clean both before and after combustion.

## **II. Electrification of Thermal Loads**

The scoping plan envisions a future in which we electrify buildings, vehicles and industries and shift away from other non-electric energy sources, such as propane.<sup>10</sup> To be clear, NYPGA strongly opposes the promulgation of all-electric building codes, as suggested by the Council, that would prohibit the use of gas equipment for common residential and commercial applications. These types of codes are shortsighted and counterproductive.

While the Climate Leadership and Community Protection Act does establish targets to reduce GHG emissions from the electric power sector and increase renewable generation,<sup>11</sup> it is difficult to predict what the carbon-intensity of New York's electric grid will actually be in 2030 or 2040. That said, we know that today, 41 percent of utility-scale electricity comes from fossil fuels.<sup>12</sup>

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<sup>4</sup> [https://afdc.energy.gov/fuels/propane\\_basics.html](https://afdc.energy.gov/fuels/propane_basics.html)

<sup>5</sup> *Supra Note 3*

<sup>6</sup> <https://dec.vermont.gov/air-quality/compliance/owb/health-and-environment>

<sup>7</sup> [https://www.epa.gov/sites/default/files/2020-09/documents/emission\\_factor\\_documentation\\_for\\_ap42\\_section\\_1.5\\_liquified\\_petroleum\\_gas.pdf](https://www.epa.gov/sites/default/files/2020-09/documents/emission_factor_documentation_for_ap42_section_1.5_liquified_petroleum_gas.pdf)

<sup>8</sup> [file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20\(7\).pdf](file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20(7).pdf)

<sup>9</sup> <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials#Learn%20why>

<sup>10</sup> [file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20\(7\).pdf](file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20(7).pdf)

<sup>11</sup> <https://legislation.nysenate.gov/pdf/bills/2019/S6599>

<sup>12</sup>

<https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2.0.1&fuel=vtvv&geo=0002&sec=008&linechart=ELEC.GEN.ALL->

Natural gas alone is the single largest power generation source in the Empire State.<sup>13</sup> And electricity, unlike propane, is a secondary energy source. Grid electricity is extremely inefficient and energy is lost during each step of the production and delivery process.<sup>14</sup> These inherent inefficiencies mean that more GHGs (and air pollutants) are released.

This climate plan also glosses over the simple fact that the cost of electricity in New York is very expensive. In fact, average residential electricity rates are 28 percent higher than the national average;<sup>15</sup> commercial rates are 27 percent more.<sup>16</sup>

Specifically, the Council recommends the electrification of thermal loads through the installation of electric heat pumps.<sup>17</sup> But the performance of air-source heat pumps degrade in cold weather and they begin to lose efficiency around 32 degrees.<sup>18</sup> In most cold climates they will require a backup heating system.<sup>19</sup> As such, in addition to a heat pump – even one designed to operate more efficiently in cold temperatures – the bulk of New Yorkers will need to invest in a supplemental heating system to make sure their heating needs are met throughout the winter.

Electrifying a home that previously used a non-electric primary energy source, like propane, increases the grid's total electric load. Some states actually prohibit this type of electric fuel-switching because the resulting activity increases, not decreases, demand for electricity.<sup>20</sup> Electricity is the primary heating fuel in less than nine percent of New York households.<sup>21</sup> Substantially increasing this figure, like this plan proposes, would necessitate additional upgrades and investments across the electric sector so it could cope with a larger and more dynamic load. These investments would almost certainly put upward pressure on already high electric rates.

#### **a. Refrigerants**

As the Council concedes, today's heat pumps utilize refrigerants, primarily hydrofluorocarbons (HFCs), to operate their heating and cooling cycles.<sup>22</sup> Unfortunately, these fugitive refrigerant emissions are extremely damaging to the climate. The California Air Resources Board, for example, estimates that the GWP of R-410A – a common refrigerant used in heat pumps – is

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<sup>13</sup> *Id.*

<sup>14</sup> <https://www.eia.gov/todayinenergy/detail.php?id=44436>

<sup>15</sup> [https://www.eia.gov/electricity/annual/html/epa\\_02\\_10.html](https://www.eia.gov/electricity/annual/html/epa_02_10.html)

<sup>16</sup> *Id.*

<sup>17</sup> [file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20\(5\).pdf](file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20(5).pdf)

<sup>18</sup> <https://www.eia.gov/tools/glossary/index.php?id=H>

<sup>19</sup> <https://info.ornl.gov/sites/publications/Files/Pub73753.pdf>

<sup>20</sup> [https://www.aceee.org/sites/default/files/pdfs/fuel\\_switching\\_policy\\_brief\\_4-29-20.pdf](https://www.aceee.org/sites/default/files/pdfs/fuel_switching_policy_brief_4-29-20.pdf)

<sup>21</sup> *Supra Note 3*

<sup>22</sup> [file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20\(5\).pdf](file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20(5).pdf)

2,088 times greater than carbon dioxide.<sup>23</sup> Any electrification plan for the buildings sector that is reliant on heat pumps must properly account for these fugitive refrigerant emissions.

In contrast, R-290, or refrigerant grade propane, has excellent thermodynamic properties, an ozone depletion potential (ODP) of zero, and a GWP of only three.<sup>24</sup> Again, propane is an extremely versatile fuel with environmentally-friendly attributes that differ from other conventional energy sources.

### **III. Transportation**

The transportation sector is our second largest emitter of GHG emissions,<sup>25</sup> and the Council is right to focus on actions to reduce emissions that results from the movement of people and products. Although electricity, especially for passenger vehicles, will play a role in decarbonizing transportation, it would be a mistake for state officials to exclude proven, low-carbon engines fuels, such as propane autogas, from this arena.

Propane is a worthwhile alternative to gasoline and diesel. The federal government has long incentivized the use of propane in engine applications because it is cleaner than conventional fuels. In fact, the recently passed Infrastructure Investment and Jobs Act establishes a new federal program to award \$500 million in grants for the adoption of clean school buses, including those that operate on propane autogas.<sup>26</sup>

The Empire State is already home to 776 clean, propane-powered school buses.<sup>27</sup> School districts across the Northeast are drawn to propane buses because they operate reliably in the region's cold, snowy climate, but also, because they reduce emissions,<sup>28</sup> create a quieter, more comfortable cabin experience, and decrease operating costs.<sup>29</sup> Propane school buses are a proven, cost-effective solution to reduce transportation emissions. And the Council should acknowledge as much in their finalized climate plan.

#### **a. Renewable Propane**

In addition to conventional propane, the industry is also actively promoting the use of renewable propane in the transportation sector as another means to reduce carbon emissions. Renewable propane is a by-product of renewable diesel production, and can be derived from a variety of sustainable sources, such as biomass, animal fats and vegetable oils.<sup>30</sup> Renewable propane can

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<sup>23</sup> <https://ww2.arb.ca.gov/resources/documents/high-gwp-refrigerants>

<sup>24</sup> <https://www.epa.gov/snap/substitutes-household-refrigerators-and-freezers>

<sup>25</sup> [https://www.dec.ny.gov/docs/administration\\_pdf/ghgsumrpt21.pdf](https://www.dec.ny.gov/docs/administration_pdf/ghgsumrpt21.pdf)

<sup>26</sup> <https://www.congress.gov/117/bills/hr3684/BILLS-117hr3684enr.pdf#page=893>

<sup>27</sup> <https://www.npga.org/wp-content/uploads/2020/12/Propane-Autogas-School-Buses-Poster.pdf>

<sup>28</sup> [https://propane.com/wp-content/uploads/2020/06/West-Virginia-University-Study-Finds-Propane-School-Buses-Dramatically-Reduce-Harmful-Emissions-Propane.com\\_pdf](https://propane.com/wp-content/uploads/2020/06/West-Virginia-University-Study-Finds-Propane-School-Buses-Dramatically-Reduce-Harmful-Emissions-Propane.com_pdf)

<sup>29</sup> <https://afdc.energy.gov/case/3075>

<sup>30</sup> [https://afdc.energy.gov/fuels/propane\\_production.html](https://afdc.energy.gov/fuels/propane_production.html)

safely be used in vehicle engines, including those certified to the California Air Resources Board’s (CARB) ultra-low NOx standard.<sup>31</sup> And, in addition to retaining all of the same environmentally-friendly attributes as traditional propane, it has a lower-carbon intensity.<sup>32</sup> Renewable propane is also an approved pathway for compliance under the federal Renewable Fuel Standard (RFS), a law that was enacted to reduce GHG emissions from vehicles.<sup>33</sup>

NYPGA supports the stated strategy of creating and expanding incentives for the deployment of refueling infrastructure for lower-carbon renewable fuel. This could act as a meaningful catalyst to get more renewable propane into the marketplace where it can displace dirtier, more carbon intensive fuels. However, the current scoping draft does not specifically mention renewable propane in this section. The Council should amend the clean fuels infrastructure plan and endorse the use of renewable propane as clean transportation fuel.

Best of all, we do not have to start from scratch. The Empire State is already home to 17 publicly accessible, primary autogas refueling stations.<sup>34</sup> Additionally, the U.S. Department of Transportation has designated Interstate 90 between the Pennsylvania border and Albany as a “Ready” propane vehicle refueling corridor under the Alternative Fuel Corridors Program.<sup>35</sup> Interstate 87 between the New Jersey border and Canada has been designated a “Pending” refueling corridor.<sup>36</sup>

#### **IV. Reliability & Resilience**

Importantly, the Climate Council recognizes that, in addition to reducing emissions, New York’s energy sector must be reliable, resilient and secure.<sup>37</sup> A healthy propane industry can help achieve these goals.

American propane production is at record levels.<sup>38</sup> As a result, clean and reliable domestic energy is readily available to consumers. Propane is portable, on-demand energy. Its nimble infrastructure is easily deployable and scalable. Propane can efficiently and economically be transported multiple ways, including by pipeline, rail, ship and over-the-road vehicle. Electricity generated at power plants, in contrast, has only one transportation option: electric utility lines. Unfortunately, power outages are commonplace in our state. In fact, when you look at normal utility operations without major event days, in 2020, New York had the highest System Average Interruption Duration Index (SAIDI) score in the Census Bureau’s Middle Atlantic

<sup>31</sup> <https://www.roushcleantech.com/roush-cleantech-launches-first-available-near-zero-emissions-engines-fueled-by-renewable-propane/>

<sup>32</sup> [https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/newtemp\\_rpropane21.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/newtemp_rpropane21.pdf)

<sup>33</sup> <https://www.epa.gov/renewable-fuel-standard-program/approved-pathways-renewable-fuel>

<sup>34</sup> [https://afdc.energy.gov/fuels/propane\\_locations.html#/analyze?fuel=LPG&region=US-NY](https://afdc.energy.gov/fuels/propane_locations.html#/analyze?fuel=LPG&region=US-NY)

<sup>35</sup>

[https://hepgis.fhwa.dot.gov/fhwagis/ViewMap.aspx?map=Highway+Information%7CLiquefied+Petroleum+Gas+\(LPG+or+Propane-Round+1.2.3.4+and+5\)](https://hepgis.fhwa.dot.gov/fhwagis/ViewMap.aspx?map=Highway+Information%7CLiquefied+Petroleum+Gas+(LPG+or+Propane-Round+1.2.3.4+and+5))

<sup>36</sup> *Id.*

<sup>37</sup> [file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20\(5\).pdf](file:///C:/Users/jpeterson/Downloads/Draft-Scoping-Plan%20(5).pdf)

<sup>38</sup> [https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=M\\_EPLLPA\\_FPF\\_NUS\\_MBBL&f=M](https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=M_EPLLPA_FPF_NUS_MBBL&f=M)

Division, and well above the national average.<sup>39</sup> SAIDI details how many minutes the average utility customer connected to the bulk electric grid lost power for over the course of a year. Simply put, New Yorkers better be prepared to cope with interruptions in their power supply.

Using propane for energy-intensive applications, like space and water heating, lowers peak electric demand and reduces stress on the grid. As we all witnessed during the February 2021 power crisis in Texas, there is tremendous resilience value in non-electric energy sources. And unlike natural gas, propane is not a primary fuel used for utility-scale electric power generation. Given this, there is no competition between power plants and thermal loads for propane.

Propane-powered standby generators can power critical appliances, such as a furnace, during a power outage. These generators are permanently installed at a location and fed via a propane tank stored onsite, ensuring the fuel supply is there when needed. Propane generators can also support distributed energy resources (e.g., solar PV, small-scale wind), charging system batteries and providing supplemental electricity when required. Energy consumers can increase energy efficiency and resilience even more by installing a propane-powered combined heat and power (CHP) unit.<sup>40</sup> Propane CHP systems use a generator to create electricity and useful thermal energy simultaneously. A major benefit of using propane to power generators is that, unlike gasoline and diesel, it does not degrade or expire.<sup>41</sup> This indefinite shelf life means that propane can be relied upon to properly perform when it is needed most.

In regards to the recommendation that building codes should require energy storage or onsite renewable generation that is able to disconnect from the grid, this energy storage component should not be narrowly focused on solar PV and battery walls. Rather, it should be broadened to specifically include the electricity that can be produced from backup generators fueled by alternative fuels, like propane, that are stored onsite. Generators fueled by propane can certainly meet the energy resilience intentions of this proposal.

## **V. Consumer Choice**

Fuel oil, kerosene and wood have limited functionality in a home. By comparison, propane provides energy for numerous applications, including: space heating, water heating, clothes drying, cooking, fireplaces, pool heaters, generators and a variety of outdoor entertainment equipment. Granted, electricity can also power some of these applications. But many consumers simply do not want to cook on an electric stovetop, or curl up next to an electric resistance heater with a digital picture of a flame. And that is the point. Several of the policies promoted in the scoping plan would purposefully make it more difficult, if not impossible, for propane companies to successfully operate in the state, thereby limiting choices for energy customers.

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<sup>39</sup> [https://www.eia.gov/electricity/annual/html/epa\\_11\\_02.html](https://www.eia.gov/electricity/annual/html/epa_11_02.html)

<sup>40</sup> <https://betterbuildingssolutioncenter.energy.gov/resources/combined-heat-and-power-deployment-program-overview>

<sup>41</sup> [https://www.epa.gov/system/files/documents/2021-09/062021\\_powerresiliencguide508c.pdf](https://www.epa.gov/system/files/documents/2021-09/062021_powerresiliencguide508c.pdf)

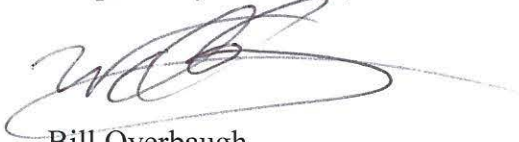
## VI. Conclusion

While NYPGA supports efforts to protect the environment and reduce GHG emissions, the Climate Action Council's scoping plan, in its current form, is not an energy plan we can endorse. The Council seems to believe that decarbonization is only possible through policy-driven electrification efforts. This is false. Propane can help reduce GHG emissions across both the buildings and transportation sectors today. A clean energy future in our state is a future that can and should include propane.

Finally, if New York officials are truly concerned about implementing climate policies that could lead some businesses to invest out-of-state, as is alluded to in Chapter 7, then the electrification components of this scoping plan need major revisions. The current recommendations for the thermal sector will result in reduced business investment, fewer jobs and a retrenchment of clean, low-carbon energy options for consumers. This is especially concerning in a state that is growing much slower than the nation as a whole, and well below many other states.<sup>42</sup> If New York wants to better attract new residents and companies, it should focus on lowering, not increasing, the price of energy and creating a more welcoming business climate.

Thank you again for the opportunity to provide comment.

Respectfully submitted,



Bill Overbaugh  
Executive Director  
New York Propane Gas Association

5315 Perry City Rd  
Trumansburg NY 14886  
[director@nypropane.com](mailto:director@nypropane.com)  
Telephone: 518-383-3823

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<sup>42</sup> <https://www2.census.gov/programs-surveys/decennial/2020/data/apportionment/apportionment-2020-map03.pdf>