Written Submission to The Electrification and Energy Transition Panel

Submitted by: The Canadian Propane Association

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Introduction

On behalf of 125 members of the Canadian Propane Association (CPA) in Ontario, I want to thank you for your excellent work to date on the Electrification and Energy Transition Panel.

Over a short period of time, you have been able to reach out to many Ontarians in order to better understand the challenges and the opportunities that await all of us, as the province prepares for electrification and energy transition.

As you know, not all areas of the province are equally positioned in the short term at least, to take advantage of a greener economy.

Indigenous, rural, and remote communities face unique challenges as these areas are not on the natural gas grid. Electricity, even with provincial a subsidy amounting to over $6.5 Billion per year, is costly.

It is also a fact that in these areas, all manner of goods including food and clothing is more expensive. Transportation and energy costs are higher.

Because of the challenges facing these communities, affordable and low emission propane is particularly suited to address their cleaner energy needs. especially given its unique distribution infrastructure. Unlike natural gas, propane is not restricted by pipelines. In fact, propane energy is unique in that it is distributed to every corner of the province.

From a GHG perspective propane, like natural gas, is much cleaner than gasoline, diesel, and heating oil. In addition, as renewable propane and propane blended with rDME come on stream in Canada (as we are seeing in Europe and the U.S) propane energy will become exponentially cleaner.

There has not been much discussion, to date at least, of how we get through the transition and particularly how we can ensure that Indigenous, rural, and remote communities are not left behind.

We believe that your efforts in illuminating that discussion is an important element of the project that the Minister of Energy has asked you to undertake.

Energy Planning: Achieving Integrated, Long-term Energy Planning

Response to Question 3:

b) Propane:

Beyond the status quo of being reflected in a fuels-based technical report, what fuels (both captured and not by past fuels-based technical reports) are most important to be integrated into the province's long-term energy planning framework for a successful energy transition?

Propane is critically important to the province's long term energy planning. This is due to the following:

- Propane is an affordable, accessible, and low-emission energy source. As a lower carbon, energy, propane is an essential component of the decarbonization of the national energy system.
- Propane is used daily by millions of Canadians, from heating homes, drying crops, and powering forklifts to transporting children to school.
- Propane is highly portable and versatile, with unmatched distribution infrastructure across Canada, perfect for rural and remote locations.
- Propane is efficient, with furnaces running as high as 98% efficiency, saving residents up to 30-45% of heating costs and reducing emissions by about 38% compared to oil furnaces.
- Propane is energy's 'first responder,' ideal for critical infrastructure like hospitals. It continues to work, even when the electric grid fails.

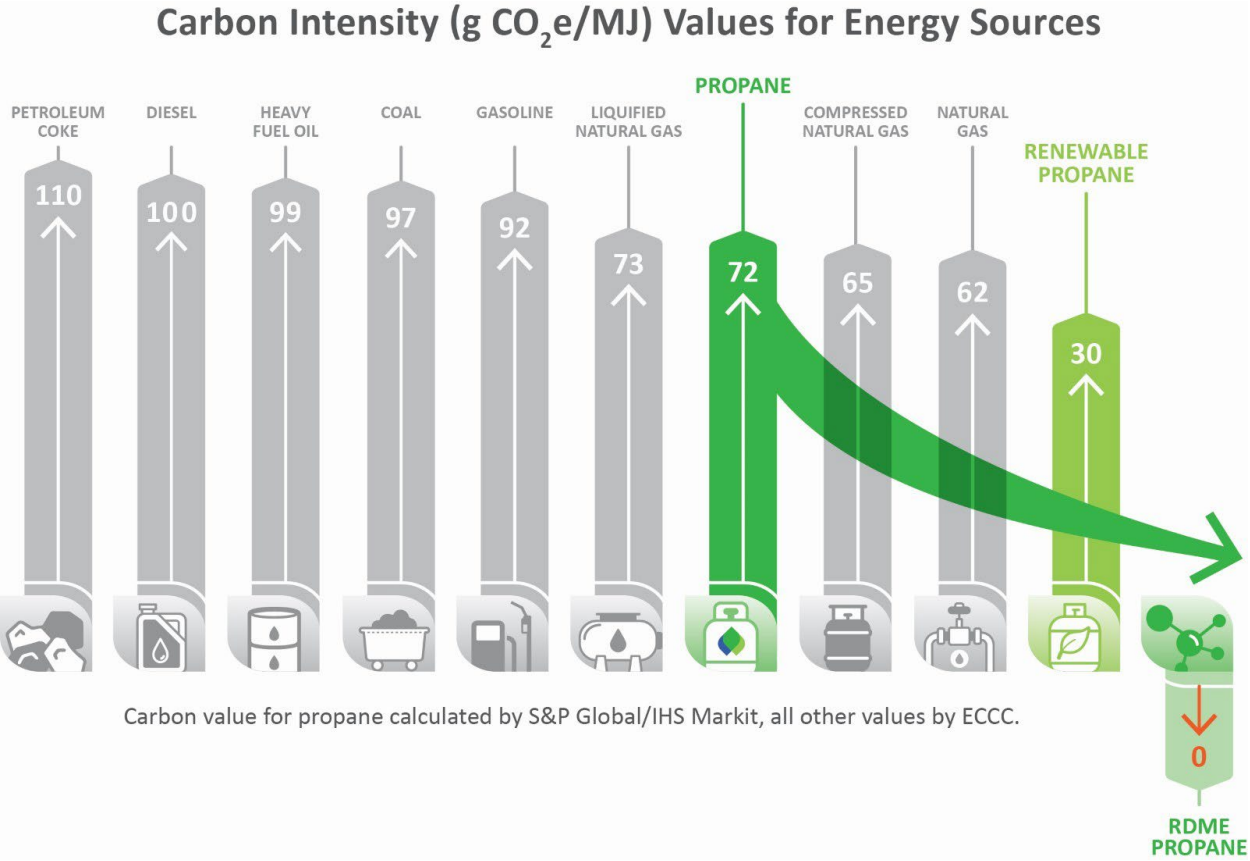
c) Biofuels:

Renewable propane is being produced and sold commercially in Europe and the U.S.

As the chart below shows, propane is already a low-carbon energy (72 gCO_2e/MJ). Renewable propane is even cleaner (30 gCO_2eg/MJ).

Propane and renewable propane emissions can be even further reduced through blending with rDME (renewable dimethyl ether) (~O gCO_2e/MJ) which is produced from renewable and

recycled carbon feedstock. As for rDME, it is currently in production in California from an Alberta feedstock.



<u>Energy Planning: Achieving Integrated, Long-term Energy Planning</u>

Question 7 d:

How might energy planning mandates and/or enabling legislation need to change to adequately address the needs and interests of Indigenous communities?

There are many Indigenous communities that are not connected to the electricity grid and rely on diesel for their heating and electricity.

Providing these communities with cleaner and affordable energy choices, which include propane is vital to ensuring they have access to reliable sources of energy. Any renewable energy installation will need back up and propane is the ideal option in these off grid locations.

Incentives that will provide price assistance to propane that is currently available to diesel is an important aspect. Just like diesel, in remote communities, propane power generation can be scaled up to meet those communities' energy/electricity needs.

Propane emits 38.2% fewer GHGs than furnace oil. Because propane is not a GHG gas prior to combustion, it does not harm air, land or water if spilled. It simply dissipates into the air. Millions of dollars are spent each year in Indigenous, rural, and remote communities to remediate diesel spills. That cost would be eliminated.

CPA member Keith Maracle, a member of the Mohawks of the Bay of Quinte First Nation and owner of Tyendinaga Propane in Shannonville, participated in a consultation session with the Electricity and Energy Transition Panel on March 15.

He believes that in addition to the many advantages of low, emission propane, its also important that those delivering services to the community, including energy, are from the community and that at the local level, energy planning is uniquely important.

"People appreciate that local businesses from our community are able to service their needs. For us, this includes working with our clients with any budgeting challenges through setting up equal billing. We know our customers and can work directly with them. That is a different level of service from what they could expect from natural gas companies or electric utilities."

<u>Community and Customer Perspectives, Affordability and Energy Sector Objectives:</u>

Affordability Question 2 d:

How do energy affordability issues vary across different types of customers in different regions of Ontario? How might the province and/or Ontario's energy agencies ensure energy costs are affordable for different types of customers in different regions – residential consumers, rural consumers, Indigenous communities, marginalized communities, small business consumers, large commercial consumers, and industrial consumers?

Should Ontario consider new programs (e.g., rebates for fuel-switching appliances) or a new approach to mitigate energy affordability risks through the energy transition for:

> *i. Larger (primarily industrial) electricity consumers to ensure competitiveness and encourage electrification during the energy transition?*
>
> *ii. Households across the income distribution spectrum?*
>
> *iii. Commercial and institutional customers?*

An important policy opportunity would be to ensure that for areas of the province that do not have access to natural gas, there be an incentive to encourage the use of propane as a replacement for carbon intense furnace oil which is still often used as a primary energy source to support heat pumps. The expanded use of propane would serve to reduce costs and emissions.

The CPA has developed a rural off-oil proposal that would lower energy costs and reduce GHG emissions for lower income Ontario homeowners.

- 3.1 tonnes of annual CO2 reduction per house (-38.2%)
- $1,385 average annual heating cost savings per Ontario house (5 –year average: 30%)
- Reduce insurance costs by up to $500 per year

<u>Community and Customer Perspectives, Affordability and Energy Sector Objectives:</u>

Achieving Energy Sector Objectives Question 1:

In your organization's experience, what are consumers willing to do to support greater reductions in GHG emissions? How willing are they to: a. Change their behaviour – For example, switch electricity uses to times of day when there is less burden placed on the electricity system such as to evenings, weekends and/or overnight. b. Use more energy efficient technologies such as energy efficient fridges, washer/driers, light bulbs, space and water heating equipment. c. Discontinue their natural gas services and transition to electric alternatives for home heating or cooking. d. Use less electricity overall through conservation – for example leaving lights off when they would normally have them on. e. Adopt renewable energy technologies like rooftop solar f. Adopt electric vehicles g. Switch heating and other fuel uses to non-emitting technology or technology that uses electricity h. Shift patterns of energy usage/demand to avoid peaks i. Track and analyze energy usage data to increase energy efficiencies and reduce demand on the energy system j. Pay more for energy services or to offset emissions.

Everyone agrees about the importance of reducing our carbon as much as we can, as quick as we can. The CPA is developing our own plan this fall for our industry to be net-zero by 2050.

However, the transition to a green future is best achieved with a **"dial approach."** This allows for fairness, affordability, and energy choice for all consumers not matter where they live or their economic circumstances.

The dial approach is “all-hands-on deck” to not only reducing emissions but also providing affordable, reliable, and secure energy. As green technology continues to develop the intensity of the dial can be increased.

A **“switch approach”** will not work as it would leave many, including Indigenous, rural, and remote communities literally out in the cold.

Energy policies that directly or indirectly negatively affect low emission propane would be doing a disservice by denying those communities that do not have access to natural gas, energy choice and are, even now, paying higher costs for heat, food, and transportation. A “switch approach” would only accelerate the challenges they currently face.

We know this because our members see it everyday. For example, many are multi-fuel distributors. They know the struggles their customers faced last winter with the prohibitive cost of heating oil. At some points, the price per litre of heating oil was almost a $1 per litre more than propane.

We also know this because experts who have been studying the transition have been telling Canadians that there are real costs involved in rapid decarbonization.

It should be noted that under the Federal Fuel Charge, propane has a lower carbon intensity than heating oil and is taxed less. The Federal Fuel Charge on a litre of heating oil on July 1 will be 17.43. For propane it will be 10.06 cents. Fast forward to 2030 and that same litre of heating oil will include a carbon tax of 45.57 cents compared to 26.30 cents for a litre of propane.

Price per tonne	$20.00	$30.00	$40.00	$50.00	$65.00	$80.00	$95.00	$110.00	$125.00	$140.00	$155.00	$170.00
FUEL	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Diesel	5.37	8.05	10.73	13.41	17.43	21.45	25.47	29.49	33.51	37.53	41.55	45.57
Gasoline	4.42	6.63	8.84	11.05	14.37	17.69	21.01	24.33	27.65	30.97	34.29	37.61
Propane	3.10	4.64	6.19	7.74	10.06	12.38	14.70	17.02	19.34	21.66	23.98	26.30

By 2030, the full pricing effect of the Canada Fuel Regulation (CFR) will come into force. According to the federal Parliamentary Budget Officer, at that point diesel and heating oil will increase another 17 cents which will bring the total carbon tax on a litre of heating oil to 61.57 cents a litre.

Like natural gas, propane is a gaseous fuel and will not be affected by the CFR. As a result, by 2030, the carbon tax on propane will be over 35 cents *less* than a litre of heating oil.

Propane is an extension of natural gas. Its low emissions and affordability relative to the cost of heating oil is a critical benefit for Indigenous, rural, and remote communities. Those advantages must be reflected in government energy policy development.

Replacing oil and gas as energy sources will be a challenge. In a report published by the **C.D. Howe Institute** in September of 2022, researchers Charles DeLand and Alexander Vanderhoof looked at the implications of replacing gas and oil in Canadian homes.

In an essay called *Only Hot Air? The Implications of Replacing Gas and Oil in Canadian Homes,* they came a way with some important observations.

- Canadian homes emit about 6 percent of Canada's total greenhouse gases. The Federal government aims to bring down 2030 building emissions by 42 percent compared to 2019, with the entire economy producing net zero emissions by 2050.
- Canada would need to retrofit **over 400,000** dwellings per year to fully electrify all dwellings by 2050 and meeting 2030 targets requires even more aggressive action: **over half a million** retrofits would be required per year.
- Even in an extreme scenario where no new emitting buildings came on the market after 2022, emissions only fall by about 26 percent to 2030, still not enough to meet government targets.
- Retrofits are not cheap. Meeting the 2050 target could cost between $4.5 billion to $6.3 billion per year.
- Numbers like these show that other emissions-reducing measures will have to bear more of the burden. These include energy efficiency improvements to homes, building code revisions, and **combining heat pumps with *traditional natural gas furnaces***.1

The last point is an important one and where some communities risk being left behind. Combining heat pumps with traditional gas furnaces make perfect sense, but only where people have access to natural gas. But what of the communities that do not have and never will see natural gas? Again, Propane as an extension of natural gas can play a critical role.

While Enbridge, delivers programming for Ontarians not on natural gas as part of its agreement with Ottawa under the Canada Greener Homes Grant, the experience of our members is that is a rare occurrence. There is not much incentive for them to reach out beyond natural gas customers. The bottom line is that propane customers need the same type of program support which will encourage them to acquire heat pumps.

Community and Customer Perspectives, Affordability and Energy Sector Objectives:

Achieving Energy Sector Objectives Question 2:

Do consumers have any issues or concerns with the reliability of their energy supply? If so, what are they and how would they like those concerns addressed?

While its well known that propane is available where natural gas is not, what is less known is that propane also plays a key role in providing immediate energy where natural gas *should* be but is not always available.

CPA member Dave Karn's family has been in the propane business in the St. Thomas area for three generations. Like Keith Maracle, Dave participated in the March 15 consultation with the panel.

He reminds us that, ***"In some cases, the natural gas is available but not enough of it at peak demand, so propane is still required. Propane energy fills in the gaps where natural gas is limited. Whether its corn dryers, tobacco curing, frost fan protection, livestock barn heating or greenhouse heating, propane is used to produce synthetic natural gas that address intermittent natural gas outages."***

The benefits of propane to the general public include:

- Portable and able to provide energy where natural gas is not available, including in remote and Indigenous communities across the province.
- Cleaner source of energy when compared to diesel, gasoline, and heating oil.
- Due to lower emissions, is taxed lower when compared to gasoline and diesel.

Community and Customer Perspectives, Affordability and Energy Sector Objectives:

Achieving Energy Sector Objectives Question 3:

What should Ontario do to ensure a reliable and resilient energy system in the future and to protect the health and safety of Ontarians in situations where power outages are unavoidable?

The best way to ensure energy availability is to use all the tools in the energy toolbox. As we noted, natural gas is not always available. In addition, the increasing number and intensity of weather events have both illustrated the limitations of electricity and the important of propane as an energy's "first responder" when access to other source of energy are not available.

Regarding electric grid itself, a report published by the **C.D. Howe Institute** in May 2023, looked at the potential impact of increased electricity demand which could also have grave consequences for those living outside the natural gas pipeline.

"Increasing reliance on electricity for home heating and cooling (as well as for things like electric vehicle charging) means that electricity demand is likely to rise. For example, Ontario expects residential demand to rise from 51 terawatt-hours (TWh) in 2023 to 61 TWh 2042, an annual growth rate of 0.9 percent (IESO 2021a)."

They also note that,

"The government of Canada aims for a net-zero electricity grid by 2035. In theory, after that, emissions will not increase with demand. In the meantime, practically speaking, emitting

sources will continue to be used. In many jurisdictions natural gas is best placed to meet those needs, since it's easily available, relatively cheap to install, and available when required. These attractive properties make it difficult to remove entirely... Back to the Ontario example, a complete phase-out by 2030 could lead to blackouts, may cost more than $27 billion, and raise bills more than 60 percent (IESO 2021b). Moving too quickly to electrification with such policy constraints may make the problem worse."

In addition to common use of propane energy to individual houses and other buildings, propane can be used via a grid system**.**

A propane energy grid can supply propane through one common storage tank, underground piping and individual meter sets for existing and potential buildings lacking access to major natural gas transmission pipelines. Propane grid systems are very common in all provinces, including Ontario.

Its also important to remember the importance of everyday usage of propane. No matter what part of the province Ontarians live, propane plays an important role in their lives.

Just look at just some of the applications of propane.

- Residential: heating, hot water, cooking, clothes dryers, Shop heaters, fireplaces, backup power generation.
- Commercial: Heating, hot water, power washers
- Industrial: paint ovens, large boiler systems, forklift engine fuel
- Agricultural: Corn Dryers, Tobacco Curing, Frost fan protection, Livestock barn heating, greenhouse heating, synthetic natural gas production for intermittent natural gas outages.
- Automotive: Fleet vehicles that want to reduce the carbon footprint in an affordable manner - i.e., City of London police cruisers.
- Construction: heating systems, curing concrete, welding

Conclusion

There are 400 members of the Canadian Propane Association. Our 125 Ontario members make up about 31% percent of the membership. The Association is comprised of producers, wholesale marketers, transporters, retailer marketers and MACE (CPA members that **M**anufacture and sell **A**ppliances, **C**ylinders and **E**quipment).

While you will find that all member categories are represented in the province, most are retailer marketers and MACE who live and work in communities right across Ontario.

Whether its Dave Karn and the Karn family who have been in the propane business in St. Thomas for generations or Keith Maracle who founded Tyendinaga Propane in Shannonville,

some thirty years ago, propane members in this province have one important commonality that is unique to the energy industry – their ties to the community.

Ontario CPA members not only provide affordable, low emission energy and jobs to their communities, but they are also important members of the community. They sponsor sports team, fundraise for local charities, lead community groups, and serve their local chamber of commerce.

They are also on the front lines as we transition to cleaner energy. Many of them are multi fuel distributors. They see that affordability and carbon challenges that diesel, gasoline, and furnace oil present. They live it every day.

They also see the advantages that affordable and low emission propane offers today and in the future. They are positioned better than anyone to help lead the energy transition at the community level.

They can turn heating oil customers into propane customers (and one day soon, renewable propane customers), but they need to be recognized as full partners in the energy transition and supported by government policies and programming.

The communities that CPA members serve, Indigenous, rural, and remote; are at a high risk of being left behind in the rush to electrification. Not because government doesn't care but because the challenges of rural energy delivery are not as "newsworthy" as announcing low emission energy projects that are far better suited to their urban neighbours who have more affordable and low emission options for home energy, food, transportation and the like.

In this submission, we have shown propane as a critical transition energy for today and for the future. The most important recommendation we can make is to urge the panel and the government to ensure that Indigenous, rural, and remote communities are recognized and understand that they face unique energy challenges beginning with affordability and access to cleaner energy alternatives. Ontario's propane industry led by CPA members stands ready to help meet those challenges.

Transitioning how we convert high carbon energy to low carbon alternatives is hard. And a time when politicians tend to use algorithms to see what policy positions will curry favour with voters, its important that the provincial government, through Minister Smith, has understood correctly that the sometimes-difficult discussion about energy transition can't wait.

But that transition has to be done inclusively when technological advances can support all parts of the province not just urban areas.

As we have said, decarbonization and energy transition is best achieved as a dial approach. The challenges facing Indigenous, rural, and remote communities require perhaps different kinds of solutions achieved at a different pace than those in the urban areas.

The availability of the panel has been excellent. Our association staff and CPA members have had several opportunities to connect directly with panel members, through email exchange, direct conversations via TEAM's, participating in consultations sessions and finally through this written submission.

I want to thank Chair Collie, Chief Emeritus Whetung and Dr. Gattinger for their efforts throughout the consultation period.

Shannon Watt