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February 4, 2021

Toronto City Council
c/o Marilyn Toft
12th Floor, West Tower, City Hall
100 Queen St. W.
Toronto, ON M5H 2N2

Re: MM28.21- Calling on the Province to Phase-Out Gas-Fired Electricity Generation

Dear Councillors:

Citizens' Climate Lobby (CCL) is an international grassroots environmental group that trains and supports volunteers to build relationships with their elected representatives in order to influence climate policy. It has several hundred members listed in the Toronto area.

In November, 2020, CCL Canada issued the accompanying Media Packet "Stop the Dash to Gas and Green the Grid", calling for an end to the effective exemption gas plants enjoy from paying carbon tax like the rest of us and explaining how the substantial increase in pollution from gas plants now projected, especially in Ontario and Alberta, poses a significant hindrance to Canada achieving its national greenhouse gas reduction targets.

But I am writing this letter not on behalf of CCL, but rather as a concerned individual citizen of Toronto with some background in the subject matter. During my employment with Ontario Hydro from 1974 through 1998 and as Manager of Generation Projects with Toronto Hydro from 1998 through 2001 and as Director of Project Development with the engineering company FVB Energy Inc from 2001 through 2016 I was deeply involved in the development of generation projects, including the early days of consideration of the Portlands Energy Centre (PEC) in Toronto. In fact, I believe I coined the term "Portlands Energy Centre" riffing off a previous heat energy project I had worked on with Ontario Hydro, the "Bruce Energy Centre". In the early days, we considered the PEC might also supply steam to the downtown district heating system.

After PEC was built, when I was with FVB, I was involved in negotiation with OPG to that end on two separate occasions on behalf of two separate clients.

In the 1990's and early 2000's, we saw gas-fired generation as an improvement over coal-fired generation. However, more recently, it has become generally accepted that gas fired generation is worse than we thought, and possible even worse than coal, because of the higher than formerly believed leaks of methane from the upstream supply. No responsible environmentalist looks upon gas as a bridge to the future anymore. The prevailing attitude was well expressed at a press conference recently by the President of the European Investment Bank, Dr. Werner Hoyer, when he said "To put it mildly, gas is over."

I read the letter to you, dated February 2, 2021 from the Association of Power Producers of Ontario (APPrO). Whereas I appreciate that APPrO has a duty to take the side of its members, including OPG, the owner of the PEC, I believe the key arguments it made for a continuance in operation of gas plants were flawed as explained below.

Firstly, it relied heavily on the technical excellence and supposed political objectivity of the Independent Electricity System Operator (IESO) implying that the generation mix we have in Ontario, including gas, is a result of the IESO's planning and therefore must be the best possible. I certainly have no doubt about the technical expertise of the IESO, but its political objectivity is certainly suspect under the chairmanship of Joe Oliver, who wrote in the Financial Post on August 15, 2019 that Canada will benefit from climate change. More recently, in the Financial Post on January 27, 202I, Joe Oliver argued that Trudeau paved the way for Biden's rejection of Keystone. So much for political objectivity.

Second, it used faulty logic in implying that because Ontario already has one of the cleanest electricity systems in the world it need not get any cleaner. That is not so. We need to be at or very close to 100% emissions free to align with the goal of achieving Net Zero, which has been roundly embraced by not only Canada, but many jurisdictions around the world. There are countries already with cleaner systems than Canada, including Albania, Iceland, Paraguay, Cost Rica and Norway.

Third, it buttressed the previous point by using 2017 data as a basis of the false claim that 96% of the electrical energy is produced from emissions free sources. But in the January, 2020 Annual Planning Outlook of the IESO, data for Figure 23 shows that the projection for the next 20 years shows a worrisome decline in the % of emissions free generation from 93% in 2021 through 83% in 2030 to 80% in 2040. Why? Because there are no new emissions free generation sources planned. All future additional needs are planned to be met with gas. APPrO writes that "current natural gas generation supply can play an important role in transitioning away from fossil fuels" But gas is itself a fossil fuel and there is no indication in the aforementioned IESO plan when this alleged transition will be completed.

As result, the data for Figure 32 in the same planning document reveals total greenhouse emissions from gas fired generation in Ontario from 2021 through 2040 to total 215 million tonnes. That is plenty to be concerned about.

The APPrO letter tries to paint Ontario green by favourable comparisons with places that are worse. But, again, that is faulty reasoning. As is pointing out that emissions come from sources other than electricity. It does not follow that emissions from electricity generation should not quickly go down to near zero. Electricity generation is the low hanging fruit. There are readily available non-emitting alternatives, few decision makers and it is largely controlled by the government. That contrasts with the millions of decision makers, mostly private, involved in building heating, where APPrO suggests we look for emissions reductions rather than from electricity.

The letter then argues for greater electrification, which, of course, will be more effective in decarbonization to the extent electricity itself is clean.

It denies more energy could be procured from Quebec as it says that province has its own capacity shortfalls in the mind-2020's. But Quebec is winter peaking, while Ontario is summer peaking. Moreover, we don't necessarily have to take net energy from Quebec. If we only had better access to the vast energy storage capability of Quebec's hydro dams, we could get better performance from our existing wind turbines and build a lot more, instead of ordering almost in-service turbines to be dismantled, one of the first actions of the current Ontario government for transparently ideological reasons. This is not just my opinion, a careful optimization study referenced in our Media Packet, as well as previous studies have suggested the same.

It tries to intimidate Councillors by quoting a cost of over $1 billion for a new tieline with Quebec. But a billion is not a huge number in this busines. My rough estimate of the cost of gas projected by the IESO (data for Figure 23, Ibid) to be burned from 2021 through 2040 based on todays low price for gas is over $12 billion. These are hydro rate payers' energy dollars haemorrhaging the province that could be recycled into local businesses to provide non-emitting energy sources.

It further tries to frighten Council by reaming off a stream of technical issues that the Motion has not taken into account, as if the Councillors were supposed to have their own mini-IESO capability and by claiming that "prematurely" replacing these assets will be "an enormous expenditure" for rate payers or tax payers. As for the word "premature", in fact most of these gas plants in Ontario will reach the end of their 20-year contracts before the early 2030's. Yet, sadly the IESO is thinking of extending those contracts.

As for "enormous expenditure", it would be the private sector, firms who may become members of APPrO, who will put up or borrow the capital cost of new emissions free generation given contracts that judging from recent contracts awarded in Alberta are barely above the running

costs of the gas plants, without proper carbon taxes, and less than the gas plants running costs should their subsidy of not paying proper carbon taxes be taken away.

And the “capacity” of the gas plants to provide reliability on standby need not go away. We just want them to run less, burn less gas and create less pollution – OK, a lot less.

The main issue under contention here is the extent to which we appreciate the absolute necessity of stopping emissions of greenhouse gases as soon as possible. If there turns out to be a net cost for that, then it would still be trivial compared to the high cost of climate change. I believe most Councillors, like most citizens of Toronto, have a good appreciation of this and therefore will vote accordingly on this motion.

Sincerely,

John Stephenson

Citizens' Climate Lobby Canada

MEDIA PACKET

Stop the Dash to Gas and Green the Grid

Monday, November 9, 2020 **Media Contact:** Cathy Orlando 705-929-4043 cathy@citizensclimatelobby.org

Sudbury ON: The Corporate Knight's Building Back Better Report indicates that greening the grid will create 905,000 jobs/and add $284.5 billion of gross value to the Canadian economy between now and 2030. Achieving this transformation will require strong measures. How can we get there?

Citizens' Climate Lobby (CCL) Canada recommends that the pricing protection currently enjoyed by natural gas electricity plants on their greenhouse gas (GHG) emissions be removed as soon as possible. Currently, the Greenhouse Gas Pollution Pricing Act and provincial regulations for big emitters in Alberta, Ontario and New Brunswick permits existing gas plants and those converted from coal to emit most of their GHGs for free.

The result? Any progress in incentivizing clean electricity production as well as reducing greenhouse gas (GHG) emissions from coal-fired electrical generation plants is largely erased by increased production from natural-gas electricity plants.

Rather than charging gas plants for only a small portion of the GHGs they emit, CCL Canada advocates that the federal government make gas plants pay the full carbon price on all the natural gas they use. This needs to be done while continuing to increase the national carbon price past 2022 and continuing to return the revenue to Canadians.

Furthermore, now that the European Union is going to enact border carbon adjustments in January 2023, Canada should follow suit, and replace the provisions to protect the competitiveness of natural gas produced-electricity in the Greenhouse Gas Pollution Pricing Act with border carbon adjustments.

This recommendation should result in the displacement of gas electrical generation by renewables—with a reduction of up to 15 Mt of GHGs per year achieved in Ontario alone (Figure 1). Significant reductions could also be made in Alberta (Figure 2). Furthermore, future additional generation is more likely to be non-emitting with an increasing carbon price (Figure 3).

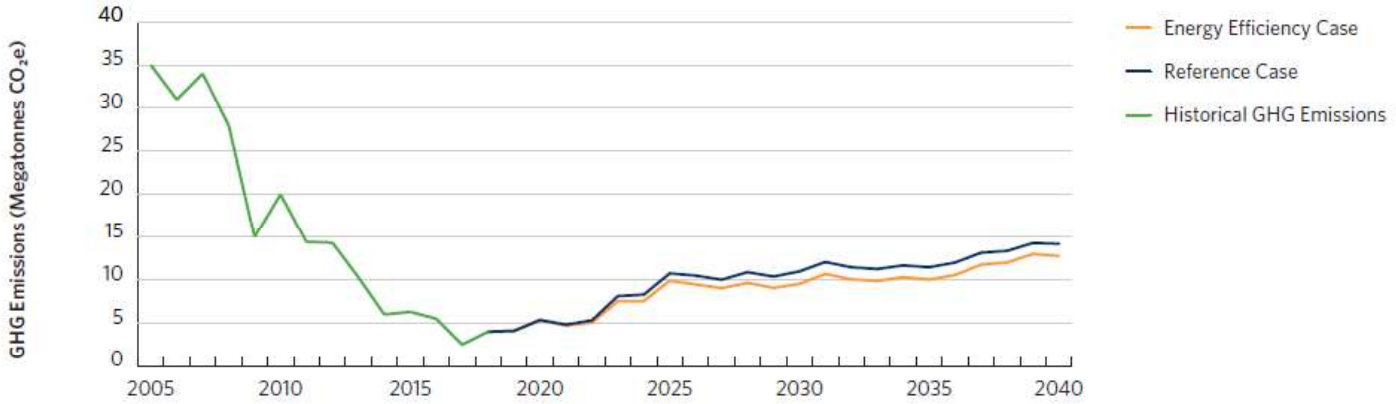
A 2017 study by Dolter and Rivers showed that an incrementally increasing carbon price with no loopholes would, over time, eliminate about 90% of GHG emissions from Canada's electricity system (Figure 3), with an increase in average cost of electricity of 1.2 cents per kilowatt-hour.

An economy-wide carbon price with no exemptions will unleash the innovative talents of Canadian business, industry, and our highly-skilled workers to meet the challenges we face. Canada is blessed with the natural resources and skilled workforce to green our grid, realize the economic benefits, and improve the lives of all Canadians. What are we waiting for?

In June 2019, Canada declared a national climate emergency. However, 18 months and an election later, we are not on track to meet our Paris Target of emitting no more than 511 Mt of GHGs per year by 2030. There is a gap of at least 92 Mt between Canada's current commitment and 2030 target (Figure 4), and current policies are nowhere close to meeting the government's more recent commitment to reach net zero GHG emissions by 2050 (Figures 5). Canada must do more to reduce our GHGs and what we do about our gas plants is crucial to this.

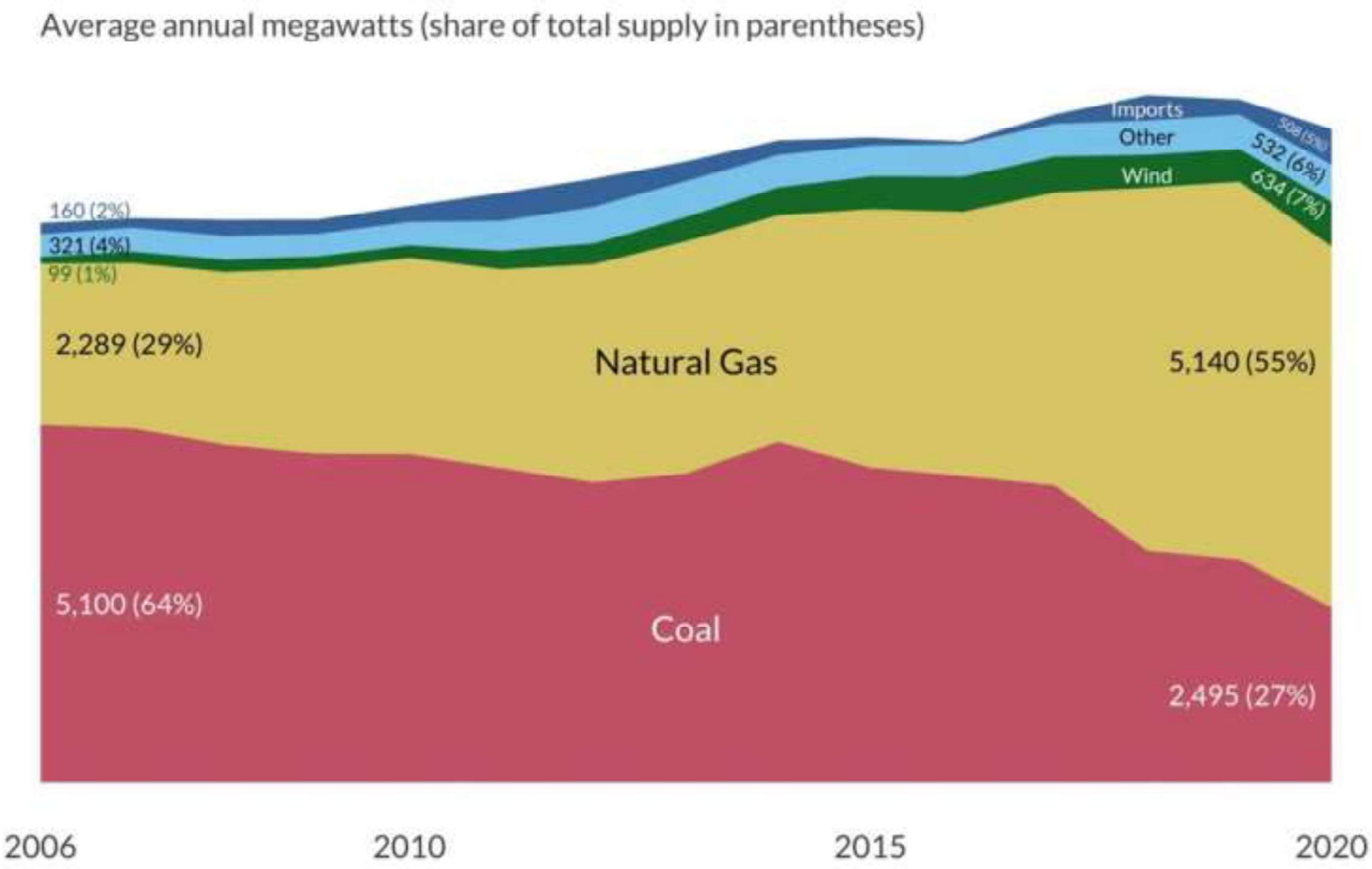
Virtually all economic studies, starting with the Stern Report in 2006, have stressed that the costs of dealing with climate change are dwarfed by the costs of failing to deal with the climate emergency -- including the costs of forest fires, flooding and health impacts. The price of ineffective action will be an increasingly uninhabitable world.

Figure 1: Ontario Electricity Sector GHG Emissions, Historical, and Forecast



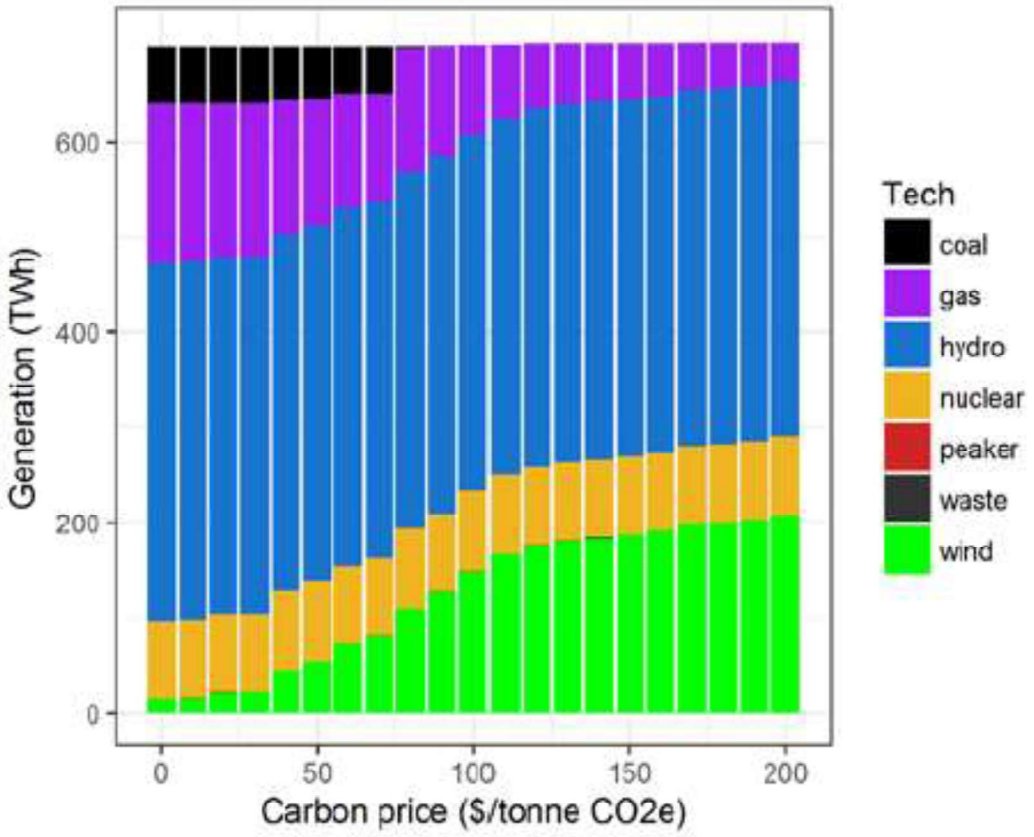
Source: Figure 32 from Annual Planning Outlook, January 2020, Independent Electricity System Operator. The drop from 2005 through 2014 is mainly due to shutdown of coal plants. The projected increase from 2017 is all from gas plants.

Figure 2: Growth of Gas Plants in Alberta



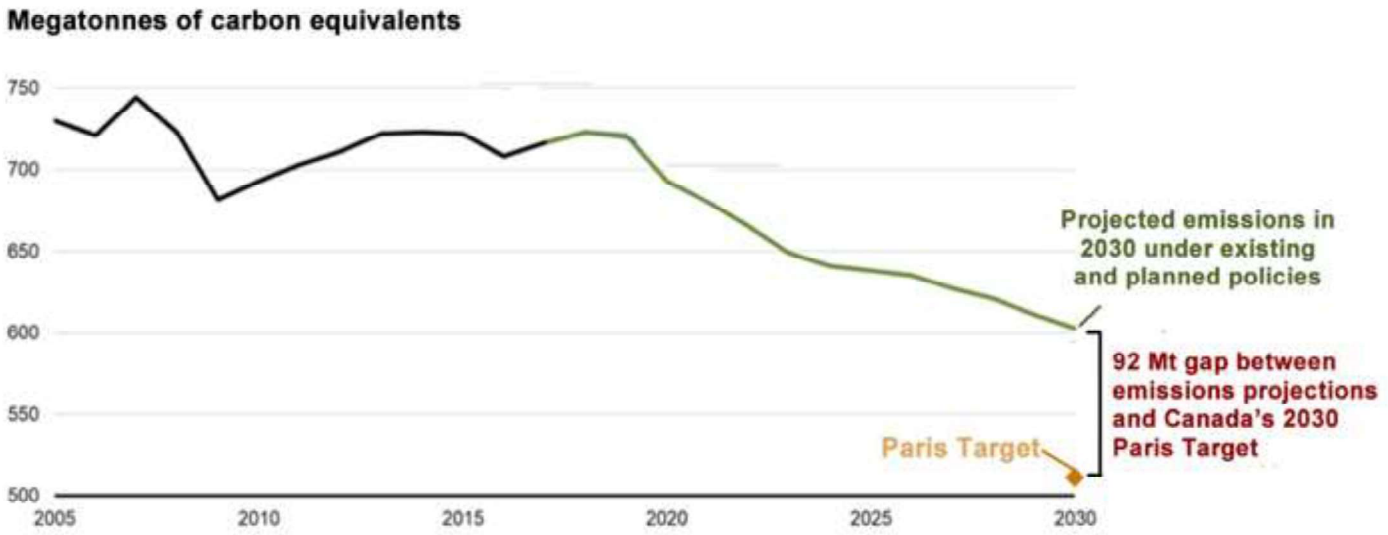
Source: OPINION | Alberta's shift away from coal power is a climate action success story, CBC Alberta, Andrew Leach and Blake Shaffer, October 15, 2020.

Figure 3: Wind displaces gas with an increasing carbon price



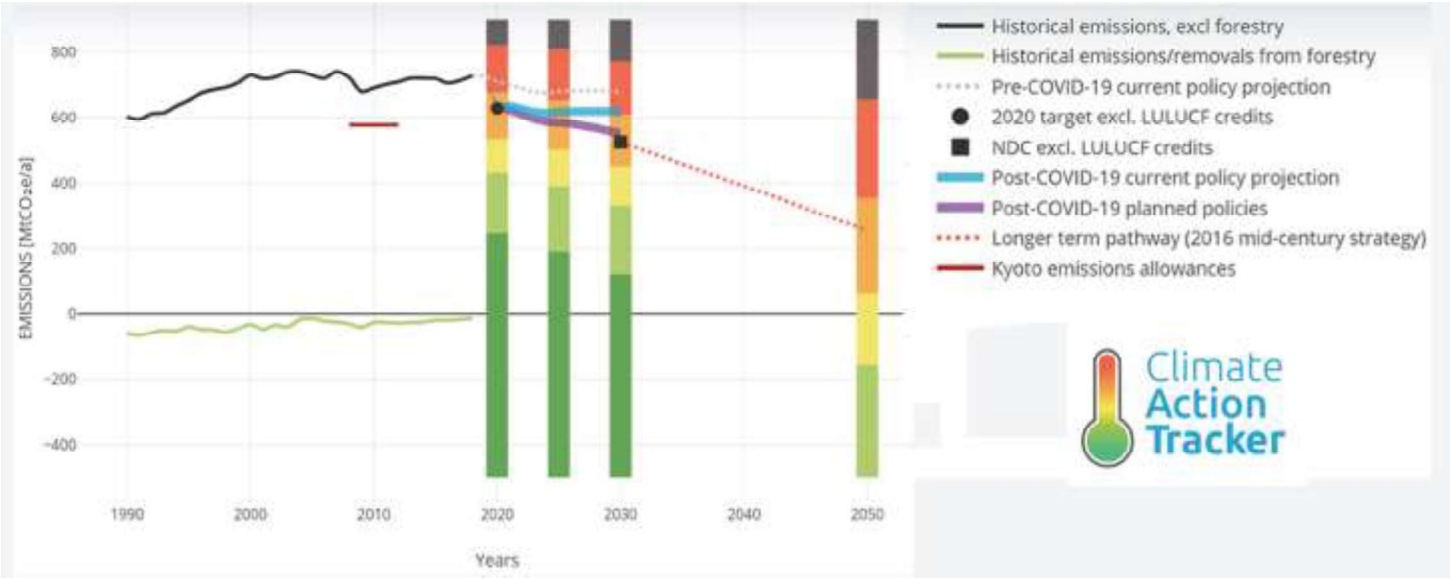
Source: The Cost of Decarbonizing the Canadian Electricity System; Dolter and Rivers (2017).

Figure 4: Canada's historical and projected GHG emissions



Source: Modified from Environment and Climate Change Canada (September 2020) Progress towards Canada's greenhouse gas emissions reduction target.

Figure 5: GHG Emissions Overview to 2050 – Canada



Source: Climate Action Tracker (September 21, 2020 data). Note; the orange section of the vertical bars denotes an insufficient effort to meet Canada's fair share of emission reductions and would lead to 3 degrees of global heating which is a full degree above the Paris Agreement.

LIST: Groups that support the phase-out of natural gas plants in Ontario

AWARE Simcoe
Braden Homes Ltd.
BurlingtonGreen
Canadian Association of Physicians for the Environment (CAPE)
Canadian Climate Challenge
Canadian Environmental Law Association
Citizens' Climate Lobby Canada
Citizens Environment Alliance of Southwestern Ontario
Clean Air Partnership
ClimateFast
Creating Healthy & Sustainable Environments
David Suzuki Foundation
Don Heights Unitarian Congregation, Social Action Committee
Ecology Ottawa
eMERGE Guelph Sustainability
Environmental Defence
Environment Hamilton
Folkes Construction Inc
Fridays for Future
Grassshopper Energy
Green 13
Green Party of Ontario
Hamilton 350
Justice, Peace, and Integrity of Creation Office of the Sisters of Providence of St. Vincent de Paul
Kairos
Leadnow
Ministry for Social Justice, Peace, and Creation Care of the Sisters of St. Joseph of Toronto.
MobilizeTO
Mount Dennis ecoNeighbourhood Initiative
Ontario Clean Air Alliance
Oxford Community Energy Co-operative
Prevent Cancer Now
Registered Nurses' Association of Ontario
Shift Action for Pension Wealth and Planet Health
SolarShare
South Riverdale Community Health Centre
The Council of Canadians
The Leap
The Roots Collaborative
Toronto Environmental Alliance
Toronto 350
Trinity St. Paul's United Church - Climate Justice Group
Wilderness Committee
Women's Healthy Environments Network

Source: https://you.leadnow.ca/petitions/ontario-it-s-time-to-phase-out-gas

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