

October 29, 2020

Re: Written Submission to the House of Commons Standing Committee on Environment and Sustainable Development- Study on Zero Emissions Vehicles

Dear Members of Parliament,

Please accept our appreciation for all the efforts you, the parliamentarians, have undertaken during this extraordinary public health and economic crisis. We fully support the efforts taken to date as we seek to contain the virus and sustain the livelihood of all Canadians.

I am writing to you today to share information on Ontario Power Generation (OPG) and its electrification initiatives that may inform the committee's study of the opportunities associated with zero-emissions electric vehicles in Canada.

OPG considers the electrification of key sectors like transportation, rural remote communities and, regions and resource development as key to meeting Canada's net-zero emissions goals by 2050. Our clean electricity generating portfolio that includes nuclear, hydro, renewables, and natural gas plants is a backbone in Ontario to meeting emissions targets, getting off coal, and enabling clean economic growth in the future.

Like all Canadians, OPG has been very focused on the health and safety of our people and ensuring that our critical electricity generating stations are operating safely and reliably. We know that our primary job is to continue providing the vital electricity that is required for hospitals, health care facilities, senior residences, grocery stores, pharmacies, water treatment plants, and other essential services that are engaged in the fight against COVID-19.

OPG has been doing its part to help meet the critical health care needs of Ontario in efforts to combat COVID-19. These include donations such as:

- 1,000,000 surgical masks
- 75,000 N95 masks
- 17,500 Tyvek protective suits
- 10 Power Assisted Air Purification Respirators
- \$500k to Feed Ontario to help launch their province-wide emergency food box program
- \$250k to the Regional Food Distribution Association of Northwestern Ontario to distribute food support to First Nations
- \$150k to Feed the Need to buy and distribute food to organizations across the Durham Region in Ontario

OPG is proud to support our province and our communities and we will continue to look for opportunities to support during this challenge.

Who We Are

OPG is Ontario's largest clean power generator, a diversified company with generating assets across North America, and a climate change leader who led the phase-out of coal-fired generation in Ontario.

Within the province of Ontario, OPG owns and operates 66 hydroelectric, two nuclear, and two thermal generating stations, one of which is biomass, as well as one solar facility and four natural gas-fired stations through our subsidiary Atura Power. OPG also owns two additional nuclear generating stations in Tiverton, Ontario which are leased on a long-term basis to Bruce Power L.P. In addition to its Canadian assets, OPG owns and operates 85 hydroelectric stations in the United States.

To support clean electricity production, OPG has been undertaking a \$12.8 billion refurbishment program at the Darlington Nuclear Generating station which will secure 30 more years of GHG-free electricity production for the province of Ontario.

On June 6th, the first of four units were successfully returned to service. Due to COVID-19 implications, the refurbishment of the next unit, Unit 3, was paused. However, we are proud to report that the refurbishment work has now restarted. Restarting the refurbishment project will help restart the Canadian economy. The refurbishment program represents 14,200 jobs per year that will extend the life of the Darlington Nuclear Generating Station, avoiding significant emissions equivalent to two million cars off Ontario's roads per year. This has a direct benefit to Ontario and Canada's efforts to reduce emissions.

Along with supplying power, OPG produces Cobalt-60, a critical medical isotope that serves a vital safety function. The isotope is used to irradiate and sterilize about 40 per cent of the world's single-use medical devices, such as syringes, gloves, and surgical Instruments. We are proud of our role in helping frontline health-care workers have access to sterilized devices as they care for our friends and loved ones. This added benefit of nuclear power has been critical in protecting our health-care workers during the COVID-19 pandemic.

Having delivered the world's single largest climate change action to-date by closing our coal stations, OPG now looks to the future. The company is investing in technologies that will drive clean economic renewal – from transportation electrification to small modular reactors, energy storage, clean generation, and micro-grids. OPG believes that a multi-technology generation approach, along with the

electrification of key sectors such as transportation, will enable the transition to a low carbon and clean energy future. OPG also believes that only by working with local and Indigenous communities can projects move forward in a manner that it brings benefits for all Canadians.

This includes equity partnerships with Indigenous nations that enable capacity building, long-term social and economic development, and traditional cultural systems to co-exist with modern economic systems. Only in developing substantive partnerships with Indigenous communities will there be an opportunity to link energy, social, and economic development goals with national reconciliation goals.

In terms of OPG's electrification strategy, it is two-pronged: first, invest in electric technologies such as electric vehicle charging to reduce emissions in other sectors and second, continue to invest in clean energy generation projects such as the refurbishment of Darlington Nuclear Generating Plant, hydro redevelopment projects, and Small Modular Reactors to ensure clean electricity is available as demand grows.

Opportunities to meet Net Zero Emissions by 2050.

As the Committee considers opportunities and challenges to achieving zero emissions in the transportation sector and more specifically for zero-emissions vehicles, OPG would encourage the Government to take a broad approach to its policy and funding mechanisms.

Such an approach would take into account the need for clean energy generation and clean energy infrastructure as well as the vehicles themselves. The entire supportive energy and transport system must be oriented toward the same goal in order to realize the maximum benefits of zero-emissions vehicles.

As this committee considers these important issues, OPG recommends the following key initiatives that could assist Canada to meet its net-zero goals and promote zero-emissions vehicles:

1. Acceleration of federal investments of electrification and clean initiatives

Accelerating federal investments that fund the electrification of the Canadian transportation system and promote electric vehicles that would help stimulate the economy, create jobs, and reduce emissions across Canada.

For instance, the federal government could continue supporting electrification initiatives such as our recently announced Ivy Charging Network ('Ivy'). OPG has partnered with Hydro One to build Ontario's largest, most connected electric vehicle fast-charger network, Ivy. The support of Natural Resources Canada has been instrumental in the buildout of this infrastructure. Once fully deployed, this network will include 160 chargers across 70 plus sites in Ontario with the goal of providing easy, reliable charging from rural communities to urban centers. This initiative could be a model that would reduce emissions in other regions.

2. Providing low-interest financing for electrification projects

The government can also stimulate investment in electrification via the provision of low-interest financing for large-scale infrastructure projects that electrify transportation and industry.

For example, OPG is currently working with the Toronto Transit Commission (TTC) and Toronto Hydro to jointly electrify TTC's fleet of over 2,000 buses. OPG will design, build, operate, and maintain all on-site charging infrastructure as the TTC electrifies its entire bus fleet over the next two decades. The project would benefit from grants and low-interest financing.

3. Investing in SMRs as part of innovation, clean energy, and climate policies

SMR technologies represent a significant potential for Canadian leadership. These technologies could enable the emissions reductions of the resource development sector as well as creating opportunities for rural/remote and Indigenous communities.

The provincial governments of Alberta, Saskatchewan, Ontario, and New Brunswick have signed a Memorandum of Understanding to explore the potential of SMRs in their respective regions.

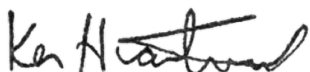
There is a unique opportunity for the federal government to work with various regions to meet commonly held goals. OPG has been working very closely with partners in these regions to enable this opportunity.

Canada needs to continue to support SMR development and deployment that will assist clean energy production in the resource development sector, smaller and remote communities that could provide the backbone for zero-emissions vehicles in those regions. This will create jobs, investments, and reduce emissions in high carbon regions and sectors.

Again, thank you for the opportunity to share these concepts and initiatives with you. I hope this information is useful to your deliberations and study of this important study.

I would be honored to appear before the Committee to assist in its important efforts. In the meantime, if you have any questions please feel free to reach out to George Christidis (George.Christidis@opg.com or 613.293.5242) who will be able to follow-up on inquiries or set up any meeting opportunity.

Sincerely,



Ken Hartwick
President & CEO
Ontario Power Generation