About Enbridge Inc.

Enbridge Inc. is a leading North American energy infrastructure company. Life takes energy and Enbridge exists to fuel people's quality of life. We safely and reliably deliver the energy people need and want. Our core businesses include Liquids Pipelines, which transports approximately 25 percent of the crude oil produced in North America; Gas Transmission and Midstream, which transports about 19% percent of the natural gas consumed in the U.S.; Gas Distribution and Storage, which serves approximately 3.8 million retail customers in Ontario and Quebec; and Power Operations. Together, our renewable energy projects (either operating or under construction) have the capacity to generate 2000 MW of net renewable power in North America and Europe.

Our regulated utility Enbridge Gas Inc. ("Enbridge Gas") is Canada's largest natural gas storage, transmission and distribution company based in Ontario with a more than 170-year history of providing safe and reliable service to customers and heats over 75 percent of Ontario homes.

Introduction

The current review of net metering rules provides an opportunity to formally recognize the benefits of localized power generated from fuels such as green hydrogen and renewable natural gas (RNG) and encourage the "right-sizing" of power generation equipment that is installed at homes and businesses.

With the community net metering proposal aiming to support projects such as net-zero communities using distributed energy resources, Enbridge believes there is an opportunity for customers to have more options on how to participate in net-metering. Enbridge believes the proposed Net Metering pilots and broader program should include efficient combined heat and power (CHP) and micro combined heat and power (mCHP) to complement building-sited renewable energy production under net-metering programs. As will be outlined in this submission, CHP and mCHP are common eligible generation sources for net metering programs and offer significant benefits including lower associated community costs while still meeting sustainability goals.

Net Metering Programs that Enable Geothermal, CHP, RNG and Hydrogen

In conducting a jurisdictional analysis, there are many net metering programs across North America that include geothermal, CHP using non-renewable and renewable fuels such as RNG and hydrogen as eligible generation sources for net metering.

Quebec allows hydropower, wind, solar PV, bioenergy and geothermal energy for electricity generation as a part of their net metering program. In Alberta, Fortis Alberta allows for microgeneration technologies such as turbines, solar PV, CHP, geothermal, fuel cell and hydropower.

Within the United States, projects led by Connecticut, New York State and Rhode Island have all incorporated fuel cell systems within their net metering policies. In Connecticut, DSIRE has allowed for solar thermal electric, solar PV, wind, biomass, hydropower, municipal solid waste, CHP, fuel cells using non-renewable and renewable fuels, landfill gas, tidal, wave, and ocean thermal through their virtual net metering program. New York has included solar PV, wind, biomass, CHP, fuel cells using non-renewable and renewable fuels, hydroelectric, anaerobic digestion, within their remote and community net

metering programs. New York, Rhode Island and Connecticut have all also employed a community net metering program within the last five years. Rhode Island has a similar structure however; they have also included geothermal electric use in their net metering programs. While the Government of Ontario is currently considering pilots for community net metering of electricity, Enbridge believes there would also be value in government reviewing the regulation of net metering of thermal energy in the future.

In California, the NEM Fuel Cell program has allowed fuel cells using non-renewable fuels that also meet a GHG emissions standard in accordance with California's Public Utilities Code. The program was a separate program cap from the virtual net metering program and bill credits are applied for the generation-only portion of a customer's retail rate. In addition, California Public Utilities Commission is updating its Net Energy Metering program to provide customer-generators with credits and or compensation for electricity generated by renewable facilities. The goal is to balance costs and benefits of the renewable electrical generation facility while providing the opportunity for customer-sited renewable generation to grow. California's net metering program specifically for fuel cell generation is eligible and is an innovative program that Ontario could learn from.

Ontario's Net Metering Rules

Ontario's current review of community net metering rules provides an opportunity to recognize the benefits of localized power generated from fuels such as green hydrogen and RNG and encourage the "right-sizing" of power generation equipment installed in homes and businesses.

To facilitate the optimization of self-generation under this program, Enbridge recommends the net-metering program allow for the eligibility of hydrogen, RNG and natural gas fired CHP and mCHP under the program. This change would serve to support the right-sizing of solar PV so as to limit unintended negative consequences. An example of an unintended consequence is the significant over-production of solar PV electricity that is sent to the distribution system (e.g. "California Duck Curve") during spring and summer months which have strong solar irradiance.

The allowance of CHP and mCHP would also bring forward the following benefits:

- Building owners would be encouraged to operate their buildings in such a way that their building's combined annual electrical generation, from all eligible sources, does not exceed their building's annual electrical consumption under a net metering program. In the fall and winter, when electricity yields from the PV array are weakest, net-metered buildings draw on their electricity credit through net-metering provisions. The building subsequently draws on its annual electricity credit by purchasing power from a bulk power grid during a seasonal time when the power grid is increasingly reliant on conventional thermal peaking plants which can increase GHG emissions.
- CHP and mCHP systems are inherently more efficient than conventional thermal power plants. A building's thermal energy requirements could exist at times when the building's electricity needs are low. Enabling CHP and mCHP under a net-metering program would allow building owners to heat their buildings and bank excess electricity. Short duration storage and remittance of electricity from the electricity distribution system and ensuring thermal energy recovery is maximized allows for the greatest GHG emissions reduction.

- Solar PV affordability has improved and will continue to improve making it more attractive for building owners. Owners who can benefit from CHP will see better results when right-sizing PV systems as they will have fewer operational impacts on power distribution systems. Building owners can use the savings from PV right-sizing to invest in battery storage (or remote storage) to improve a building's self-consumption pattern under net-metering.

Conclusion

Maximizing Ontario's emission reductions requires careful consideration of the time and seasonal dependency for when generation is supplied to the power distribution systems and when loads consume power from the bulk distribution system.

Net metering regulations should also allow for the net metering of power from various sources such as solar, wind, biomass, hydroelectric, municipal solid waste, CHP systems using renewable and non-renewable fuels, fuel cells using renewable and non-renewable fuels, landfill gas, tidal, and ocean thermal. Examples of such inclusions can be found throughout North America.

Enbridge recommends that the proposed community net metering program include efficient CHP and mCHP to complement building-sited renewable energy production under net-metering programs. This improves the overall energy resiliency for buildings and offers a reduced environmental footprint related to energy production and use.

If you have any questions or require additional information please contact Nicole Gruythuyzen, Government Affairs Senior Advisor (nicole.gruythuyzen@enbridge.com).