ERO number 019-9285
Integrated Energy Resource Plan Consultation

On behalf of TC Energy, we are pleased to provide the following commentary to the Environmental Registry of Ontario regarding Ontario's first integrated energy resource plan. We appreciate the opportunity to share our thoughts with the Government of Ontario on this important work to achieve Ontario's vision to meeting growing energy needs, maintaining affordability and reliability while positioning the province to be an energy superpower.

TC Energy is a nation-building enterprise committed to maximizing Canada's competitive advantage in energy. TC Energy supports the Government of Ontario's ambitions to build an affordable, reliable and clean energy system – a system that can support critical infrastructure, a system that can revive manufacturing and mining jobs and a system that can grow Ontario's technology and services sectors. As provincial and federal climate commitments and related policies continue to drive a decarbonized electricity system, TC Energy's existing investments, regulatory expertise, and stakeholder relationships in Ontario's power market, position us favourably to play a prominent role in the build out of an affordable, reliable and clean energy system to meet energy demands and power the future of Ontario.

Energy Addition

We believe energy addition is an accurate way to describe the energy needs of the future – we will need more of every kind of energy including natural gas, nuclear, and storage. With the recent successful spinoff of our Liquids Pipelines business (South Bow), TC Energy is now better positioned to participate in the energy addition journey – we are increasingly focused on complementary business lines – natural gas, natural gas storage and power and energy solutions, and with that, we are well-positioned to meet demand for reliable, affordable and low-carbon energy sources.

TC Energy is one of the largest private investors in the Ontario electricity sector. We hold a significant ownership interest in Bruce Power, supplying 30 per cent of Ontario's power needs while producing zero carbon emissions. In addition to Bruce Power, TC Energy has been a long-time market participant building approximately 2500 megawatts of capacity since the early 1990's. As a complement to our investment in Bruce Power, we are proposing to expand our clean power portfolio in the province by developing a pumped hydro storage facility that would provide an additional 1,000 megawatts of electricity. In addition, our integrated pipeline system includes over 8,000 kilometers of natural gas transmission pipeline in Ontario and delivers over 70 per cent of the province's total consumption. We take our role in the energy system seriously, ensuring that we safely and responsibly supply the energy that Ontario consumers need every day.

Today, the synergies across our footprint enable us to develop capabilities and expertise in

lower-carbon technologies that ensures we're well prepared to respond to market shifts and remain competitive in a lower-carbon future. All this to say, TC Energy is well positioned to facilitate Ontario's build out of an affordable, reliable and clean energy system to meet the province's growth needs.

The critical role of Natural Gas

Any integrated energy strategy must consider that natural gas is the predominant heat source in most Ontario buildings. At peak, the current energy available through the natural gas system is three times that of the power grid. Should Ontario's natural gas utilization decline, costs to serve remaining gas markets will climb. As Ontario develops its integrated energy plan and contemplates the role of natural gas a critical heating source, we encourage Government to consider the flexibility of natural gas as a safe, clean, reliable and affordable fuel source and its ability to serve Ontario's growing industrial, heating and power generation needs.

The indispensable value of Nuclear Power

With a history of safe nuclear power generation dating back to 1967, independently operated Bruce Power supplies 30 per cent of Ontario's power. TC Energy has a 48.4 per cent ownership stake in Bruce Power and we are committed to the continued development and maintenance of a broad range of low-carbon energy solutions, with a focus on nuclear power generation and pumped hydro storage opportunities – both critical for maintaining Ontario's grid reliability.

Nuclear power was critical in Ontario's efforts to phase out coal power generation and it will be just as important as our economy electrifies and demand for energy grows. In addition to a proven safety record and ability to deliver a clean, reliable supply of the baseload electricity required by homes, business and industry, nuclear power has significant economic benefits. Bruce Power's annual operational spending boosts provincial gross domestic product (GDP) by an estimated $3.5 billion and adding in induced economic effects, the company contributes over $4 billion annually to provincial GDP with more than 90 per cent of the company's supply chain spending occurring in Ontario.

According to the Independent Electricity System Operator (IESO), electricity demand in the province is anticipated to grow 75 per cent by 2050 – even higher than the 60 per cent growth forecast in their planning outlook from earlier this year. Annual electricity consumption is set to rise from 151 terawatt-hours in 2025 to 263 terawatt-hours in 2050, largely driven by the industrial sector and data center development, on top of a growing population and continued electrification.

If Ontario is to meet growing demand as well as its decarbonization commitments, these scenarios show an additional 18 gigawatts of nuclear power will be required to meet

increasing demand. The current generation from Bruce Power and additional output from Project 2030 remain a key element in Ontario's energy plans as they provide generation that is both reliable and available in the short term.

In 2023, the Life-Extension Program at Bruce Power progressed with the completion of Unit 6 Major Component Replacement (MCR). It was successfully placed in commercial operations ahead of schedule and within budget. Extending the operational life of the Bruce Power units will secure long-term electricity price stability for businesses and families in Ontario.

Along with the MCR life extension program, Bruce Power's Project 2030 has a goal of achieving site peak output of 7,000 megawatts by 2033 in support of climate change targets and future clean energy needs. Project 2030 will focus on continued asset optimization, innovation and leveraging new technology that could include integration with storage and other forms of energy to increase the site peak output.

MCR and Project 2030 are critical components to meeting Ontario's growing electricity demand and decarbonization goals and are opportunities for Ontario to leverage its position as a clean energy leader.

Bruce Power has been delivering safe, reliable operations for over 57 years; receiving exemplary ratings by international industry groups, through an unwavering focus on safety and execution excellence. Bruce Power will continue to play a pivotal role in the planned build out of Ontario's nuclear fleet.

An integrated future coupling nuclear generation with pumped hydro energy storage

As Ontario builds its electricity system to support demand growth, the future will be powered by a portfolio of new generation and storage. With a prominent focus on nuclear power, Ontario will require significant amounts of energy storage capacity to balance and optimize existing and future nuclear generation. The IESO predicts that Ontario will need 14,500 megawatts of energy storage to support this new system.

In response to this need, TC Energy and prospective partners Saugeen Ojibway Nation, are co-developing the Ontario Pumped Storage facility (the Project), designed to provide 1,000 megawatts of flexible, clean energy to Ontario's electricity system. The facility would be co-located on the existing Department of National Defence's 4th Canadian Division Training Centre, in Meaford, Ontario. The Project would ensure Ontario gets the most value from its power generation resources, storing excess energy at night and during periods of low demand, and delivering that stored energy during the day, during periods of high demand, reliably and responsibly. The Project would be built with Ontario know-how, labour and manufacturing expertise and over 83 per cent of the investment in this Project will be spent in Ontario.

At the core of this Project is the mature relationship between TC Energy and the Saugeen Ojibway Nation. As prospective partners, TC Energy and the Saugeen Ojibway Nation are currently developing and plan to finance, construct, own and operate the Project together. As a significant equity owner, the Saugeen Ojibway Nation will enjoy the proceeds of that ownership, providing a long-term secure source of income for the Nations that will have a positive impact for generations. The Project is a concrete example of what economic reconciliation is meant to be – full and equal participation of Indigenous peoples in the opportunities that Ontario's growing economy presents.

Ontario Pumped Storage offers a solution - it is the universal adapter - taking off-peak cheaper energy from nuclear and intermittent sources and deploying it to the grid when its needed most by homes and businesses while keeping costs down.

Further, the Project is strategically located. Situated between Bruce Power and hydroelectric generation in northern Ontario, the Project can ensure that we are optimizing these assets and future assets - getting the most out of core electricity resources that Ontarians have relied on for generations and new investments needed to support Ontario's growth. And there are further opportunities for efficiency and rate-payer savings through joint efforts to coordinate transmission routing via the Huron Hub. The Huron Hub proposes to connect two large-scale, long-life, clean energy assets (the Project and Bruce C expansion) to Canada's largest electricity demand centre, the Greater Toronto Area, allowing Ontario to both serve a growing economy and achieve lower emissions targets.

By leveraging long duration storage in proximity to Bruce Power we can limit the overall capacity required in the province by effectively storing excess electricity during periods of low demand and bolstering the ability to meet peak requirements. Through the combination of pumped hydro storage and nuclear power, Ontario can ensure greater grid stability, maximize its nuclear operations, enhance overall system efficiency and reduce sectoral carbon emissions. Pumped hydro storage supports the buildout of Ontario's nuclear fleet and can deliver Ontario's clean nuclear power on demand.

In addition to optimizing nuclear power, the Project supports many of the Government of Ontario's key priorities, including economic development in advanced manufacturing, energy security via domestic supply chains, economic reconciliation with Indigenous groups, and local partnership.

- ✓ **Made-In-Ontario Jobs and Manufacturing** – The Project is a made-in-Ontario opportunity that will be built by Ontario workers and supplied by Ontario businesses.
    - *Good, high paying jobs for hardworking Ontarians*: Over a four-year construction period, the Project will create 1,700 direct and indirect construction jobs.

- *Energy Security*: Unlike battery storage parts sourced from China, the Project will be built with Ontario supply chains. Of the total capital investment in the Project, 83 per cent remains in Canada of which 92 per cent stays in Ontario.
- *Prosperity for rural communities:* 61 per cent of the total employment benefits and 65 per cent of the GDP benefits will occur in rural parts of the province.

✓ **Indigenous Partnership** – Prospective partnership with the Saugeen Ojibway Nation, to jointly design, build, operate and co-own the Project.

✓ **Municipal Support** – The Project has been advanced in coordination with local municipalities and has received Resolutions of Support from the host municipality of Meaford, the adjacent City of Owen Sound, and the regional government Grey County.

It is our view that the Ontario government should continue to prioritize the advancement of long duration energy storage and other projects that support the operability of a low emission energy grid, while injecting billions of dollars of investment into Ontario's economy through jobs and reliance on domestic supply chains.

Conclusion

TC Energy supports the Ontario Government's priorities and vision for growing Ontario's economy, building critical clean energy projects and advancing Ontario's position as a leader in nuclear. As an organization, we are committed to embracing energy addition and are making meaningful efforts that contribute to a lower-carbon energy world. While we must continue to innovate and scale up generation and storage including nuclear and pumped hydro, natural gas remains a readily deployable energy source capable of achieving the needed levels of reliability, affordability, and scalability — and TC Energy is well positioned to deliver it through its reliable and robust infrastructure in the province. We continue to look to capture growth opportunities that will help meet the province's future energy needs and continue to invest in clean energy infrastructure.