Consultation on Industrial Electricity Prices

The Ontario Society of Professional Engineers (OSPE) is pleased to present the following submission concerning the government's consultation on industrial electricity prices.

OSPE is the voice of the engineering profession in Ontario. We represent the entire engineering community, including engineers, engineering professionals and graduates. As an organization, we advance the professional and economic interests of our members, many of whom work in the environmental, energy and transportation sectors. OSPE is pleased to respond to this notice for public comments to provide feedback on Ontario's current industrial electricity pricing mechanism and system.

General Comments

1. The following general principles should be used in setting electricity rates:
   - 1.1. **Ratepayers should pay for the services they use with rates that are as close as possible to the actual cost to provide those services**. There are three main cost streams in the electricity system and several less significant costs that need to be recovered:
     - 1.1.1. Fixed monthly costs that are independent of the amount of energy or capacity that is used by ratepayers. A good example of this is the ratepayer's connection size which is fixed once it is installed and the monthly billing costs. Typically, less than 1/3 of total costs fall into this category.
     - 1.1.2. Energy variable costs that are directly proportional to the amount of energy in kWh or MWh, drawn by the ratepayer from the electricity system. These costs closely align with the cost of fuel and expenses that are proportional to the amount of energy drawn by the ratepayer in kWh or MWh. Typically, less than 10% of total costs fall into this category in a low emission power system and up to 30% in a high emission (fossil fuel based) power system. The wholesale market for electrical energy is a good proxy for the variable energy cost. For larger consumers who use large inductive loads (motors) or capacitive loads some adjustment to the energy charge will be necessary for poor power factor. Poor power factor increases the losses on the power system to deliver the energy load in kWh or MWh. The electricity system losses created by the ratepayer facility's poor power factor cannot be directly measured using the ratepayer's electrical meters. However, the poor power factor itself can be measured by the ratepayer's meters and a suitable system loss adjustment can be applied to the energy charge.
     - 1.1.3. Installed capacity variable costs that are directly proportional to the ratepayer's requirement for installed power system capacity needed to supply the ratepayer's average daily peak power demand (measured in peak kW or MW). Typically, more than 60% of total costs fall into this category in a low emission power system and less than 40% of total costs in a high emission (fossil fuel based) power system. For smaller consumers (eg: residential and small commercial/industrial who are not familiar with peak power billing) this cost component can be recovered by increasing

the energy billing rate during high demand periods so that separate peak power billing is not required.

1.1.4. Other less significant costs can be allocated to ratepayers on an "as needed basis" using a fee schedule for each service.

1.2. **Government programs to assist low income ratepayers, trade exposed businesses or for economic development or social benefit reasons should be financed by government tax accounts and not by raising the rates for other ratepayers**. This principle is intended to ensure ratepayer's that do not participate in those assistance programs and who have modest income after living/business expenses and taxes do not see a material reduction in their net income.

1.3. **Government programs to meet international obligations should be included in the cost of electrical service**. However, the incremental cost of accelerated programs that exceed the pace demanded by international obligations (eg: Ontario's recent 90% reduction in GHG emissions in the electricity sector in 10 years) should be paid for using tax incentives and not by raising electricity rates. This principle is intended to avoid imposing higher than necessary costs to do business on Ontario ratepayers.

2. Low emission power systems produce significant amounts of surplus low-emission electricity (typically 15% or more of total energy production). **Rather than exporting this surplus at low wholesale prices or curtailing (wasting) it, provisions should be available to ratepayers on a voluntary basis to purchase that surplus at its wholesale market energy price.** Additional metering and/or communication capability between the ratepayer and the utility will be required to differentiate between dependable (non-interruptible) and surplus (interruptible) electricity use.
3. Dependable electricity needs are very difficult and costly for ratepayers to shift to other time periods of use. A more cost-effective strategy to use surplus low-emission electricity is to use that surplus to displace fossil fuels for heating requirements and to produce hydrogen (a zero-emission energy carrier) that is easier to store for later use in a number of applications currently using fossil fuels.

Consultation Questions

1. **What impact has the Industrial Conservation Initiative (ICI) had on your operations and business competitiveness? How easy or difficult is it for you to lower consumption in potential peak hours in order to reduce Global Adjustment (GA) charges? What changes, if any, could be made to ICI to improve fairness, industrial competitiveness or reduce red tape?**

The current ICI program is overly generous. It allows the Global Adjustment to drop to zero. The Global Adjustment mainly represents the fixed cost of installed capacity. The ICI program allows large industrial ratepayers to use system installed capacity for free. Those costs are then

transferred to all other ratepayers who do not qualify for the low or zero global adjustment. There are several policy solutions available to correct this unfair cost transfer. Each has different impacts on ICI participants and non-participants. The primary principle that should be followed is that each ratepayer should pay for the energy and capacity that they use at their respective rates. Any other subsidies the government wants to apply should be done via the tax system. This way ICI non-participants are not penalized for the actions of ICI participants.

2. **What are your thoughts on a rate mitigation program that is based on electricity intensity, trade exposure, or both?**

There are several policy solutions available to assist ratepayers who need support. Each program is legitimate, provided the costs are not imposed on non-participants via their electricity rates.

3. **Given the choice, would you prefer a more dynamic pricing structure which allows for lower rates in return for responding to price signals or a flat rate structure that potentially costs more, but is more stable and predictable?**

Ratepayers should be given choices in how they pay for their electricity provided the general principles are followed that OSPE listed in this consultation under the title “General comments”.

Ideally the choices should be voluntary and once selected the ratepayer should be entitled to keep the price plan until they have paid off the investments needed to take advantage of the rate plan. Providing a secure period to keep the rate plan is reasonable because these alternative rate plans are also designed to encourage ratepayers to use the electricity system in a way that improves the overall power system operation and reduces the cost of operating the power system for all ratepayers.

4. **Some jurisdictions have offered targeted electricity programs, that use a competitive evaluation process, to achieve economic development objectives. In some jurisdictions, evaluations are based on elements such as job commitments and investments. From your perspective would such a program be beneficial in Ontario?**

Yes, these programs can be beneficial, but the feedback provided in question 3 also applies here.

5. **The Northern Industrial Electricity Rate (NIER) program currently provides a rebate to eligible electricity consumers. What changes, if any, could be made to NIER to improve fairness and industrial competitiveness?**

OSPE believes that the NIER program should focus on providing support to all companies that meet the requirements, independent of their previous involvement in the program. This will allow new companies entering the program the same opportunity of receiving funding as other companies that have received so in the past.

A fairer system would aim to provide sufficient funding to all participants who are eligible and proceed with the application process. If insufficient funding is available, funding should be equitably distributed among all eligible participants, reviewed on an annual basis.

6. **Electricity retailers currently have a limited role in Ontario's electricity market. If the option were available, would your company consider entering into an all-in commodity contract with a retailer, even if it involved a risk premium?**

The history with retailers in Ontario is storied and not favourable. In fact, when the government introduced the global adjustment, a windfall was created for the retailers. When the wholesale price fell due to the government's mandated use of cleaner low-cost energy sources like wind, solar and nuclear, the global adjustment began to rise.

Ratepayers on retail contracts saw electricity rates rise faster than consumers who purchased electricity from their local utility. Retail contracts had fixed energy prices but no protection from the rising global adjustment charges as energy prices fell. The retailers enjoyed a windfall that was not passed on to their customers. If the private sector gets a greater role, they should also be required to assume greater responsibility to share any windfalls with their customers on a fair basis determined by the Ontario Energy Board.

7. **What are your views regarding the proposed updates to the electricity market or procurement mechanisms being proposed by the Independent Electricity System Operator?**

OSPE is comfortable with the IESO market renewal program. However, the current retail electricity rates are not designed to make use of surplus electricity domestically. The wholesale market recognizes the lower value of interruptible surplus electricity. The retail rate plans do not. Consequently, surplus low-emission electricity is exported at low prices or curtailed (wasted) rather than used for fossil fuel displacement or hydrogen production. The retail price plans need to be redesigned to create an interruptible rate so surplus electricity can be used domestically. OSPE has published a report showing 3 ways this can be done. The report is titled "Retail Electricity Price Reform - Path to Lower Energy Bills and Economy-Wide Carbon Dioxide Emission Reductions" and is available at OSPE's website at: https://www.ospe.on.ca/downloads/April-2019-Research-Report

8. **Beyond the commodity portion of the electricity bill, is there anything that you would like to see changed in terms of delivery and regulatory cost recovery or bill presentment?**

Yes, electricity rates should be better aligned with the major electrical services that ratepayer's use. Current retail rates assign too much of the underlying costs to the price of electrical energy

in kWh or MWh. Most costs in Ontario's low-emission electrical system are fixed costs and should not be assigned to energy usage. Also, dependable and interruptible surplus electricity should have different prices. See OSPE's general comments and comments to question 7 in this consultation.

9. **Are there any other thoughts that you would like to provide with respect to industrial electricity price mitigation?**

OSPE recommends that electricity be considered as part of a larger energy portfolio. There are opportunities to reduce total energy costs for ratepayers if the larger portfolio of energy uses is considered and surplus electricity is used to displace other energy sources especially fossil fuels. That will also help ratepayers to reduce their greenhouse gas emissions at no cost.

Many industrial customers take advantage of the Industrial Accelerator Program for electricity conservation capital retrofits that enable their businesses to become more competitive and productive using the latest technology. This program should be continued.

Finally, and most importantly, in the effort to reduce electricity prices, the electricity generation from 95% emissions-free sources currently benefitting all Ontarians should not be moved to generation from sources that emit more GHGs.

Sincerely,

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