CANADIAN MANUFACTURERS & EXPORTERS

Canadian Manufacturers & Exporters (CME)

Industrial Electricity Rate Consultation Submission

www.cme-mec.ca

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Introduction:

Canadian Manufacturers & Exporters (CME) would like to thank the Government of Ontario for conducting a review of industrial electricity pricing in Ontario. This was a key recommendation in our Industrie 2030 Ontario: Manufacturing Ontario's Future report that was released in December of 2018.

Manufacturing is critically important to Ontario's prosperity and we believe that investment is key to the growth and long-term success of the sector. However, business investment over the last several years has been declining of which the Government of Ontario and CME have recognized. It should come as no surprise that along with an increased regulatory burden and no significant corporate tax reforms, rapidly rising industrial electricity rates due to energy policies imposed by the previous government are one of the core reasons for the investment challenges that we face in the province today.

While not all manufacturers are alike, and one solution does not fit all manufacturers, CME believes that we need to target a reduction of manufacturing Class A rates by 8 per cent and Class B rates by 30 per cent. This can be achieved by a menu of targeted rate relief options that allows each manufacturer to choose the solution that fits best. Simply put, addressing electricity rates is essential to reversing investment trends and making Ontario truly "Open for Business". With that premise in mind, our recommendations to help bring down that amount are as follows:

Recommendations:

1. **Maintain, but reform ICI** – The relaxed participation criteria has now morphed into a rate shifting scheme for a lot of businesses and provides little incremental demand reduction. ICI should be reformed to return to its original design criteria and be grandfathered for those who wish to stay in it until such a time as they decide to opt out.

2. **Recognize Ontario Energy Intensive Trade-Exposed Sectors (EITEs)** – Mining, auto, refining, steel and forestry industries need competitive power rates to compete with other jurisdictions.

3. A competitive **preferential, regionally competitive industrial rate for manufacturers.**

4. Establish an **electricity related economic development program** to incent investment similar to Quebec's L rate or Re-Charge NY.

5. **Reform the Northern Industrial Electricity Rate Program (NIER)** – NIER creates inter provincial market distortions by giving preferential rates to Northern businesses within the same business sector. The program should be recast as an EITE program with an expansion of the participation base.

6. **Enact measures to achieve the lowest cost system** –The Ministry of Energy, Northern Development and Mines (MENDM) should ensure that electricity policy decisions stay focused on achieving the lowest possible total system cost.

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7. **Re-think Market Renewal** – The concept where the last generator bid into the supply stack sets auction clearing pricing for the entire supply does not optimize pricing but ensures the maximum price is paid to all suppliers. An alternative supply procurement approach needs to be considered. (see appendix)

CME will be releasing an electricity pricing white paper later this summer that will be providing additional information to assist the Government of Ontario's in its industrial electricity pricing review.

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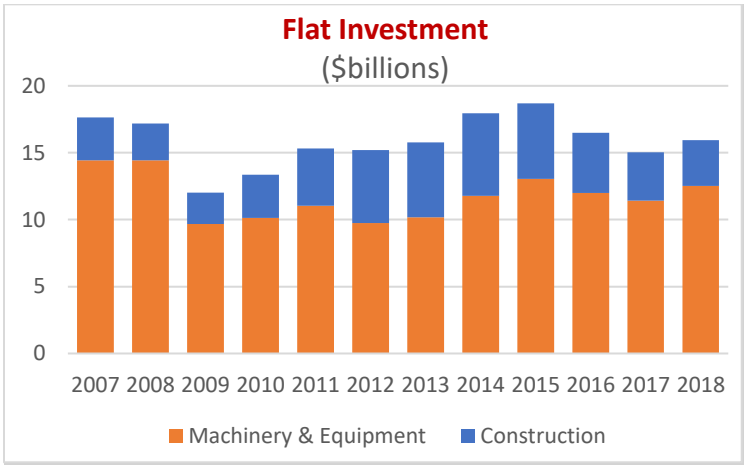
The State of Manufacturing in Ontario:

Manufacturing is a major driver of innovation, wealth creation, and employment. It is a catalyst for economic activity across the country. Across Canada, the sector accounts for 1.7 million employees, 11 per cent of GDP, and two-thirds of total exports. In Ontario, manufacturers directly employ more than 770,000 workers, while accounting for roughly 12 per cent of GDP and 80 per cent of all exports. Including indirect impacts, the sector supports nearly 30 per cent of all provincial economic activity and more than 25 per cent of all employment. In 2017, Ontario's manufacturers' sales hit a record high of a little more than $300 billion.

Ontario's struggles in conjunction with high electricity pricing and increased regulatory burden can be largely traced to one key statistic: declining investment. Simply put, without investment, businesses and the economy cannot grow. Investment levels are a bellwether for the trust businesses have in the local market. Investment drives innovation, exports, and job creation. To be sure, the issue of declining investment is not isolated to Ontario. Across all business sectors in Canada investment has been, at best, flat over the past decade and has been generally declining since its post-recession peak in 2015. This performance stands in stark contrast to most of our international competitors. Over the past five years, Canada has seen the slowest growth in business capital spending in the entire G-7, except for Italy. Investment growth is two-and-a-half times slower that the Organization for Economic Cooperation and Development (OECD) average and three times slower than in the United States.

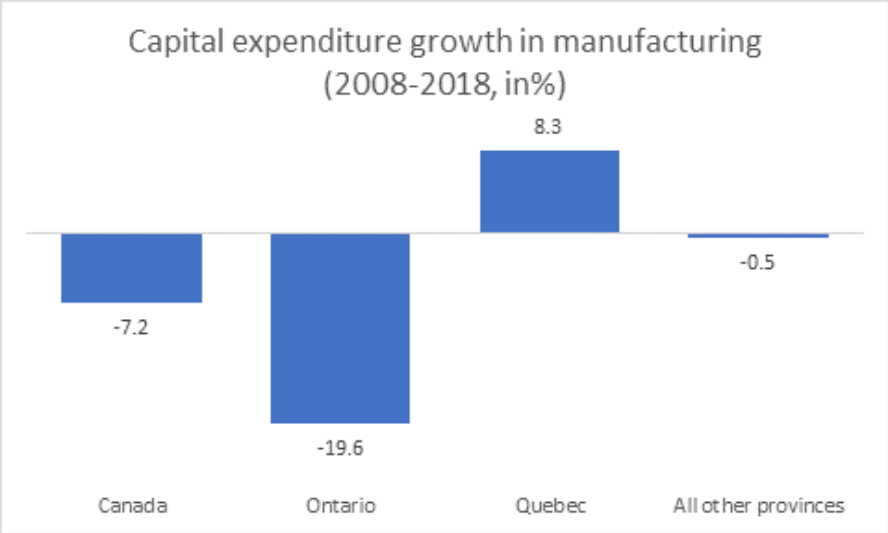


Source: Statistics Canada

Ontario companies are increasingly taking their capital out of the country and investing in other jurisdictions, while foreign investment in Canada is drying up. For example, since 2013, US investment in Ontario has halved while Canadian investment in the US has tripled. In just four years, Canada/Ontario has swung from a $15 billion net inflow of investment from the US to a net outflow of nearly $60 billion.

Canada-US investment flows are just an example of the broader challenges: Canada's share of global foreign direct investment (FDI) is falling precipitously. While Canada as a whole has significant work to

do to become a leading destination for investment, Ontario itself is dragging down Canada's performance. Capital expenditures in Ontario's manufacturing sector have fallen by nearly 20 per cent over the past decade. Meanwhile, investment levels were up by 8.3 per cent in Quebec and, on average, flat across the rest of the country.



Source: Statistics Canada

Companies will not invest in Ontario unless we lower electricity costs. Current electricity prices raise the cost of doing business in Ontario and are making investment here less competitive than in other jurisdictions. These investment trends will not be reversed without meaningful progress on lowering energy costs for manufacturers in the province.

Current Electricity Landscape for Ontario Manufacturers:

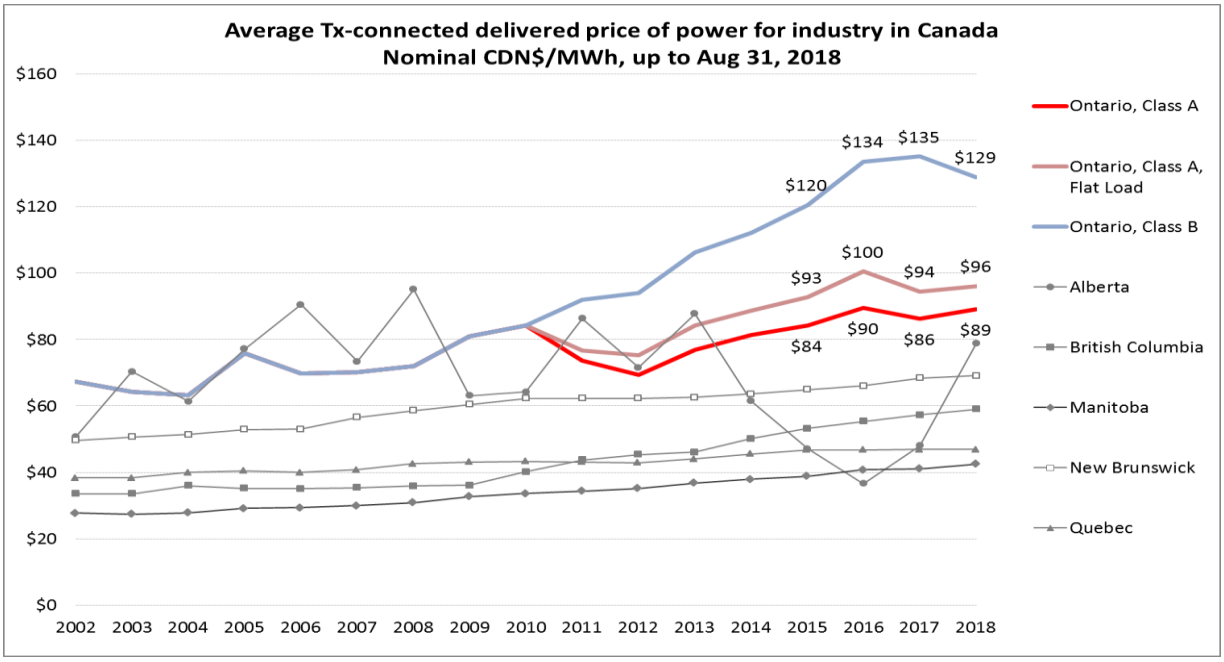
Last year, CME undertook an Ontario-wide consultation exercise aimed at determining what needs to be done to double provincial manufacturing output (to achieve $600 billion) by 2030. The result of that exercise was Industrie 2030: A Manufacturing Strategy for the Province.

A recurrent issue in CME's Industrie 2030 Ontario consultations was that the province's energy policies were effectively pushing local manufacturers to relocate to the United States. Respondents identified lowering energy costs as one of the highest priorities for government action to improve business conditions.

Ontario's industrial electricity prices are among the highest in North America, with large industrial Class A rates increasing almost 25 per cent and small and medium industrial Class B rates increasing by over 40 per cent over the last five years. For example, small industrial consumers (with a power demand of one megawatt and monthly consumption of up to 400 megawatt hours) in the Toronto area paid, on average, 16.27 cents per kWh, nearly double what comparable-sized firms paid in Montreal (9.11 cents)

and Vancouver (9.49 cents), and nearly three times what they paid in Calgary (6.53 cents). The same pattern exists with large industrial consumers.

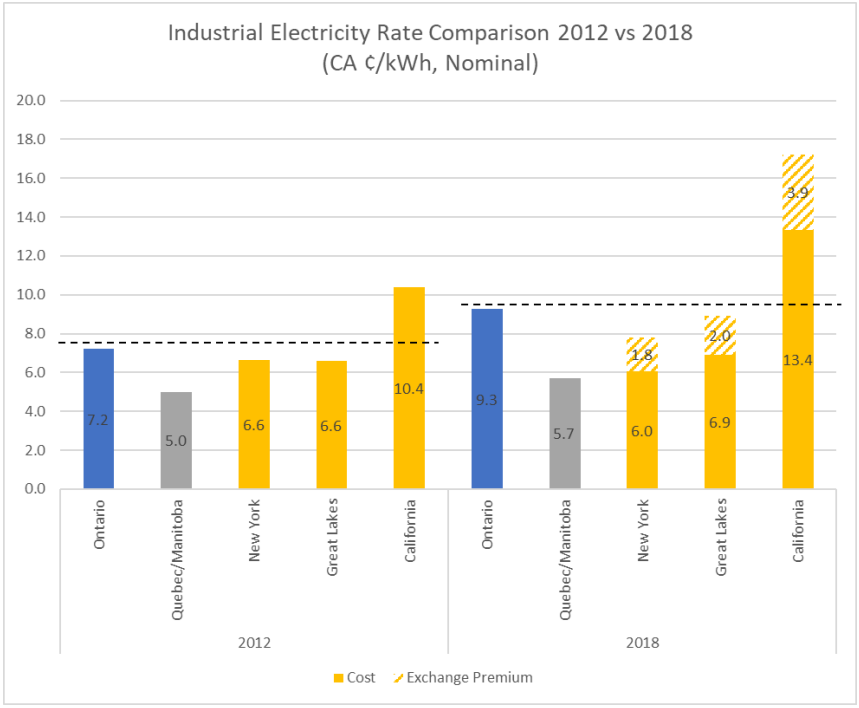
The following graph shows that Ontario's Class A and Class B rates are higher than nearby jurisdictions, and significantly, there is a systemic cost disadvantage compared to neighbouring facilities in Manitoba and Quebec. This is especially true of Class B customers who are paying significantly more than Class A customers. Class B rates range from $0.20/kwh to $0.30/kwh – high enough to put them at a significant competitive disadvantage. It is also worth nothing that Class A ratepayers are facing uncompetitive rates ($0.16 to $0.20/kwh) compared to other Canadian and US jurisdictions.

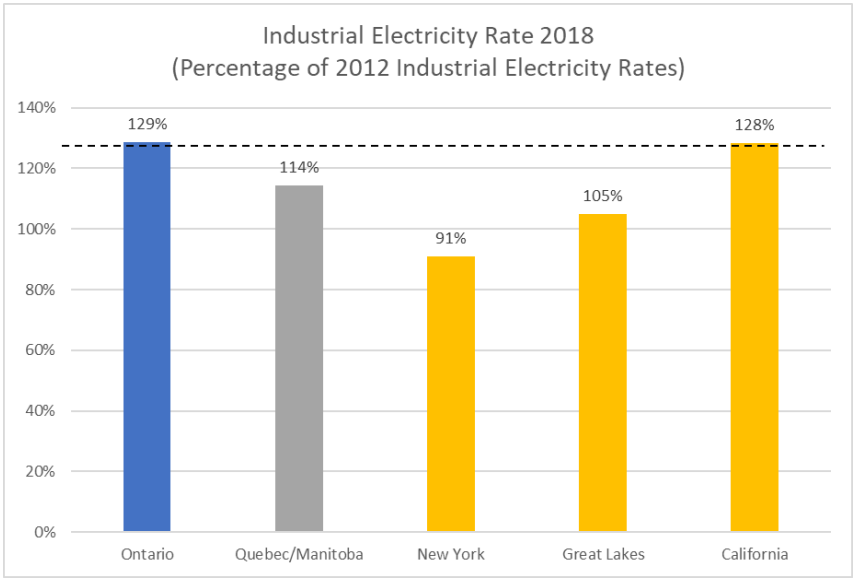


Source: Association of Major Power Producers of Ontario (AMPCO)

It's important to point out, however that the rate statistics mentioned above are "averages". There are plants below and some well above the average. For example, some auto manufacturers are forecasting 2020 rates well north of AMPCO' s average class B rates.

In 2010, Ontario industrial rates were similar to California and New York but much higher than Quebec, Manitoba, and Great Lakes competitors. By 2018, Ontario's rates were higher than all but California.





Source: Strategic Policy Economics

Industrial users are the constant baseload for energy creation and distribution. Our sector doesn't cause the peaks and surges, households and other commercial sectors primarily do. However, manufacturers in the past have suffered we are the ones who get punished for peak rates and demand which makes no economic sense.

Competitive electricity rates are fundamental to the success of Ontario's manufacturing sector and economy. Ontario used energy policy to drive economic growth in the early 1900s by developing electrical generation at Niagara Falls. That policy initiated the growth of Ontario as Canada's industrial heartland and the millions of jobs that followed. This model is still followed in other jurisdictions around the world. In Germany for example, manufacturers pay significantly lower rates than residential customers as they recognize that manufacturing supports economic and social wellbeing.

Unfortunately, in recent years, Ontario electricity generation has become a policy instrument to pursue certain environmental and social outcomes. The result has been ballooning costs that have driven investment and jobs out of the province. Ontario needs to once again leverage its energy policy to attract investment in manufacturing, while at the same time broaden and strengthen the rate base.

Outside of manufacturers facing uncompetitive rates, the biggest problem we face is a shrinking rate base. This contraction has happened for two reasons. First, companies divesting in Ontario because of uncompetitive production costs asked by electricity costs and second because of poor and high electricity costs/supply companies are shifting to self or co-generation. If rates don't come down these trends will continue. The overall goal should be to reduce rates to increase the rate base which would further reduce rates on all users, including households.

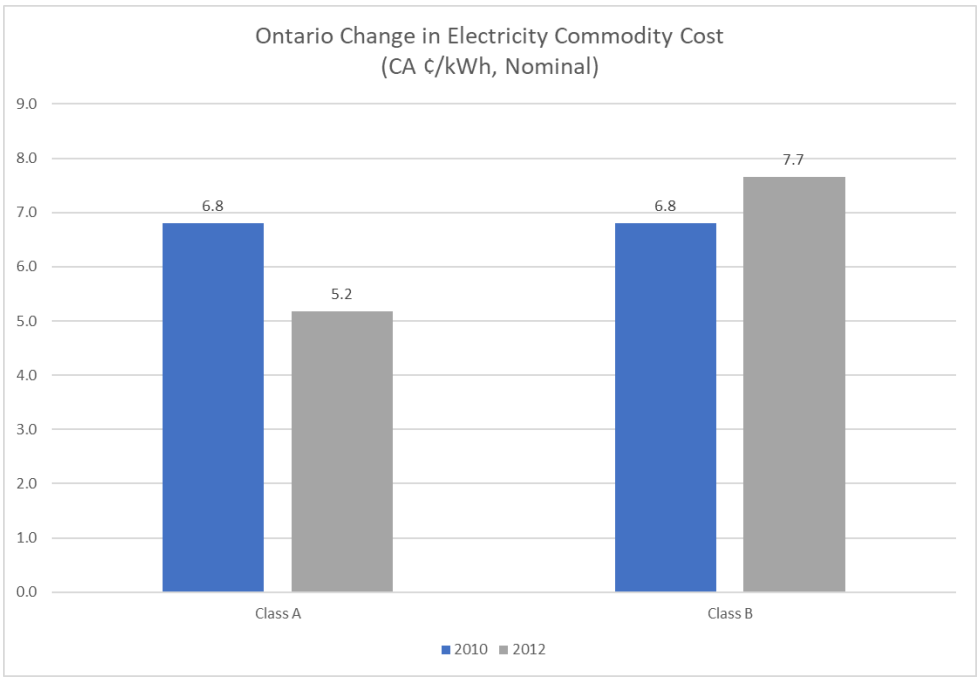
The fact is that Industrial users are the constant baseload for energy creation and distribution. Our sector doesn't cause the peaks and surges, households and other commercial sectors primarily do. However, manufacturers in the past have suffered we are the ones who get punished for peak rates and demand which makes no economic sense.

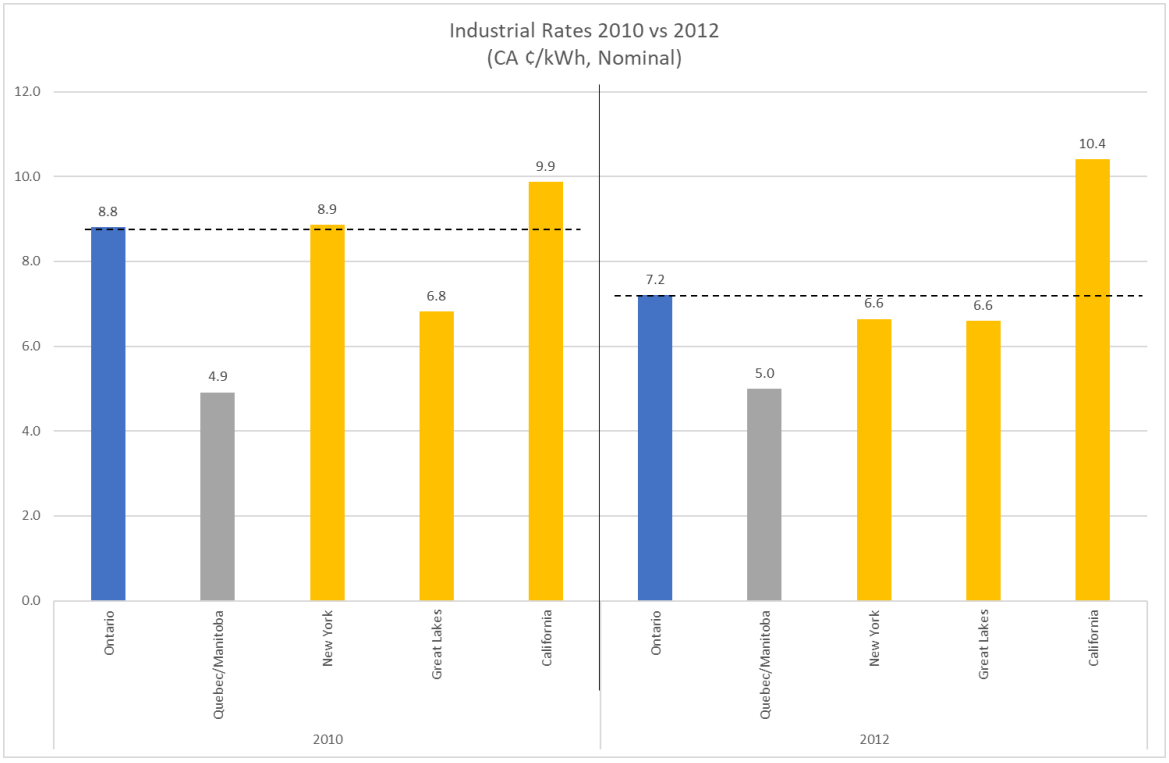
With that premise in mind, the following sections describe CME's proposed approach to lower electricity costs for all manufacturers:

The Industrial Conservation Incentive (ICI) Program:

The ICI program was implemented in 2010 to administer the Global Adjustment (GA) mechanism and lower industrial rates by creating an incentive for industry to shift a significant portion of load from on peak to off peak hours during periods when capacity was tight. The program worked. It provided a capacity-related system benefit which allowed for the deferral of new build generation. It also recognized that large-volume consumers were paying more than their fair share of costs. ICI was an economically effective alternative to incremental power generation when originally envisioned.

ICI effectively transferred the social costs of the electricity system to residential and non-manufacturing Class B consumers and was justified by demand profiles that showed that Class B consumers were more responsible for peak loads than industrials. From CME's perspective, peak system loads are the driver of the highest cost components of the electricity system. In fact, the cost of electricity shifted from almost equal between Class A and B in 2010 to a substantial difference in 2012.


Ontario Change in Electricity Commodity Cost
(CA ¢/kWh, Nominal)
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
6.8
5.2
6.8
7.7
Class A
Class B
2010
2012


Industrial Rates 2010 vs 2012
(CA ¢/kWh, Nominal)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
8.8
4.9
8.9
6.8
9.9
7.2
5.0
6.6
6.6
10.4
Ontario
Quebec/Manitoba
New York
Great Lakes
California
Ontario
Quebec/Manitoba
New York
Great Lakes
California
2010
2012

Over time, Global Adjustment (GA) cost growth has defeated the initial competitive advantage of participating in the ICI program, as the ICI provided incentives for large consumers to invest in behind the meter solutions to reduce their overall costs.

The ICI has become a high cost approach to peak avoidance, as identified by the Ontario Energy Board (OEB) Market Surveillance Panel. Over the past few years, the eligibility threshold for the ICI program has been reduced from its original value of 5MW to 1MW and as a result, has materially increased the amount of cost shifting between Class A and Class B customers. A "free ridership" unintended consequence has been created, whereby many businesses receive a cost reduction without contributing to a demand reduction.

Additionally, as the program is currently structured, the ICI program rewards companies for not producing. Production is what creates jobs, wealth, and prosperity. Its backwards from what the government and industry is trying to accomplish. And essentially the flattening of the peaks make participation extremely difficult. Improper judgement of peaks, interruption to operations, lower value from ICI participation and post-event GA allocation methodology are some of the detrimental factors. This inefficiency is another competitive disadvantage to other jurisdictions.

That said, ICI still provides a benefit. According to the Independent System Energy Operation (IESO), approximately 1,400 MW of capacity are shifted during peak days. In the absence of the program, that quantity of capacity would need to be found elsewhere – likely at considerable cost. Other jurisdictions (such as PJM) use a similar coincident peak approach, thus ICI is a competitive tool for participating Ontario industries.

The original intent of the ICI Program was to lower electricity costs for industrials that could not pass higher electricity costs through to their customers by limiting participation to entities that were Energy Intensive and Trade Exposed (EITE). This distinction balanced the system benefit with the provision of competitive benefits to those sectors that required it the most because they directly compete with other jurisdictions that have lower energy pricing.

Recommendation #1: The ICI program be returned to its original design intent and grandfathered for those who wish to stay in it, until such a time as they decide to opt out.

A Competitive Manufacturing Industrial Rate:

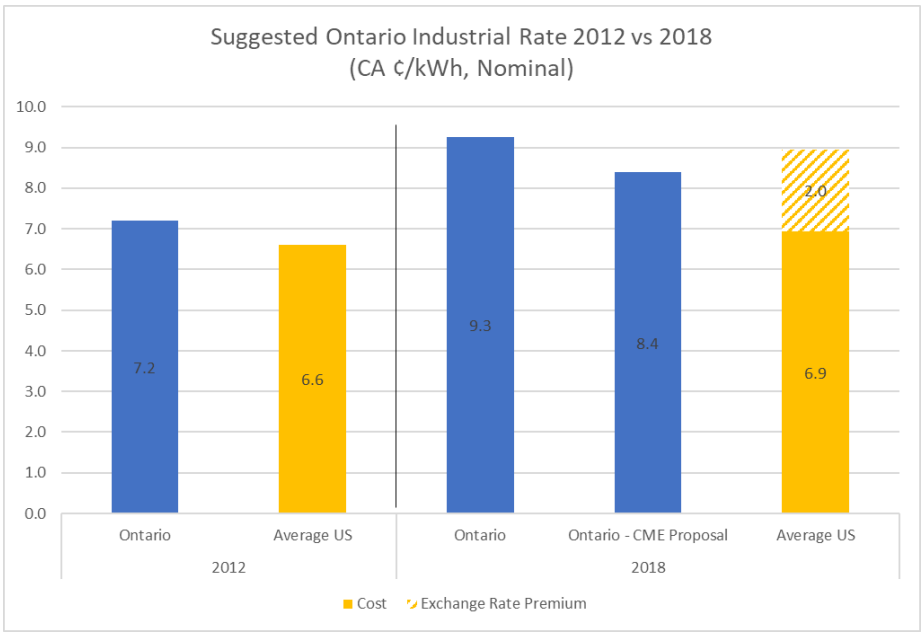
In the context of manufacturing, Ontario needs a predictable low-cost competitive manufacturing rate. Manufacturers constitute system baseload and should be recognized and distinguished from variable demand that drive higher costs. With system costs largely fixed, increasing electrical load will spread system costs across more customers thereby lowering the unit costs. An industrial rate which reflects this distinction and appropriately allocates costs to the stable, continuous, and significant volumetric contribution that manufacturing consumers provide the system should be established. This has been and will continue to be Ontario's low-cost advantage and Ontario's manufacturing sector should be able to leverage this advantage.

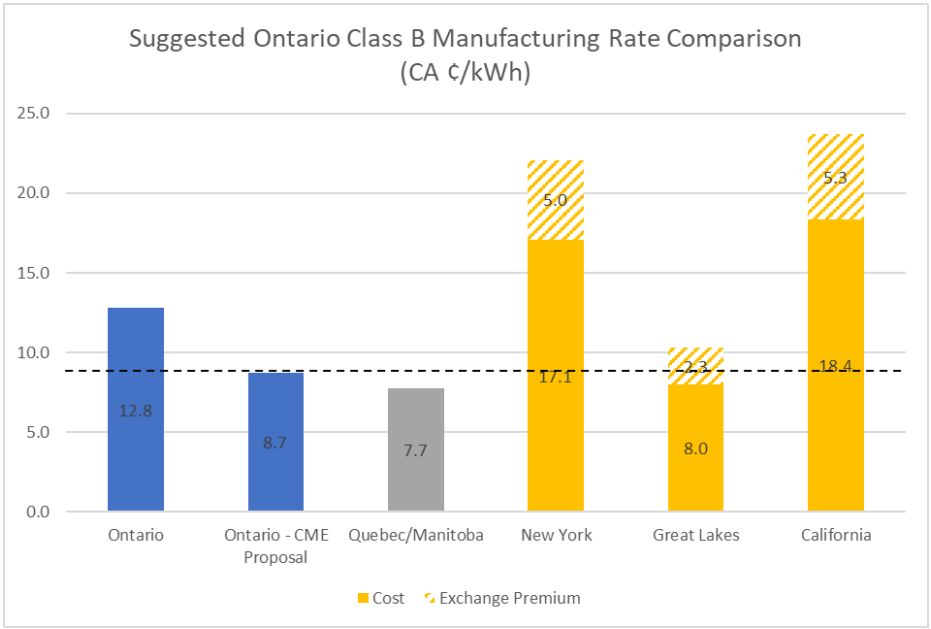
The proposed rate should be attractive to manufacturers that *have not been* able to take advantage of the ICI. However, any changes to the current program should not undermine investments made in good faith by rate payers who wish to continue participating in the current ICI program. The proposed rate should also lower costs for manufacturing by removing the administrative cost of running the ICI, as manufacturers do not have to invest in technologies that only serve to shift costs and the IESO does not have to spend money on administering the ICI.

To provide manufacturers with a rate that is competitive with its trading partners, electricity system costs will be shifted to other ratepayers, those being residential and commercial Class B. CME has established a goal of reducing the manufacturing Class A rates by 8 per cent and manufacturing Class B rates by 30 per cent. In our view, this would result in a cost shift of approximately $500 million per year. This could lead to a 3 per cent increase in rates for other ratepayers. Now, with the underlying challenge with electricity rates being the total cost of the system, mitigating rate impacts to these affected class B rate payers involves looking at those drivers. In Ontario, costs since 2013 have risen 17 per cent almost exclusively due to the renewables that were added under the Green Energy Act. The auditor general reported that Ontario paid significant premiums for those renewables as a result of the subsidies that were inherent in the Feed in Tariff (FIT) program. In the US, these premiums are covered in the tax base as it is recognized that renewables investments have many policy objectives such as environment and climate change. In Ontario, the Green Economy Act was an industrial policy that has since been perceived as having failed. The burden of a failed government policy should not be placed on rate payers. Incorporating Ontario's renewables premiums in the tax base would require less of a rate reduction than put forward by the Fair Hydro Plan and have a basis founded in industrial and economic policy. The result would reduce residential rates to be similar to those of Ontario's trading partners and in fact also achieve parity in the balanced distribution of industrial/residential ratepayer costs. Since it is important to the CME that competitive playing fields are levelized, ensuring parity across these broader electricity sector factors is good policy.

Addressing Ontario's long-term cost challenge can be achieved in two ways: responsibly managing go-forward decisions to ensure that the lowest total system cost is achieved; and, driving economic growth to increase the utilization of Ontario's fixed cost assets. On the latter, implementing the recommended manufacturing rates will create 5,400 jobs, increase annual GDP by $700 million and enhance government revenues by $120 million per year. The government revenue obtained can be used to offset the costs of shifting the renewables policy costs to the tax base.

It is important to note that the proposed manufacturing rate would move Ontario closer to the average of industrial electricity rates in the US than they are today, However, Ontario's overall rates would still be proportionally higher than the average US rates than they were in 2012. Class A rates would be competitive with exchange-adjusted rates in New York and the other Great Lakes states. Class B rates would become competitive with the Great Lakes states, in between the effective raw inputs and the exchange rate adjusted benchmark.





Source: Strategic Policy Economics

Recommendation #2: CME recommends that an industrial rate be established for manufacturing that is based on the average cost of Ontario's baseload hydro and nuclear power which manufacturing relies upon.

Other Industrial Rate Program Options:

While ICI provides numerous benefits, it is not a program that cannot be accessed by all manufacturers. For this reason, alternative incremental rate options are necessary to address the increasing competitiveness gap between Ontario and other jurisdictions; the choice between Class A or Class B is insufficient given the diversity of industry and energy profiles in Ontario.

Other jurisdictions, such as Quebec, New York, Florida and California have successfully implemented similar programs that are achieving the kind of desired economic objectives – job retention/growth and predictability. A specific focus of these programs has been incentives to stimulate the attraction of new capital investment. In CME's view, steps must be taken to increase the amount of investment flowing into the province. Otherwise, Ontario manufacturing investment will remain flat. Implementing rate structures that increase Ontario's economic competitiveness would encourage capital investment and grow Ontario's manufacturing sector. The following are some other examples of rate constructs that could be considered:

- **Quebec Tariff "L"** - Some industries consume at a relatively constant rate that is referred to as "baseload". This could be in the form of an all-in flat rate (including fixed capacity costs and variable energy costs) that reflects the costs of the baseload grid facilities supplying their loads. These grid facilities will tend to have high capacity factors and will be well utilized, resulting in their fixed costs being spread over a proportionately large volume of energy. These types of facilities could benefit from either a single "all-in" price, like the flat rate model that has energy and capacity costs rolled in together or a separate energy and capacity charge but with a minimum capacity value such as the Quebec Tariff "L". In addition to the basic rate construct (Capacity + Energy), Tariff "L" includes a program to stimulate capital investment offered through the Ministère des Finances. As part of this program, Companies can receive assistance in the form of reduced electricity costs enabling them to recoup up to 50 per cent of eligible project costs, including 40 per cent of the eligible capital costs and up to 10 per cent of the eligible capital costs incurred as part of efforts to reduce GHG emissions. The assistance corresponds to a maximum electricity bill reduction of 20 per cent for a period of four years (or six years for projects worth $250 million or more). Tariff "L" also includes other rate components such as a further economic development rate (for building a new facility or expanding an existing facility), an industrial revitalization rate (for returning unused production capacity to operation or converting an industrial process that is currently powered by fossil fuel to electricity) and further credits for supply of electricity at medium or high voltage (among others).

- **New York's "ReCharge NY**" - This program recognizes the need for a firm linkage between energy and economic development. Through the ReCharge NY program, qualifying businesses and non-profits statewide can lower their energy costs by as much as 25 per cent by using specially allocated NYPA power which is set aside by the state government and the NYPA board for economic support. ReCharge NY power contracts are awarded competitively. The New York State Economic Development Power Allocation Board (EDPAB) reviews applications and makes allocation recommendations to NYPA's Board of Trustees, who approve allocations. Applications

are evaluated according to a number of criteria including significance of the cost of electricity to applicant's total cost, capital investment being made, number of jobs created or retained within the state, and significance of the applicant to the local economy (among others).

- **Pacific Gas and Electric (PG&E) – Economic Development Rate**: Commercial or industrial customers expanding in PG&E's California service territory can receive an Economic Development Rate discount of 12 per cent, 18 per cent or 25 per cent on top of the applicable posted industrial rate for 5 years. The 12 per cent discount is available statewide; 18 per cent or 25 per cent discounts are available for companies locating or expanding in counties whose unemployment rate is above the California average.

- **Florida Power and Light (FPL) – Commercial/Industrial Service Rider (CISR):** FPL is empowered to bilaterally negotiate suitable electricity rates to attract investment in new businesses and expansion of existing businesses in Florida under the conditions that: A minimum of an incremental 2 MW of load will be served by a single meter, and documentation is provided that shows the project has out-of-state opportunities that are more competitively priced than the posted industrial FPL rate. To ensure the CISR is not overused, current eligibility is limited to a total of 50 individual negotiated agreements or a maximum total new load of 300 MW, whichever is reached first annually.

These are just a few examples of incremental rate options. CME would be pleased to continue working with the Government of Ontario to assess possible industrial rate designs in Ontario. In addition to the ICI program, more dynamic rate designs that keep prices affordable while delivering electricity system benefits, enhancing competitiveness and promoting economic development should be a key imperative. Retaining and growing industries that generate jobs and stimulate secondary economic activity can benefit the economy, our society and communities in general. These benefits retain (or add to) the tax base and contribute to the quality of life for all citizens. Thus, funding from economic development programs leveraged with reductions in electricity costs can provide multiple benefits.

Recommendation #3: Establish an electricity related economic development program to incent investment similar to Quebec's L rate or Re-Charge NY.

Northern Industrial Electricity Rate Program (NIER)

To provide some background, the NIER program has assisted Northern Ontario's manufacturing industrial electricity consumers to reduce energy costs, sustain jobs and maintain global competitiveness within the sector. In the past, the NIER program was part of the government's plan to strengthen the economy and support a dynamic and innovative business climate that attracts investment and helps create jobs in the north. It's accurate to say that Northern Ontario industrial customers face unique challenges and competitive pressures. However, Ontario has a long history of providing socio-economic support to northern industrial customers. And, the program in recent years has created interprovincial market distortions by giving preferential rates to Northern businesses within the same business sector. These policy measures need to be moved off the rate base and lower

electricity costs should be implemented for all Class A and Class B ratepayers regardless of the region that a manufacturing plant is located in.

Recommendation #4: The NIER program should be recast as an EITE program with an expansion of the participation base.

Enact measures to achieve the lowest cost system:

CME would like to stress that the adoption of lowest total system cost objective be adopted as part of the implementation of industrial electricity rate relief. By focusing on the lowest total system cost as part of an outcome-based objective, Ontario's manufacturing sector will remain competitive. This will in turn drive investment and growth in the province. All customers will benefit from a lowest total system cost objective by paying less for electricity, regardless of class or group. By nature, rate design will mean that some costs get shifted between customer groups A low total system cost objective ensures that the fairest solution is achieved.

Recommendation #5: The Ministry of Energy, Northern Development and Mines (MENDM) should ensure that future electricity policy decisions stay focused on achieving the lowest possible total system cost.

Conclusion:

CME welcomes the opportunity to work with the Government of Ontario to assess possible industrial rate designs in Ontario. In addition to the ICI program, additional dynamic rate designs that keep prices affordable while delivering electricity system benefits, enhancing industrial competitiveness and promoting economic development should be a key imperative.

It is important to note that CME members are not identical and that their competitors, and the geographic areas over which they compete, are equally diverse. Manufacturing industries such as mining and steel compete globally for business, where automotive, pulp and paper and petrochemical are more regional (i.e. North America). This diversity further underscores the need for flexibility in crafting solutions since the prices that are paid for electricity (and other input costs, for that matter) are dependent upon the jurisdiction in which a competitor resides.

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Appendix:

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 ICI was intended to creating parity around industrial rates, it did so, for a while. As part of the formulation of the program, energy Intensive and Trade Exposed (EITE) sectors were taken into consideration. This helped to balance the system benefit with the provision of competitive benefits to those sectors that required it the most because they directly compete with other jurisdictions that have lower energy pricing. The inherent premise is industrials are trade exposed and manufacturing on average is 80 per cent trade exposed, and this applies to all manufacturing, both big and small.

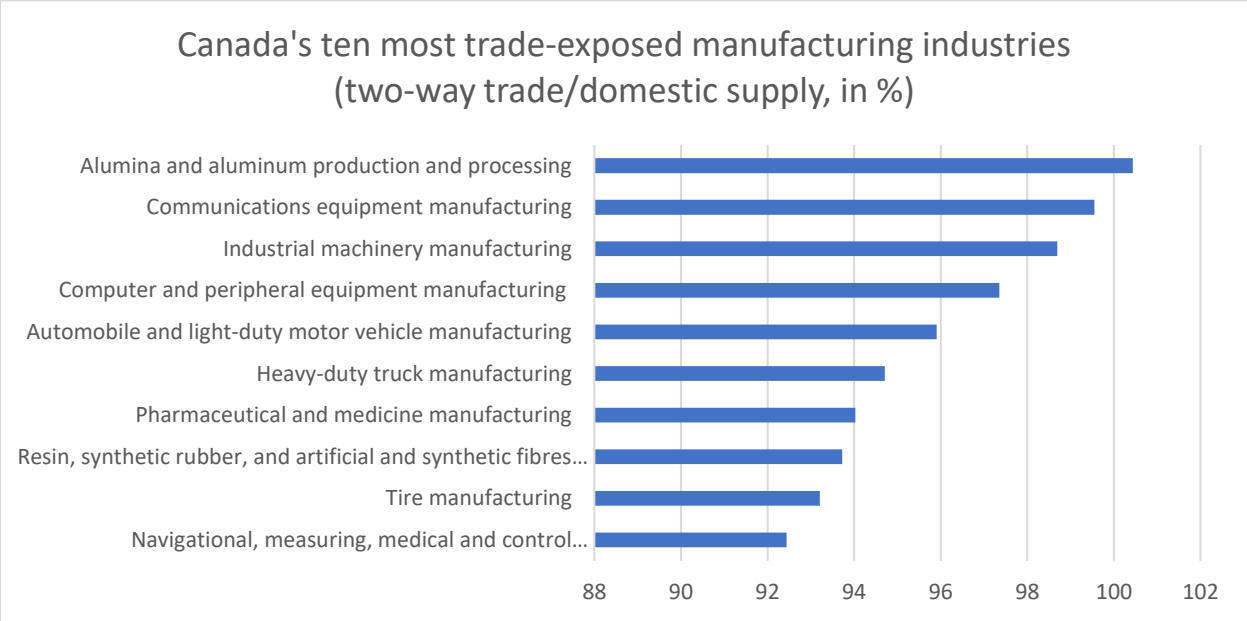
As such, CME believes the former program should be returned to its initial focus - exclusively for EITE industries as well as the mining sector. Manufacturers need this competitive tool. These are the entities that provide the system benefit and who take action by making business decisions regarding the price of electricity, since they cannot simply pass their costs through to their customers.

Ontario needs lower manufacturing rates than what the ICI is currently providing. For some who the ICI does not work effectively for, means the ICI should be replaced. For those who competitively benefit from the ICI and also reduce system peaks should be able to continue with the program.

Recommendation: The ICI program should be returned to its initial focus and exclusively for EITE industries as well as the mining sector within manufacturing.

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

To provide some background, trade exposure measures the extent to which firms in a sector compete with firms outside their province. Defined as the sum of sector's imports and exports divided by the sum of the sector's production and import, a higher trade exposure indicates that the industry exports most of the goods produced, while low exposure indicates the sector imports more goods. Having said that, this has a domestic impact as well. For example, auto parts made in Ontario vs. Michigan are going to an auto manufacturer in Ohio, Texas, Mexico or Ontario. Competition and trade exposure exist similarly in all markets.



Source: Statistics Canada

Ontario manufacturing companies are generally more trade exposed (rely more heavily on exporting) than other industries. An increase in input costs (i.e. electricity price) will put Ontario companies at a competitive disadvantage in international markets, where they rely on for most of their business.

In fact, manufacturing is the only industry that has to compete with companies in other jurisdictions and should be eligible for lower industrial rates. Manufacturers need this competitive tool. As mentioned above, the original intent of the ICI Program was to reduce industrial rates to make them competitive.

Recommendation: An industrial rate should be created for all manufacturers that are trade exposed and avoids "electricity intensity" measures.

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?**

This is a difficult question because it artificially creates a binary choice, where none exists in reality. The answer, of course, is that firms require both. Manufacturers want low cost, stable, and predictable electricity. It is not the amount of fixed cost in the system that affects the choice between dynamic and fixed pricing. It is also not manufacturers want both "dynamic pricing responding to price signals" and "flat", it is that they want low cost stable pricing.

Recommendation: CME believes there must be a portfolio approach of options to reduce electricity costs that includes a manufacturing rate be developed for manufacturing based on the total cost of

Ontario's baseload hydro and nuclear power which manufacturing relies upon and in turn which the economy relies upon for jobs.

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?**

CME supports the integration of energy and economic development and believes that the Government of Ontario should look at other programs in other US jurisdictions.

In addition to Quebec Tariff "L" and New York's "ReCharge NY" as discussed by the Association of Major Power Producers in Ontario (AMPCO) in its submission, the Government of Ontario may wish to consider these other economic development programs:

- **Pacific Gas and Electric (PG&E) – Economic Development Rate**: Commercial or industrial customers expanding in PG&E's California service territory can receive an Economic Development Rate discount of 12 per cent, 18 per cent or 25 per cent on top of the applicable posted industrial rate for 5 years. The 12 per cent discount is available statewide; 18 per cent or 25 per cent discounts are available for companies locating or expanding in counties whose unemployment rate is above the California average.

- **Florida Power and Light (FPL) – Commercial/Industrial Service Rider (CISR):** FPL is empowered to bilaterally negotiate suitable electricity rates to attract investment in new businesses and expansion of existing businesses in Florida under the conditions that: A minimum of an incremental 2 MW of load will be served by a single meter, and documentation is provided that shows the project has out-of-state opportunities that are more competitively priced than the posted industrial FPL rate. To ensure the CISR is not overused, current eligibility is limited to a total of 50 individual negotiated agreements or a maximum total new load of 300 MW, whichever is reached first annually.

Ontario should ensure that any energy procurement programs must consider the economic benefits to the province. Retaining and growing industries that generate jobs and stimulate secondary economic activity can benefit the economy and society in general. These benefits retain (or add to) the tax base and contribute to the quality of life for all citizens. Thus, funding from economic development programs leveraged with reductions in electricity costs can provide multiple benefits.

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?**

Please see CME's response to this question on page 15 of our submission.

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?**

CME's members would most likely not enter into an all-in commodity contact contract with a retailer, even if it involved a risk premium. This is because the addition of another layer of costs would likely involve higher electricity prices for all ratepayers, rendering it unaffordable for all manufacturers, particularly for small and medium manufacturers.

There is really no market in Ontario for energy retailers, and that is because there is so much fixed cost in the system and hence so little for them to put a risk premium on. The IESO Market Renewal Project may lead to substantial more gas being purchased, and, in that future, there may be a different role for retailers. However, this requires a longer discussion.

Recommendation: Manufacturers should not be asked to enter into an all-in commodity contact with an all-in commodity contract with a retailer under any other circumstances.

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

CME has been active in the consultation process within the in the IESO's Market Renewal Program (MRP) since its initiation. Throughout the discussions, CME has consistently reiterated its need for competitive electricity pricing in Ontario. CME's position is that if the Government of Ontario perseveres and sees Market Renewal through to its conclusion and if it results in generally higher electricity prices then the entire Market Renewal consultation process will have been a failure.

There are two specific areas of the MRP that CME will comment on as part of this Consultation – Load Pricing and one specific element of the Incremental Capacity Auction (ICA).

Load Pricing:

CME supports a uniform pricing regime in the province, which has inherently less risk for customers than other options. CME cannot support the IESO's recommendation of zonal pricing (with a nodal option) for non-dispatchable loads and nodal pricing for dispatchable loads as part of the market design. The current level of evidence that exists to support the IESO's recommendation is not sufficiently compelling to earn CME's support. In general, much of the driving force to move to a Zonal/Nodal pricing regime appears to come from an exclusive subscription to economic theory regarding short and long run price efficiencies. While CME understands the theory, we do not agree that economic theory alone should (or will) drive all decisions in electricity markets. There are countless other considerations – fundamental realities that exist in Ontario and elsewhere - that appear to have been neglected in preference to the exclusive reliance on academic economic theory. Below are the key problems with the recommendation:

- Short run marginal price efficiency should be subordinate to competitive pricing.
- Long run marginal price efficiency is a theoretical construct of little value when viewed exclusively within the Ontario electricity market. There are many other more compelling realities to be considered in investment decisions.
- Volatility in a nodal/zonal pricing construct will be greater than in a uniform pricing world. Nodal /zonal is riskier than uniform pricing. Acceptance of this risk must come with a corresponding return which does not exist (disbursement of residual is insufficient).
- All the IESO analyses used to support its recommendation have been "backcasts" of information instead of forecasts. History cannot predict the future. Additionally, the values used in these backcasts are what is referred to as "Shadow Prices" – these are not the same as nodal/zonal prices and cannot be relied upon to behave as nodal/zonal prices.

Incremental Capacity Auction (ICA):

The ICA represents a new structure to the Ontario market and is proposed to replace contract procurement of generation. At a high level, it is assumed that a generation source that is no longer in possession of a contract will participate in a competitive auction process instead of renegotiating its contract to participate in the Ontario electricity market. In this way, the competitive nature of the auction process will drive efficiencies and result in significantly lower prices than contracted procurement methods. In fact, this is the area of the MRP that is assumed to be responsible for the vast majority of the cost savings identified ($3.2 – $5.2 billion over a 10-year period) by the Brattle Group in its Benefits Case Report located on the IESO website.

Throughout the ICA discussions, it has become clear that many generation sources – that have long lead times to design, permit, construct, and commission - will need "multi-year commitments" as part of the ICA in order to get a guaranteed revenue stream that will be required to secure project financing, among other things. CME expects this is correct but cannot help but wonder what exactly is the difference between a 20-year contract and a multi-year commitment with guaranteed revenues? CME believes that the ICA will be a dysfunctional high cost implementation that cannot, by its own design, deliver on lowest cost solutions for Ontario. The IESO even acknowledges that the ICA will not procure capacity at the lowest cost.

The auction will pay all generators the auction clearing price which is the highest bid. And combining that with bad economic principles mean that all generation procured through ICA will cost same as new capacity, erasing the possibility of procuring life extensions of low-cost aged assets. This is also not considering that new built capacity is required by 2023.

Additionally, the bias towards gas-fired generation in the ICA design will limit options to procure low cost alternative non-emitting resource. A 1-year contract length means generators are going to bid higher risk premiums. The unbundling of energy, capacity, and ancillary services markets will further drive up costs by not being able to optimize for the lowest total system cost solution. Each of the markets will be independent, not allowing for synergies and complexities of resources capabilities. For example, renewables require more A/S. This will lead to additional A/S market needs not accounted for by the capacity market.

Finally, and of note, the ICA high level design and Market Renewal Program business case consultations suggest that more design work is needed to fully understand the requirements to implement this system. At its heart, ICA is a complex IT project that still has many details undefined and the rushed timeline to consult stakeholders further increases risk of improper implementation and cost overruns. We are almost certain that the ICA development will almost assuredly be significantly over budget.

Recommendation: Re-think Market Renewal. The concept where the last generator bid into the supply stack sets auction clearing pricing for the entire supply does not optimize pricing but ensures the maximum price is paid to all suppliers. An alternative supply procurement approach needs to be considered.

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?**

CME supports increased stability and transparency on industrial electricity bills, as set out in Bill 87, Fixing the Hydro Mess. Electricity pricing and overall energy policy is extremely complicated so with that reliability and sustainability is always welcome as it makes it a bit easier for industrial electricity rate customers within Ontario's manufacturing sector. It is always important to keep in mind that regulatory efficiency must never be used as a justification for exclusion of customer interests from proceedings that directly impact electricity rates.

Recommendation: The Ontario Energy Board (OEB) should conduct a 360-degree review of the intervenor process, without retribution, to recommend improvements and encourage self-regulation of intervenor activity by implementing a shared funding of intervenor costs or fixed envelope cost recovery as per the National Energy Board.

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

The energy sector is embroiled with many initiatives including this consultation, the IESO Market Renewal Project (MRP) consultations, the IESO long-term planning consultations, the OEB modernization, and several OEB policy consultations on rate designs. The rapid adoption of emerging and innovative DERs are changing the way customers consume electricity. The changes to customer consumption patterns and their growing ability to respond to price signals is pushing the OEB to re-think how Ontario's power system is regulated, planned, financed, operated and maintained. The re-thinking should include consideration for the following broad components of Ontario's electricity regulatory framework:

- Cost allocation: which customers pay for what investments;
- Rate design: how are customers charged for system costs;
- Utility renumeration: how network owners receive revenue and returns for efficient operation and investment in their networks; and,
- Compensation for DER benefits: how DERs should be measured and compensated for services they provide to network operators.

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In addition to the Commercial and Industrial Distribution Rate Design Consultation (EB-2015-0043), the OEB has launched two additional consultations (i.e., Utility Renumeration (EB-2018-0287) and Responding to Distributed Energy Resources (DERS) (EB-2018-288) that are strongly intertwined with C&I rate design and should be addressed in a coordinated manner. Rate design influences customer and distributor investment decisions today and the OEB should develop a progressive rate design that will send the right signals to the market, while achieving the stated objectives. Further staff consultation should proceed under a fixed timeline that includes allocation of time and resources for:

- A jurisdictional review of best practices in progressive rate design that aligns customer and distributor investment drivers;
- Coordination with other recently launched OEB consultations on Utility Renumeration and Responding to DERs;
- Adequate and meaningful stakeholder engagement to ensure feedback and analysis is appropriately integrated; and,
- A formal process to present, review and finalizing new rate design options before presentation to the OEB, including a finite timeline for implementing a cost and benefit estimation methodology. This will require coordination by multiple agencies.

In its inputs to the OEB modernization initiative consultation, CME strongly recommended the adoption of lowest total system cost objective. By focusing on the lowest total system cost as part of an outcome-based objective, Ontario's manufacturing sector will remain competitive. This will in turn drive investment and growth in the province. As a next step, CME recommends that the IESO's long term planning process consider options that not only drive to lower system costs but also consider the economic benefits to the province that support growing industries that generate jobs and stimulate secondary economic activity that can benefit the economy and society in general.

For a list of all our recommendations, please see page 2 of our submission.

WHO WE ARE:

From the first industrial boom in Canada, Canadian Manufacturers & Exporters (CME) has been advocating for and representing member interests. Nearly 150 years strong, we have earned an extensive and effective track record of working for and with 2,500 leading manufacturers from coast to coast to help their businesses grow. The association directly represents more than 2,500 leading companies nationwide. More than 85 per cent of CME's members are small and medium-sized enterprises. As Canada's leading business network, CME, through various initiatives including the establishment of the Canadian Manufacturing Coalition, touches more than 100,000 companies from coast to coast, engaged in manufacturing, global business and service-related industries. CME's membership network accounts for an estimated 82 per cent of total manufacturing production and 90 per cent of Canada's exports.

CME Website: www.cme-mec.ca
Manufacturing Matters: www.manufacturingmatters.ca
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