

MEETING NOTE

NAME OF ORGANIZATION: Ontario Mining Association (OMA)
DATE/TIME OF MEETING: Wednesday February 21, 2018
LOCATION OF MEETING: 900 Bay Street, 4th floor, Hearst Block

PURPOSE: To understand the concerns of mining companies in Ontario

ATTENDEES: **Minister of Energy**
Mike Feenstra, Chief of Staff

Ontario Mining Association

LAST MEETING: November 2, 2017

ANTICIPATED AGENDA ITEMS:

1. Electricity Prices
2. Cap and Trade
3. Industrial Accelerator Program

NOTES ON AGENDA ITEMS:

1. Electricity Prices

- Mining companies indicate that increasing electricity prices, as well as uncertainty around future prices, are a barrier to investment in Ontario.
- Glencore is considering a \$1.5 billion investment in their Sudbury Integrated Nickel Operations (SINO), but is concerned about uncertainty around future electricity prices.
- In a February 1, 2018 letter from Goldcorp to the Minister of Economic Development and Growth, Goldcorp indicated that it envisions investing approximately \$1 billion in a new prospective mine development in Timmins (Century Gold Project) but identified electricity prices as a barrier.
- Although the Industrial Conservation Initiative (ICI) has reduced electricity costs for miners, they assert they have a limited ability to benefit from ICI due to the nature of their operations.

Suggested Response:

- We recognize the importance of electricity prices for the mining sector in Ontario. Maintaining competitiveness with respect to energy costs is a top government priority.
- The 2017 Long-Term Energy Plan (2017 LTEP) forecasts the industrial electricity prices will increase in line with inflation over the forecast period.
- Currently, the electricity price for industrial electricity consumers in Ontario is lower than the average price in the Great Lakes region as reported by the U.S. Energy Information Administration. Consumers in Northern Ontario that participate in the Northern Industrial Electricity Rate Program can achieve even lower rates.
- While benefits vary from consumer to consumer, the Industrial Conservation Initiative (ICI) has been successful at lowering industrial electricity costs.
- As part of Ontario's Fair Hydro Plan, the Ontario Electricity Support Program (OESP) and the Rural or Remote Rate Protection (RRRP) program are now funded from provincial revenues instead of by electricity consumers. This lowers electricity costs for industrial customers, including mining companies, who previously funded a portion of these programs.
- In addition, there are a number of existing initiatives available to business consumers to help them manage their electricity costs:

Industrial Conservation Initiative (ICI);
Industrial Accelerator Program (IAP);
Northern Industrial Electricity Rate (NIER); and
Demand Response initiatives.
- We intend to remove the Debt Retirement Charge (DRC) for commercial, industrial and other non-residential electricity users on April 1, 2018, nine months earlier than previously planned.
- The Independent Electricity System Operator's (IESO) Market Renewal initiative is expected to save up to \$5.2 billion over a ten year period.

Background:

Industrial Conservation Initiative (ICI)

- Due to their very large size, mining companies generally qualify and participate in ICI.
- Under ICI, these consumers are charged Global Adjustment (GA) on the basis of their share of the total system demand during the highest five peak hours of the year.
- While savings vary, ICI participants pay about one-third less for electricity compared to if they did not participate.

Industrial Accelerator Program (IAP)

- The IAP assists eligible transmission-connected companies to fast track capital investment in major energy conservation projects.
- The program provides financial incentives to encourage investment in innovative process changes and equipment retrofits to reduce electricity consumption on the provincial system and to help companies become more competitive by positively impacting their bottom line.

Northern Industrial Electricity Rate Program (NIERP)

- NIERP provides a \$20 megawatt per hour (MWh) rebate for qualifying large northern industrial consumers, including some mines. The province committed to extending the program beyond March 31, 2016.
- Note: In a February 1, 2018 letter to the Minister of Economic Development and Growth, Goldcorp suggested that an all-in electricity cost of \$75/MWh could be achieved with a combination of capital funding of \$90 million and participation in NIERP for 15 years.

Ontario's Fair Hydro Plan

- Ontario's Fair Hydro Plan has shifted the cost of the Rural or Remote Rate Protection Program (RRRP) and Ontario Electricity Support Program (OESP) from the rate-base to the tax-base. This benefits all ratepayers including large industrial ratepayers. Large industrials receive a benefit of approximately \$3/MWh. Note: Removing the Debt Retirement Charge (DRC) from all bills, effective as of April 1, 2018. This will save large industrials approximately \$7/MWh.

2. Cap and Trade

- OMA may raise concerns on the impact of cap and trade on future mining operations as its members consider whether to use electricity or diesel at new projects.
- OMA may suggest that companies who engage in significant fuel switching be rewarded with a lower electricity price via the introduction of a government program.
- Some miners have voiced concerns about a lack of certainty regarding cap and trade's impact on the electricity sector post-2020 (i.e., after the first compliance period ends).

Suggested Response:

- **Ontario has been taking strong climate-positive actions for years, such as successfully eliminating coal as a source of electricity generation and developing a long-term energy plan that focuses on a safe, clean, reliable and affordable energy future.**
- **The elimination of coal-fired generation represents a 30 Mt reduction in greenhouse gas (GHG) emissions since 2003. Ontario's electricity sector is now over 90% emissions-free based on the 2016 generation mix.**
- **Cap and trade proceeds will be used to support programs aimed at reducing greenhouse gas emissions and energy consumption.**
- **The Ministry of the Environment and Climate Change (MOECC) continues to implement its Climate Change Action Plan (CCAP), which outlines how cap and trade auction proceeds are to be used in first compliance period of cap and trade.**
- **Ontario is supporting industries to reduce greenhouse gas pollution from their facilities or manufacturing processes through a new program from the Green Ontario Fund, a non-profit provincial agency funded by proceeds from the province's carbon market.**
- **Government will outline its plan for fighting climate change post-2020 in the next CCAP, which will be developed as we approach 2020.**

Background:

- A preliminary assessment from MOECC revealed that most mines in Ontario report emissions between 10,000 and 25,000 tonnes of CO₂e per year, and there are a few that emit over 25,000 tonnes CO₂e per year.

Emissions from the majority of Ontario mines will either be included in the cost of natural gas provided by the utility or if the mine is a voluntary participant, they will be responsible for their own emissions.

- On June 8, 2016, Ontario released its five-year Climate Change Action Plan (CCAP) designed to help Ontario take steps to transition to a low-carbon economy.
- On December 8, 2017, Ontario announced support for industries to reduce greenhouse gas pollution from their facilities or manufacturing processes through a new program from the Green Ontario Fund, a non-profit provincial agency funded by proceeds from the province's carbon market.

Projects eligible for the GreenON Industries funding include switching to less carbon intensive fuels, redirecting harmful carbon dioxide emissions back into production processes, upgrading energy inefficient production equipment and introducing production processes that require fewer energy resources.

GreenON Industries will provide up to \$200 million in matching funding for eligible projects.

3. Industrial Accelerator Program

- Many mining sites in Ontario are eligible to participate in the Industrial Electricity System Operator's (IESO) Industrial Accelerator Program (IAP).
- IAP assists eligible customers to fast-track capital investment of up to \$10 million for major energy-efficiency projects, equipment retrofits, process changes and new construction.

Suggested Response:

- **We are pleased to see your members, such as Glencore and Goldcorp, benefiting from IESO's Industrial Accelerator Program.**
- **As you may be aware, IESO is currently undertaking a mid-term review of the Conservation First Framework and the Industrial Accelerator Program. The review is looking at how the programs are meeting customer needs and is expected to be completed by June 1, 2018.**

- We encourage you to participate in the mid-term review process and provide your feedback directly to IESO. Additional details on the review are available on IESO's website.

If asked about the elimination of Combined Heat and Power (CHP) incentives

- Beginning July 1, 2018, proponents will no longer be eligible to apply for incentives for combined heat and power projects that use supplied fossil fuels to generate electricity under the Conservation First Framework or the Industrial Accelerator Program.
- Behind the meter waste energy recovery projects will continue to be eligible, as will renewable energy projects, including those paired with energy storage systems.
- Incentives for these projects are being phased out to meet Ontario's climate change goals. The IESO determined that natural gas-fired CHP projects on average result in greenhouse gas (GHG) emissions that are over four times the marginal GHG emissions rate of the electricity system.

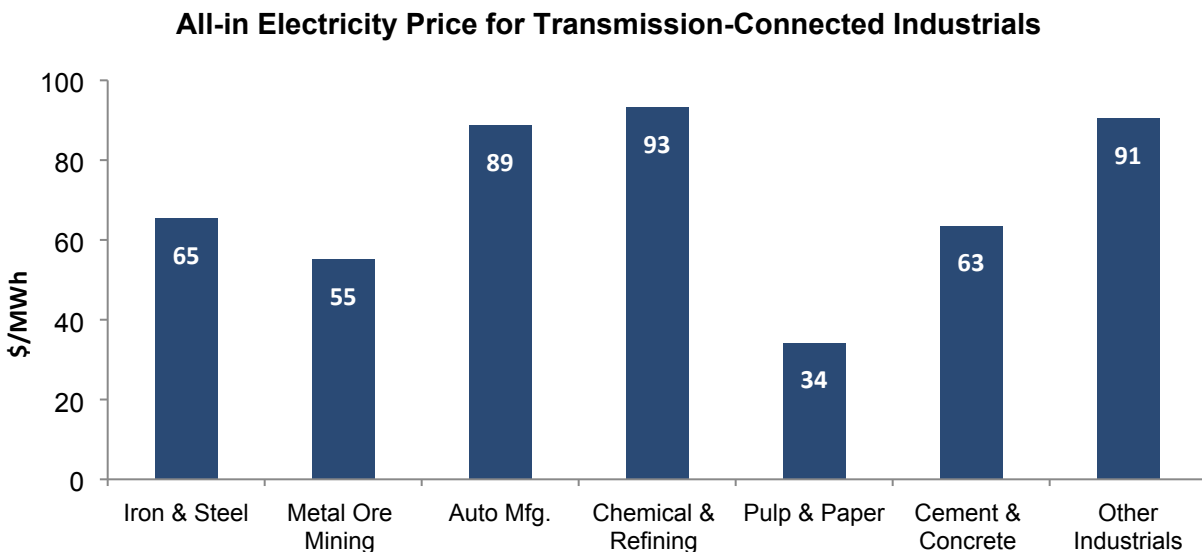
Background:

- IAP is available for entities connected to IESO transmission grid, and their distribution-connected sites.
- Program streams offered through the IAP include Retrofit Program, Process and Systems, Energy Managers and High Performance New Construction.
- Through the IAP, Glencore's Kidd Mine in Timmins received about \$5.6 million in incentives (~ 60% of project costs) to transition to a fully automated underground ventilation system. The project is expected to result in \$2 million of savings annually.

APPENDIX:

1. Electricity Prices – Background

- Estimated all-in prices are shown below for YTD October 2017. Note: participants in NIERP receive a reduction of \$20/MWh on eligible consumption.



Industrial Conservation Initiative (ICI)

- All customers pay Global Adjustment (GA), which reflects costs associated with contracted and regulated generation and the cost of conservation and demand management programs.
- Since January 2011, Global Adjustment (GA) has been allocated to two separate classes of consumers:

Consumers with average monthly peak demand greater than 5 MW (Class A), who pay a portion of the monthly GA total based on the percent they contribute to Ontario's five highest demand peaks in the previous year (i.e., Base Period).

All other consumers (i.e., Class B) will continue to be charged GA on a flat \$/kilowatt hour (kWh) basis.

- In July 2015, Class A consumer status was extended to consumers operating in select electricity-intensive sectors with average monthly peak demand greater than 3 MW.

- In April 2015, a further amendment to O. Reg. 429/04 regarding the sharing of Class A information took effect.

Each Class A consumer must provide written consent to their Local Distribution Company or IESO, to share the following with ENERGY:

- ICI consumer's company name;
- The address and geographic location of ICI consumer's head office;
- The address and geographic location of the consumer's load facilities participating in ICI; and
- Written consent for IESO/LDC to provide that information to ENERGY and for ENERGY to publish that information.

ICI Expansion

- On January 1, 2017, amendments to O. Reg. 429/04 took effect that further expand the ICI program to include more than one thousand newly eligible customers with monthly peak demand greater than one megawatt, down from the current threshold of three megawatts. In addition, sector restrictions have been removed and smaller industrial, institutional and commercial businesses would be eligible to participate.
- As part of Ontario's Fair Hydro Plan, ICI was further expanded to include smaller manufacturers with peak demands between 500 kW and 1 MW. This expansion is subject to sector restrictions (e.g., manufacturing and greenhouses as per North American Industry Classification System (NAICS) codes 31 – 33 and 1114).
- Expanding participation in the ICI program:

Reduces cost pressures on the electricity system by empowering more consumers to lower their electricity demand during peak periods; and

Reduces electricity bills for new ICI participants who are able to reduce their electricity demand during peak demand periods.

Northern Industrial Electricity Rate Program (NIERP)

- The original three-year NIERP was introduced as part of the 2010 Ontario Budget.
- On December 14, 2012, the Ontario government announced its intention to extend NIERP for three years. The extended program administered by the Ministry of Northern Development and Mines (MNDM) was set to expire on March 31, 2016.

- On April 7, 2015, the Ontario government announced its intention to make NIERP permanent for qualifying large northern industrial consumers.
- Ontario has committed to a permanent NIERP beyond March 2016, with continued investment of up to \$120 million per year. **Note:** MNDM was approved to implement an ongoing program, with an initial duration of five years ending March 2022.

Industrial Accelerator Program (IAP)

- IAP assists eligible transmission-connected customers to fast-track capital investment of up to \$10 million for major energy-efficiency projects, equipment retrofits, process changes and new construction.
- IAP also offers financial incentives for behind the meter (BMG) customer generation with the intent of reducing electricity consumption from the grid.

Under IAP, generation projects must not exceed 20 MW.

BMG projects can include combined heat and power (until July 2018), and waste energy recovery.

- The IESO expects that the program will achieve 1.7 TWh in savings between 2015 and 2020.

saveONenergy for Business

- The saveONenergy for Business Program offers a variety of financial incentives to distribution-connected industrial customers to increase energy efficiency and save money on their bills.
- The RETROFIT program provides incentives up to 50% of project costs to upgrade old or inefficient equipment.
- The PROCESS and SYSTEM program provides incentives to industrial consumers of up to 70% of project capital costs for system and process improvements.
- The Embedded Energy Manager program pays up to 80% of the cost for industrial consumers to hire an energy manager to identify and achieve savings.
- The AUDIT FUNDING program provides up to 50% of the cost of an energy audit to identify opportunities for energy efficiency upgrades and eligible incentives.

Demand Response (DR)

- DR provides payments to businesses and industry to shift consumption at times when the electricity system is stressed.
- The IESO has transitioned DR from a program approach to a market approach.

Annual DR auctions replace the practice of multi-year contracting for DR. Under the former OPA, DR resources were procured through the DR3 program for typically 5 year contract periods.

The IESO held its first DR auction in December 2015, procuring ~390 MW were procured for the summer commitment period (May 2016 to October 2016) and ~400 MW for the winter commitment period (November 2016 to April 2017).

- In addition to the DR auction process, IESO is also undertaking pilot programs to test new capabilities for DR in the energy market and its ability to meet system needs.
- DR reduces peak demand and, as a result, system costs.

As demand rises, more expensive generation is typically needed.

When consumers reduce their electricity use during peak periods, the marginal cost of more expensive generation can be avoided.

2. Cap & Trade – Background

General

- On May 18, 2016, Ontario passed the Climate Change Mitigation and Low-Carbon Economy Act, 2016 and on May 19, 2016, Ontario posted its final cap and trade regulation (O. Reg. 144/16) and guideline.
- Under Ontario's cap and trade regulation, auctions must be held four times each year during the 2017-2020 compliance period. See Table 1 for auction results data.

Table 1: Ontario's 2017 Cap and Trade Auction Results

Auction Date	Current Allowances (2017)	Current Allowances Settlement Price (per tonne)	Future Allowances (2020)	Future Allowances Settlement Price (per tonne)	Estimated Proceeds (millions)
March 22	25,296,367	\$18.08	812,000	\$18.08	\$472
June 6	25,296,367	\$18.72	1,674,000	\$18.30	\$504
September 6	25,296,367	\$18.56	3,116,700	\$18.03	\$526
November 29	20,898,000	\$17.38	3,116,700	\$18.89	\$422

- On January 1, 2018, Ontario joined the linked cap and trade program that Quebec and California implemented.

Electricity and Natural Gas Impacts

- In certain circumstances, some consumers will not have the carbon cost passed on to them by the fuel distributor if their emissions associated from fuel combustion are already captured under cap and trade (e.g., in the case of “Large Final Emitters”, discussed further below) or if they are voluntary participants.
- Large final emitters (LFE), mandatory participants under cap and trade, are defined as emitting at least 25,000 tonnes of CO₂e (carbon dioxide equivalent) per year or more.
- Voluntary participants are facilities who emit between 10,000 and 25,000 tonnes of CO₂e per year and who choose to participate directly in the program.
- Under the cap and trade regulation/guideline, MOECC will apply a formula-based approach to determine the quantity of allowances that an eligible large final emitter (LFE) will receive free of charge.
- All covered facilities (i.e., those whose emissions exceed the opt-in threshold of 10kt) are eligible for free allowances during the first compliance period of cap and trade.
- LFEs are responsible for purchasing allowances to cover the emissions above their free allocation amount.
- Emissions from electricity generation are subject to a carbon price through the cost of fuel. Natural gas-fired electricity generators are expected to pass on the cost of carbon through increased offers into the wholesale electricity market.

Climate Change Action Plan

- Through its Climate Change Action Plan (CCAP), Ontario is investing \$377 million in proceeds from its carbon market in the Green Ontario Fund, a non-profit provincial agency funded by proceeds from the province's carbon market that was launched in summer 2017.
- On December 8, 2017, Ontario announced the launch of GreenON Industries, a new program from the Green Ontario Fund. GreenON Industries will provide up to \$200 million in matching funding for eligible projects.
- Companies interested in how to qualify and apply for the new GreenON Industries program should visit GreenON.ca.

3. Industrial Accelerator Program – Background

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