Ontario

MINISTRY OF
ENERGY

Cap and Trade and the Climate Change Action Plan

Foundation Briefing

January 2018

Issue / Context

- On January 1, 2017 Ontario's cap and trade program began and will limit greenhouse gas emissions (GHG) and continue the province's fight against climate change.

- Released in 2016, the Climate Change Action Plan (CCAP) outlines how cap and trade auction proceeds are to be used in the first cap and trade compliance period (2017-2020) to fund actions to reduce GHG emissions.

- Through the cap and trade program and CCAP, Ontario intends to reduce GHG emissions to 15% below 1990 levels by 2020, 37% by 2030 and 80% by 2050.

Current Status

- In May 2016, the Ministry of the Environment and Climate Change (MOECC) passed the *Climate Change Mitigation and Low-Carbon Economy Act, 2016* and posted its final cap and trade regulation and guideline.
  - Cap and trade proceeds are intended to be used to support programs aimed at reducing GHG emissions and energy consumption, which will provide energy savings to households.

- In June 2016, MOECC publicly released its 5-year *Climate Change Action Plan* (CCAP). The CCAP outlines how cap and trade auction proceeds are to be used in the first cap and trade compliance period (2017-2020) to fund actions to reduce greenhouse gas (GHG) emissions.

- On January 1, 2017, Ontario's cap and trade program came into effect. Under the province's cap and trade regulation, auctions must be held four times each year during the 2017-2020 compliance period.

Current Status (cont'd)

- In 2017, Ontario successfully administered four cap and trade auctions on March 22, June 6, September 6 and November 29. The average settlement price for 2017 allowances sold for $18.19 per tonne, while the average settlement price for future 2020 allowances sold for $18.33 per tonne.

- Ontario expects to generate between $1.8 billion ~~to~~ and $1.9 billion per year in proceeds from its cap and trade program. The province's total anticipated proceeds from all four 2017 auctions was approximately $1.9 billion.
  - On September 22, 2017, Ontario signed a cap and trade linking agreement with Quebec and California, under the Western Climate Initiative (WCI). The linkage is effective as of January 1, 2018.

- On August 30, 2017, Ontario launched the Green Ontario Fund (previously green bank, and established in regulation as the "Ontario Climate Change Solutions Deployment Corporation"). The Green Ontario Fund was established with $377 million in cap and trade proceeds.

- MOECC is currently working with ministries, agencies and stakeholders to develop and execute implementation plans related to CCAP initiatives (See the Appendix for additional background regarding cap and trade and CCAP).

1) Cap and Trade – Key Information / Considerations

- Costs incurred by gas distributors to comply with cap and trade are passed on to natural gas consumers upon review and approval by the Ontario Energy Board (OEB). 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.

- On November 24, 2016, the OEB set interim rates of about 3.35¢ per cubic metre of natural gas for the recovery of costs related to cap and trade. On September 21, 2017, the OEB set final cap and trade rates for natural gas utilities at approximately 3.35¢ per cubic metre. These rates took effect on January 1, 2018.
  - Interim Cap and trade rates increased the average residential bills by between $68 to $80 per year (before taxes). The exact costs depend on how much natural gas a customer uses each month.

- On November 9, 2017, Ontario's three OEB-regulated natural gas utilities (Enbridge Gas Distribution, Union Gas, and EPCOR) filed their cap and trade compliance plans for 2018 with the OEB. The OEB is currently assessing the cost-effectiveness of each of these compliance plans.
  - If approved, the costs of the proposed plans would raise residential natural gas rates by $5 to $6 on average per year retroactive to January 1, 2018.
  - In addition, the utilities outlined a proposal for OEB consideration to competitively procure renewable natural gas (RNG) to reduce the carbon-intensity of natural gas supply in Ontario. The price premium of RNG above the cost of conventional gas and carbon allowances would be funded by the GGRA.

- For gasoline consumers, MOECC estimated the impact of carbon pricing on gasoline at 4.3¢ per litre.

2) CCAP – Key Information / Considerations

- The CCAP reviews/report backs provide an opportunity for ENERGY to assess action items and to subsequently further develop options / recommended approaches that would:
  - Ensure Ontario ratepayers and key energy stakeholders are appropriately engaged and not adversely impacted;
  - Leverage existing programs/expertise in order to avoid duplication; and
  - Provide the greatest GHG benefit per dollar spent.

- It important for the Ministry to continue to work closely with energy agencies (i.e., IESO and OEB) throughout this process, given their significant subject matter expertise and experience.
  - Ministry staff will also work with MOECC, as well as agencies, to assess implementation approaches that have been successful in other jurisdictions (i.e., California and Quebec).

- As directed by the 2016 CCAP Cabinet Minute, ENERGY is working with MOECC to help inform the governance and program delivery approach for the Green Ontario Fund
  - On August 4, 2017, the Minister of Energy directed IESO to enter into an agreement with MOECC to support the design and delivery of GreenON programs, and, among other things, to:
    - Avoid marketplace confusion and make prudent use of funds by avoiding duplication
    - Ensure there are cost-effectiveness thresholds or requirements and Evaluation, Measurement and Verification (EM&V) of the associated energy savings.

- The Ministry and IESO are engaging with key energy stakeholders (e.g., electricity and gas utilities) to leverage existing experience in program development and delivery.
  - Communication between stakeholders will also be important in helping to identify issues and finding holistic solutions.

- ENERGY has worked with IESO and MOECC to ensure that these CCAP impacts are considered in the 2017 Long-Term Energy Plan (2107 LTEP).

3) Public Messaging – Key Information / Considerations

- On January 1, 2017, Ontario implemented a cap and trade program. This program is a flexible, market-based approach that will be a cornerstone in Ontario's fight against climate change, and is the most cost-effective way of achieving reductions in GHG emissions.

- Ontario has taken significant action to reduce emissions from the electricity sector through the elimination of coal-fired electricity generation and associated investments in emissions-free generation. The elimination of coal-fired generation has led to a 30 megatonne (Mt) reduction in greenhouse gas (GHG) emissions since 2003. Ontario's electricity sector is now over 90% emissions-free.

- Ontario's cap and trade program is a cornerstone in the fight against climate change. Ontario continues to build on this leadership as part of the government's plan to invest in people, build modern infrastructure and support a dynamic and innovative business climate.

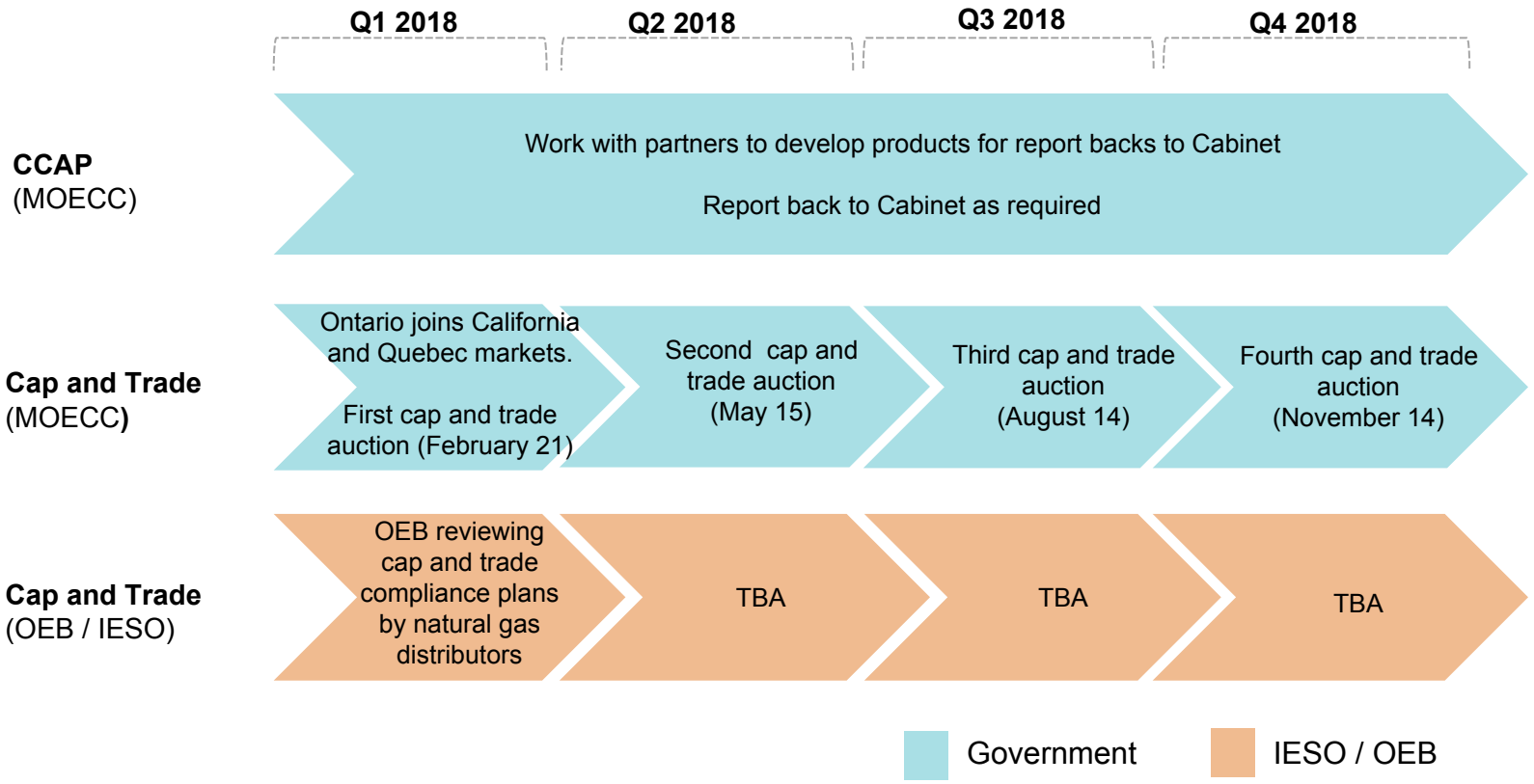
- Natural gas will continue to play a critical role in the energy mix in Ontario — even as our Climate Change Action Plan (CCAP) supports people and businesses in shifting away from fossil conventional fuels by undertaking initiatives which include investing cap and trade auction proceeds into next generation clean technologies.

- By law, all proceeds from cap and trade will be invested in a transparent way into projects that support GHG reductions, such as supporting Ontarians in shifting away from fossil fuels and investing in emerging clean technologies. This will create good jobs in clean tech and construction, generate opportunities for investment in Ontario, and help people and businesses transition to a low -carbon economy.

- We are pleased with the results of the first year of Ontario cap and trade auctions. These auction results demonstrate that the Ontario cap and trade market system is functioning as intended and that there is solid market engagement.

Appendix

Key Dates and Milestones



Cap and Trade / Background

- In April 2015, Ontario announced it would limit GHG emissions through a cap and trade program to support the province's climate change plan and to help meet its GHG reduction targets of:
  - 15% below 1990 levels by 2020;
  - 37% below 1990 levels by 2030; and
  - 80% below 1990 levels by 2050.

- A cap and trade program is a flexible, market-based program with targets (caps) that get more stringent over time. Ontario's caps are set at a broader economy-wide level rather than by sector. Ontario's program covers emissions from Large Final Emitters (LFEs) defined as those emitting over 25,000 tonnes of CO2 per year, electricity generation/imports, liquid petroleum fuel distributors and importers and natural gas distributors (**Note:** Entities with emissions above 10, 000 tonnes may opt-in to the program as "voluntary participants").

- On September 11, 2015, Quebec and Ontario signed a new Memorandum of Understanding to collaborate and implement their joint intention to link the Quebec carbon market to that being developed in Ontario.
  - On September 22, 2017, Ontario signed a cap and trade linking agreement with Quebec and California. The linking came into effect on January 1, 2018.

- On November 24, 2015, MOECC released its Climate Change Strategy, a document highlighting the government's climate targets and which positions carbon pricing as a cornerstone of GHG emissions reduction in the province.

- On February 24, 2016 MOECC introduced the *Climate Change Mitigation and Low-Carbon Economy Act, 2016*, which sets emission reduction targets and establishes Ontario's cap and trade program.

Cap and Trade / Background (cont'd)

- On February 25, 2016, the draft Cap and Trade Regulation was posted to the EBR, outlining the policy for a number of program elements, including compliance periods, auction rules and allocations.

- The *Climate Change Mitigation and Low-Carbon Economy Act, 2016* received royal assent on May 18, 2016.

- The Cap and Trade Program Regulation and new Quantification, Reporting and Verification of Greenhouse Gas Emissions Regulation were filed with the Registrar of Regulations on May 19, 2016.

- On May 19, 2016, MOECC posted the final cap and trade regulation/guideline (effective July 1, 2016). MOECC's Revised Guideline for Greenhouse Gas Emissions Reporting references a report prepared for ENERGY by Navigant, which outlines the methodology used to develop marginal default emission factors (DEFs) for calculating emissions associated with imports. Navigant's DEFs report was posted on the Ministry's website on February 26, 2016.

- In 2017, Ontario successfully administered four cap and trade auctions. The total number of current allowances sold was 96,787,101 for an average price of $18.19 per tonne. The total number of future allowances sold was 8,719,400 for an average price of $18.33 per tonne. The total estimated proceeds from all four 2017 auctions was approximately $1.9 billion.

Cap and Trade Impacts on Electricity Market and Generators

- Under the cap and trade program, Ontario's natural gas distributors (i.e., Enbridge Gas and Union Gas) are the "point of regulation" for Ontario's natural gas-fired electricity generators.
- This means that natural gas distributors must purchase allowances to cover emissions of natural gas-fired electricity generators and other consumers that are not directly covered under cap and trade.
- Costs incurred by gas distributors to comply with cap and trade are passed on to natural gas consumers once approved by the Ontario Energy Board (OEB).
- 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.
- As part of Ontario's Fair Hydro Plan, certain costs associated with electricity support programs have been shifted to the tax base from the rate base, leading to a savings of $3/MWh for all electricity consumers. This is expected to more than offset the impact of cap and trade on electricity costs over the first compliance period (i.e., 2017-2020).

Treatment of Electricity Imports under Cap and Trade

- Importers of electricity have a compliance obligation under Ontario's cap and trade program.
- To be compliant, electricity importers will be required to apply default emission factors (DEFs) to electricity imports to determine the emissions associated with such imports and to purchase allowances equal to this amount of emissions.
- Two objectives are achieved by placing a carbon price on electricity imports:
  - Treats domestic electricity generation and imports equally (i.e., mitigates competitive disadvantages faced by Ontario generators under cap and trade); and,
  - Prevents CO2 leakage from electricity imports (i.e., mitigates increased emissions arising from fossil fuel-based electricity generation from the US states displacing Ontario generation).
- ENERGY retained Navigant to develop the DEFs, which are outlined in a technical report, entitled *Default Emission Factors for Ontario's Cap & Trade Program* (as posted on ENERGY's website). The report outlines a methodology that calculates DEFs based on the "marginal emission intensity" of generation resources.
- In December 2017, updated 2018 DEFs were posted to ENERGY's website, along with an updated technical report from Navigant.

Treatment of Combined Heat and Power under Cap and Trade

- The final cap and trade regulation, which covers detailed rules and obligations for businesses participating in the program, includes guidance on the treatment of facilities with behind-the-meter generation (BMG) and/or combined heat and power (CHP).

- The regulation includes amendments to the treatment of BMG and/or CHP. These amendments:
  - Allow LFEs to receive free allowances for electricity generated by BMG/CHP facilities for their own consumption over the first compliance period;
  - Are designed to ensure consistency with the 2016 Budget commitment related to proceeds recycling; and
  - Do not provide free allowances for electricity that is sold into the grid.

- **Note:** Facilities with emissions below the opt-in threshold of 10kt will not be covered directly under cap and trade and are not eligible for free allowances. Such facilities will have an indirect compliance obligation (i.e., carbon costs will be passed through from their natural gas supplier).

Cap and Trade Impacts on Natural Gas Utilities

- Ontario's natural gas distributors carry compliance obligations for:
  - The electricity sector (i.e., natural gas-fired generators);
  - Residential, commercial and industrial customers (excluding LFEs); and
  - Any facilities owned or operated by the natural gas distributors.

- In 2016, the Ontario Energy Board (OE)B undertook a consultation process with natural gas distributors and key stakeholders prior to developing its regulatory framework to assess natural gas distributors' cap and trade compliance plans including the recovery of costs in rates. These plans were filed with the OEB

- As a regulated entity, costs incurred by natural gas distributors to comply with the cap and trade program are passed on to natural gas consumers once approved by OEB. In November 2017, the natural gas utilities submitted their respective cap and trade compliance plans to the OEB. The OEB decision is forthcoming.

Ontario Climate Change Solutions Deployment Corporation (Green Ontario Fund)

- The Green Ontario Fund's (GreenON's) mandate is to further the deployment of technology that reduces greenhouse gas (GHG) emissions from buildings and the production of goods.
- As directed by the 2016 CCAP Cabinet Minute, ENERGY is working with MOECC to help inform the governance and program delivery approach for GreenON.
  - In February 2017, the Minister of Energy wrote a letter to IESO requesting that the IESO support the implementation and early adoption of GreenON services.
  - In April, 2017, IESO and MOECC executed a Service-Level Agreement, for IESO to support development and implementation of GreenON (including website, customer support, and program design).
  - On August 4, 2017, the Minister of Energy directed IESO to enter into an agreement with MOECC to support the design and delivery of GreenON programs
- On August 30, 2017, Ontario announced Green Ontario Fund launch, including its website (GreenON.ca) and the GreenON Installations Program (free installations of smart thermostats, and home energy review).
  - GreenON.ca is a one-stop shop for homes and businesses to programs and rebates to reduce energy costs and GHG emissions, including providing information on the suite of existing conservation and energy efficiency programs.
- In October 2017, IESO and MOECC executed a collaborative agreement (TPA).
- On December 13, 2017, the Green Ontario Fund launched: a GreenON Support Program (free over-the-phone service from home energy experts); GreenON Rebates for homes (rebates for insulation, window replacements, and ground and air source heat pumps); and, a Smart Thermostat Rebate program, funded jointly by GreenON and the Conservation First Framework ($100 rebate for purchase of smart thermostat)
- Other programs to meet CCAP commitments, including for businesses, low-income and Indigenous communities are under development.

CCAP – ENERGY Reviews/Report Backs

- MOECC's CCAP cabinet minute stipulates that ENERGY is:
  - Leading reviews and report backs on 11 proposed CCAP initiatives; and
  - Supporting reviews and report backs on 14 proposed CCAP initiatives.
- Key CCAP initiatives for ENERGY include:

CCAP Cabinet Minute #	Minute Description	ENERGY Comments
10	• ENERGY to work with MOECC and MTO to establish a 4 year time-limited free overnight EV charging program for residential and affected multi-unit residential customers/buildings, and report back to Cabinet in 2016.	• Proposal for phased approach to overnight charging that focuses on data collection approved by Cabinet December 13, 2017. • Implementation underway. Program launch expected late Q1 / early Q2 2018.
22	• MOECC work with ENERGY, MEDEI/MRI AND OMAFRA to develop a recovered content requirement for natural gas and report back to Cabinet in 2016 with policy design for a regulation to be in place in 2017.	• ENERGY and MOECC continue to collaborate on designing a policy. • Regulatory approach under review by MOECC
30	• ENERGY to work with MMAH, MIA, MGCS and MOECC to develop a regulation requiring home energy/GHG rating and energy/GHG performance disclosure for new/existing homes at time of sale, and report back to Cabinet in 2018	• Based on feedback received through stakeholder consultations, a review of home energy rating and disclosure (HER&D) initiatives in other jurisdictions, and an analysis of anticipated costs, benefits and impacts of HER&D, a number of issues and implementation challenges have been identified.
41	• ENERGY/MAA to work with MOECC to develop and report back in 2016 on an implementation plan to work with First Nations to develop program for low/no carbon energy powered microgrids and other alternative energy projects.	• ENERGY has gone back to Cabinet and received approval for a new Microgrid program to support diesel reduction in four remote communities where grid connection is not viable. We are awaiting MOECC's final funding allocation for the program and developing a plan for engaging communities to finalize program guidelines.

CCAP – ENERGY Reviews/Report Backs (cont'd)

CCAP Cabinet Minute #	Minute Description	ENERGY Comments
59	• ENERGY work with MOECC to establish GHG reductions as a key element of consultation on the next LTEP.	• LTEP forecasts are to include GHG emissions. • Relevant to all energy stakeholders; in both the electricity and fuels sectors.
60	• ENERGY work with MOECC to establish a vehicle to grid integration roadmap to enable EV batteries to serve as energy storage outside of peak hours, and report back to Cabinet as part of the next LTEP	• Commitment in 2017 LTEP to develop VGI roadmap. Ministry to consult with LDCs and other stakeholders, including auto manufacturers.
76	• ENERGY to develop a proposed approach for a province-wide implementation of the Green Button program in 2017, and report back to Cabinet in 2017.	• ENERGY reported back as part of the LTEP Cabinet Submission on July 26, 2017.
77	• ENERGY to develop single portal for energy-related social benchmarking programs for natural gas/electricity and report back to Cabinet in 2017	• ENERGY reported back as part of the LTEP Cabinet Submission on July 26, 2017.
91	• ENERGY to develop additional options to addressing rate-impacts on electricity consumers and work with MOECC, Premier's Office/Cabinet Office regarding the selected option.	• Impact of cap and trade on electricity consumers over the first compliance period has been more than offset for all consumers by Ontario's Fair Hydro Plan.