Annual Planning Outlook

Carbon Pricing

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Carbon Pricing

Currently, the electricity sectors in Ontario and in neighbouring jurisdictions are subject to carbon pricing. This section details the carbon pricing policies currently in effect within the northeastern portion of the Eastern Interconnection, and how carbon pricing was modelled for this outlook.

Ontario imports from and exports to its five neighbours every day of the year. To forecast the impact of imports and exports, the IESO models the demand and supply in neighbouring jurisdictions and develops regional commodity and carbon price forecasts for fuels used to produce electricity.

The carbon pricing assumptions used in this outlook are based on the provincial Emissions Performance Standards (EPS) program, which was accepted by the federal government on September 20, 2020. On March 31, 2021, Environment and Climate Change Canada announced its intent to remove the application of the federal Output-Based Pricing System (OBPS) from Ontario facilities effective January 1, 2022, signifying the official start date of EPS. Currently, Ontario is subject to the OBPS. The OBPS and EPS programs are almost identical in terms of how carbon emissions from natural gas fired generation is priced, and will be further described below.

The OBPS and the EPS applies a regulatory charge above an industry-specific benchmark emission rate for emission-intensive, trade-exposed (EITE) industry. The federal government considers the electricity sector as EITE and, as such, applies a benchmark emission rate to the sector for large emitters (those exceeding the threshold). Note, there is no carbon pricing applied to the fuel input, the carbon pricing is applied based on the generator's output.

Having a benchmark applied to the electricity sector means there will be no charge associated with emissions up to a specific rate based on fuel type (e.g., 370 t CO_2e/GWh for natural gas). To put this in context, the average combined-cycle gas turbine in Ontario has an emission factor of approximately 415 t CO_2e/GWh. As such, the carbon pricing applied with the OBPS and EPS acts as a pro-rated carbon price. As different gas-fired generation facilities have different emission rates, each facility will be charged an amount based on its emissions and electricity production, leading to facility-specific carbon pricing. Both the OBPS and the EPS maintain the same threshold of 370 t CO_2e/GWh for natural gas, which should facilitate a smooth transition from OBPS to EPS.

In the 2020 APO, the carbon price was assumed to go up to $50/t CO2e by 2022 and remain at this level indefinitely. In this APO, the carbon price was increased to align with the federal government's announcement that it intends to increase the carbon price up to $170/t CO2e by 2030, and remain at this level for the duration of the planning period.[1]

[1] https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/carbon-pollution-pricing-federal-benchmark-information/federal-benchmark-2023-2030.html

In order to more accurately forecast the impact of carbon prices on trade, the IESO has modelled the carbon pricing policies applied in neighbouring jurisdictions where there is a material impact on electricity sector emissions.[2] These include Nova Scotia,[3] New Brunswick,[4] and parts of the United States through the Regional Greenhouse Gas Initiative.[5]

[2] Although carbon pricing is in effect in Manitoba and Quebec, these jurisdictions are considered essentially non-emitting.

[3] Nova Scotia's cap-and-trade program took effect January 1, 2019. More information is available at Nova Scotia's Cap-and-Trade Program.

[4] The federal output-based pricing system was in effect in New Brunswick as of January 1, 2019. For more information, see the Regulations Amending Part 1 of Schedule and Schedule 2 to the Greenhouse Gas Pollution Pricing Act.

[5] For more information, see the Regional Greenhouse Gas Initiative, currently in effect in 10 northeastern states.

Independent Electricity

1600-120 Adelaide Street West
Toronto, Ontario M5H 1T1

Phone: 905.403.6900
Toll-free: 1.888.448.7777
E-mail: customer.relations@ieso.ca

ieso.ca

@IESO_Tweets
facebook.com/OntarioIESO
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