

Summary Results Report

Ontario Cap and Trade Program

Auction of Greenhouse Gas Allowances

November 2017 Ontario Auction #4

Background

The Ontario Ministry of the Environment and Climate Change (MOECC) held the fourth auction of greenhouse gas (GHG) allowances on November 29, 2017. The auction included a Current Auction of 2017 vintage allowances and an Advance Auction of 2020 vintage allowances. The information provided in this report is a balance between the need for program transparency and protection of individual auction participants' market positions.

Prior to the certification of the auction, MOECC staff and an independent market monitor evaluated the bids and determined that the auction process and procedures complied with the requirements of The Ontario Cap and Trade Program Regulation (Regulation). As provided below, the Market Monitor made the following findings:

The Market Monitor found that the auction was cleared consistent with the auction clearing rules in the Regulation. To address potential market manipulation or collusion, the Market Monitor also uses a number of economic analysis tools to evaluate the auction results. The Market Monitor confirmed the clearing price and clearing quantities by participant for the Current Auction of 2017 vintage allowances and for the Advance Auction of 2020 vintage allowances. The auction algorithm correctly applied the Regulation requirements covering the bid guarantee. The Market Monitor did not observe any breaches of security or communication protocols. The Market Monitor recommended that MOECC approve the November 2017 Ontario Auction #4 results.

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Summary Results

The first table below provides key data and information on the results of the auction. The second table provides qualified bid summary statistics from the auction. Please see Explanatory Notes at the end of this report for descriptions of all summary information.

Table 1: Auction Results for November 2017 Ontario Auction #4

Auction Results	Current 2017 Vintage	Future 2020 Vintage
Total Allowances Available for Sale	25,296,369	3,116,700
Total Allowances Sold	20,898,000	3,116,700
Total Qualified Bids Divided by Total Allowances Available	0.83	1.45
Proportion of Allowances Purchased by Capped Participants*	91.5%	92.9%
Herfindahl-Hirschman Index	1404	1873

*Note this statistic may not be provided if it would result in the disclosure of confidential information.

Table 2: Qualified Bid Summary Statistics for November 2017 Ontario Auction #4

Qualified Bid Summary Statistics	Current 2017 Vintage	Future 2020 Vintage
Ontario Auction Reserve Price (CAD)	\$17.38	\$17.38
Settlement Price (CAD)	\$17.38	\$18.89
Maximum Price (CAD)	\$31.19	\$25.35
Minimum Price (CAD)	\$17.38	\$17.38
Mean Price (CAD)	\$20.74	\$19.95
Median Price (CAD)	\$19.60	\$18.81
Median Allowance Price (CAD)	\$19.98	\$19.41
Auction Exchange Rate	1.2807	

List of Qualified Bidders for the Current Auction of 2017 Vintage Allowances and the Advance Auction of 2020 Vintage Allowances

A Qualified Bidder is a cap and trade program participant that completed an auction application, submitted an acceptable bid guarantee, and was approved by MOECC to participate in the auction. Qualified bidders may or may not have participated in the auction.

CITSS Entity ID Number	Participant Legal Name
ON2151	Suncor Energy Products Partnership
ON2164	NGL Supply Co. Ltd.
ON2165	Union Gas Limited
ON2176	Enbridge Gas Distribution Inc.
ON2178	Parkland Fuel Corporation
ON2187	Markham District Energy Incorporated
ON2189	Imperial Oil
ON2190	Plains Midstream Canada ULC
ON2203	Greenergy Fuels Canada Inc.
ON2210	Ivaco Rolling Mills 2004 L.P.
ON2220	TransCanada PipeLines Limited
ON2223	Governing Council of the University of Toronto
ON2224	Irving Oil Commercial G.P.
ON2240	Greater Toronto Airports Authority
ON2253	Federated Co-operatives Limited
ON2254	Great Lakes Copper Ltd
ON2267	Superior Plus LP
ON2298	Oxy Vinyls Canada Co.

CITSS Entity ID Number	Participant Legal Name
ON2299	The Corporation of the City of Kingston
ON2304	Ontario Power Generation Inc.
ON2306	1329606 Ontario Limited
ON2313	Sun Gro Farms Inc.
ON2315	Husky Oil Operations Limited
ON2324	Nature Fresh Farms Inc.
ON2328	Pomas Farms Inc.
ON2329	EPCOR Natural Gas Limited Partnership
ON2330	Great Lakes Greenhouses Inc.
ON2345	Pembina Infrastructure and Logistics LP
ON2348	Primemax Energy Inc.
ON2356	Koch Supply & Trading, LP
ON2359	The International Group Inc.
ON2361	Hiram Walker & Sons Ltd.
ON2369	Apotex Inc.
ON2370	Labatt Brewing Company Ltd
ON2381	The Corporation of the City of Kitchener
ON2388	Greenfield Energy Centre LP
ON2414	Elbow River Marketing Ltd
ON2421	La Coop Carbone
ON2439	MacEwen Petroleum Inc.
ON2445	Royal Bank of Canada
ON2452	Propane Levac Propane Inc.
ON2457	McDougall Energy Inc.
ON2458	Énergie Valero Inc / Valero Energy Inc
ON2465	1308998 Ontario Ltd.

CITSS Entity ID Number	Participant Legal Name
ON2475	Shell Energy North America (Canada) Inc.
ON2477	Pétrole Léger Inc.
ON2490	Cardinal Power of Canada, L.P.
ON2504	Larry Penner Enterprises Inc.
ON2509	Econo Petroleum Inc.
ON2522	Luminus Energy Partners B.C., Ltd.
ON2532	Centre Lane Trading Limited
ON2533	BP Products North America Inc.
ON2578	MAG Energy Solutions Inc.

Explanatory Notes: Qualified Bid Summary Statistics

Current Auction of 2017 Vintage Allowances

Term	Definition
Total Allowances Available for Sale	Total allowances available, by vintage, for purchase in the Current Auction in metric tons, sold by the Province of Ontario
Total Allowances Sold at Auction	Total allowances, by vintage, purchased in the Current Auction
Total Qualified Bids Divided by Total Allowances Available for Sale	Total number of allowances included in all the qualified bids for the Current Auction allowances (regardless of bid price) divided by the total number of Current Auction allowances available in the auction
Proportion of Allowances Purchased by Capped Participants	<p>The total number of Current Auction allowances (by vintage) purchased in the Current Auction by Capped Participants divided by the total number of Current Auction allowances sold in the Current Auction</p> <p>Capped Participant is as defined in the Ontario Cap and Trade Regulation.</p>
Herfindahl–Hirschman Index (HHI)	The HHI is a measure of the concentration of allowances purchased by winning bidders relative to the total sale of Current Auction allowances in the auction. The percentage of allowances purchased by each winning bidder is squared and then summed across all winning bidders. The HHI can range up to 10,000, representing 100% of the current vintage allowances purchased by a single bidder (i.e. $100 \times 100 = 10,000$)
Qualified Bid Price Summary Statistics	Statistics are calculated from all the qualified bids for the Current Auction allowances (regardless of bid price). All price statistics are shown in CAD.

Term	Definition
Auction Reserve Price	The minimum acceptable auction bid price for Current Auction allowances, in CAD
Settlement Price	The Current Auction allowance price that resulted from the auction, in CAD
Maximum Price	Highest qualified bid
Minimum Price	Lowest qualified bid
Mean Price	Average qualified bid calculated as the sum of the bid price times the bid quantity of each qualified bid divided by the sum of the bid quantities across all qualified bids
Median Price	The price per metric ton calculated so that 50% of the qualified bids fall above and below the median bid price
Median Allowance Price	The price per metric ton calculated so that 50% of the quantity of allowances in the qualified bids fall above and below that price median value
Auction Exchange Rate (USD to CAD)	<p>The United States dollar to Canadian dollar (USD to CAD) daily average exchange rate as provided by the Bank of Canada for the day before, or a date that is before and as close as possible to, each Ontario auction.</p> <p>The Auction Exchange Rate is used in the determination of the Auction Reserve Price as described in the Detailed Auction Requirements and Instructions document.</p>

Advance Auction of 2020 Vintage Allowances

The data for future vintage allowances available for sale at the Advance Auction are computed in the same manner as computed for the Current Auction.