



**Auction  
of Québec Greenhouse Gas  
Emission Units  
on May 27, 2014**

**Summary Report Results**

## Background

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The Québec Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC)<sup>1</sup> held an auction of greenhouse gas emission units on May 27, 2014. The auction included the sale of present vintage (2014) and future vintage (2017) emission units. The data presented in this report respects the privacy of confidential information provided by auction participants.

Before certifying the auction, the staff of MDDELCC's carbon market division and the market monitor evaluated the bids submitted, monitored the sale, and determined that the sale met the requirements of the *Regulation respecting a cap-and-trade system for greenhouse gas emission allowances*.

The market monitor made the following observations and recommendations:

- The Market Monitor found the auction results to be competitive, based on the data available at the time of the auction. The Market Monitor did not find evidence of market manipulation, based on the data available at the time of the auction.
- The Market Monitor found that the auction was cleared consistent with the auction clearing rules in the regulation and appropriate economic logic.
- Based on data available, the Market Monitor confirmed the clearing price and clearing quantities by participant for the auction for 2014 and for the auction for 2017 vintage allowances. The Auction Administrator (AA) reported that the 2014 auction clearing price is \$11.39 per allowance, with 1,049,111 total 2014 vintage allowances sold. The administrator also reported that the 2017 auction clearing price is \$11.39 per allowance with 1,302,000 total 2017 allowances sold.
- The Market Monitor confirmed the cleared quantities assigned to individual participants by the AA were consistent with the regulation logic involving tie breakers and the random allocation of residual allowances in both auctions and therefore that the total volumes cleared are correct. The auction algorithm correctly applied the regulation requirements covering the bid guarantee and the tie breaker constraints.
- The Market Monitor did not observe any breaches of security or communication protocols.
- The Market Monitor recommends that MDDELCC approve the May 2014 Auction results.

## Auction of Québec Greenhouse Gas Emission Units Held on May 27, 2014

The Québec (MDDELCC) held an auction of greenhouse gas emission units on May 27, 2014. The auction included the sale of present vintage (2014) and future vintage (2017). Below is the main information and data regarding the auction results. **Please refer to the explanatory notes appearing after the list of participants for a description of the data presented below.**

### Summary of bids accepted<sup>2</sup>

#### Auction of present vintage (2014) emission units

Total number of 2014 vintage emission units available for sale:	1 049 111
Total number of 2014 vintage emission units sold:	1 049 111
Ratio of total acceptable bids (in number of emission units) divided by total number of 2014 vintage emission units available for sale:	102.00%
Minimum selling price:	\$11.39
Final selling price per unit:	\$11.39
Proportion of emission units purchased by emitters:	Not disclosed*
Price statistics:	
Maximum price:	\$20.00
Minimum price:	\$11.39
Average price:	\$12.64
Median price:	\$11.80
Median emission unit price:	\$12.00
Hirschman-Herfindahl Index:	2147

#### Auction of future vintage (2017) emission units

Total number of 2017 vintage emission units available for sale:	1 527 000
Total number of 2017 vintage emission units sold:	1 302 000
Ratio of total acceptable bids (in number of emission units) divided by total number of 2017 vintage emission units available for sale:	85.27%
Minimum selling price:	\$11.39
Final selling price per unit:	\$11.39
Proportion of emission units purchased by emitters:	Not disclosed*
Price statistics:	
Maximum price:	\$20.00
Minimum price:	\$11.39
Average price:	\$12.81
Median price:	\$11.94
Median emission unit price:	\$11.56
Hirschman-Herfindahl Index:	2260

<sup>2</sup> An accepted bid is an offer that, if accepted as such, does not violate the purchase limit, possession limit, or financial guarantee of the bidder.

\* Given the limited number of bidders, this statistic cannot be disclosed, in order to preserve the confidentiality of certain information.

## Summary of submitted bids<sup>3</sup>

### Auction of present vintage (2014) emission units

Total number of 2014 vintage emission units available for sale:	1 049 111
Total number of 2014 vintage emission units sold:	1 049 111
Ratio of total bids (in number of emission units) divided by total number of 2014 vintage emission units available for sale:	102.00%
Minimum selling price:	\$11.39
Final selling price per unit:	\$11.39
Proportion of emission units purchased by emitters:	Not disclosed*
Price statistics:	
Maximum price:	\$20.00
Minimum price:	\$11.39
Average price:	\$12.64
Median price:	\$11.80
Median emission unit price:	\$12.00

### Auction of future vintage (2017) emission units

Total number of 2017 vintage emission units available for sale:	1 527 000
Total number of 2017 vintage emission units sold:	1 302 000
Ratio of total bids (in number of emission units) divided by total number of 2017 vintage emission units available for sale:	85.27%
Minimum selling price:	\$11.39
Final selling price per unit:	\$11.39
Proportion of emission units purchased by emitters:	Not disclosed*
Price statistics:	
Maximum price:	\$20.00
Minimum price:	\$11.39
Average price:	\$12.81
Median price:	\$11.94
Median emission unit price:	\$11.56

<sup>3</sup> A submitted bid is an offer proposed as such by a bidder without taking into account the purchase limit, the possession limit and the financial guarantee of the bidder.

\* Given the limited number of bidders, this statistic cannot be disclosed, in order to preserve the confidentiality of certain information.

## Participants registered as qualified bidders for the auction of present vintage (2014) and future vintage (2017) emission units

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A qualified bidder is an emitter or participant that is registered for the auction, has submitted an acceptable financial guarantee, and whose registration application has been approved by the MDDELCC.

ALCOA LTÉE

CGC INC.

COMPAGNIE DE GESTION D'ALCOA-LAURALCO

ÉNERGIE VALERO INC.

ETHANOL GREENFIELD QUÉBEC INC.

HYDRO-QUÉBEC

KRONOS CANADA, INC.

LANTIC INC.

PIERRE OLIVIER PINEAU

PRODUITS SUNCOR ÉNERGIE S.E.N.C.

SHELL ENERGY NORTH AMERICA (CANADA) INC.

SOCIÉTÉ EN COMMANDITE GAZ MÉTRO

SOCIÉTÉ EN COMMANDITE REVENU NORANDA

TRANSCANADA ENERGY LTD.

TRANSCANADA PIPELINES LIMITED

## Explanatory notes: Summary of statistics on accepted bids at the auction of present vintage (2014) emission units

The statistics on accepted bids at the auction of future vintage (2017) emission units are calculated in the same manner as the statistics regarding present vintage (2014) emission units.

Total number of 2014 vintage emission units up for sale	Total number of 2014 vintage units, in metric tons, put up for sale by the MDDELCC
Total number of 2014 vintage emission units sold	Total number of 2014 vintage emission units, in metric tons, purchased at the auction
Ratio of total acceptable bids (in number of emission units) divided by total number of 2014 vintage emission units up for sale	Total of acceptable bids submitted (in number of 2014 vintage emission units, regardless of bid prices) divided by the total number of 2014 vintage emission units up for sale
Minimum selling price	Acceptable minimum price, in dollars per metric ton, for a bid on a 2014 vintage emission unit made at the auction
Final selling price per unit	Selling price of a 2014 vintage emission unit resulting from the auction, in dollars per metric ton
Proportion of emission units purchased by issuers	Total number of 2014 vintage emission units purchased by issuers divided by the total number of 2014 vintage units sold
Price bid statistics	Statistics calculated based on acceptable bids for 2014 vintage units (regardless of the bid prices)
Maximum price	The highest bid price
Minimum price	The lowest bid price
Average price	Price calculated as being the sum of all bid prices multiplied by the quantity offered for each accepted bid, divided by the sum of the number of units of all accepted bids
Median price	Price per metric ton calculated so that 50% of the bids fall above and 50% fall below this price
Median emission unit price	Price per metric ton calculated so that 50% of the quantity of emission units for which there is a bid fall above and 50% fall below this price
Hirschman-Herfindahl Index (HHI)	The HHI is a measure of the concentration of emission units purchased relative to the total sale of 2014 vintage emission units. The percentages of emission units purchased by each bidder is squared, and then summed across all winning bidders. The HHI limit is 10,000, which is reached when 100% of the emission units are purchased by a single bidder ( $100 \times 100 = 10,000$ )