California Cap-and-Trade Program, and Québec Cap-and-Trade System February 2019 Joint Auction #18

Summary Results Report

Background

The California Air Resources Board (CARB) and Québec's ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC)¹ held a joint auction of greenhouse gas (GHG) allowances on February 20, 2019. The auction included a Current Auction of 2016, 2017, and 2019 vintage allowances and an Advance Auction of 2022 vintage allowances. The information provided in this report is a balance between the need for program transparency and protection of information about individual qualified bidders' market positions.

Prior to the certification of the auction, CARB and MELCC staff and the independent Market Monitor carefully evaluated the bids and determined that the auction process and procedures complied with the requirements of the California and Québec Cap-and-Trade Regulations (the Regulations). As provided below, the Market Monitor made the following determination:

The Market Monitor found that the auction was cleared consistent with the auction clearing rules in the Regulations and appropriate economic logic. The Market Monitor confirmed the clearing price and clearing quantities by qualified bidder for the Current Auction of 2016/2017/2019 vintage allowances and for the Advance Auction of 2022 vintage allowances. The auction algorithm correctly applied requirements of the Regulations covering the bid guarantee. The Market Monitor did not observe any breaches of security or communication protocols.

The Market Monitor recommends that CARB and MELCC approve the February Auction results.

Auction proceeds figures are not shown in this report because of the exchange rate process for determining final auction proceeds in a joint auction. Winning bids are submitted in one of two currencies – U.S. dollars (USD) or Canadian dollars (CAD). After receiving payment from the winning bidders, and using instructions from the linked jurisdictions (California and Québec), the Financial Services Administrator will exchange some amount of currency at then-prevailing market rates prior to transferring the auction proceeds to the jurisdictions.

The Financial Services Administrator will distribute auction proceeds to the jurisdictions after all qualified bidder payments are received. The jurisdictions will receive auction proceeds by March 19, 2019. As provided in the California Cap-and-Trade Regulation,

¹ Ministry of Environment and the Fight against Climate Change.







sellers who consigned allowances in this auction will be paid the auction settlement price in USD for every consigned allowance sold. Information regarding jurisdiction-specific auction proceeds will be published after the auction is final.

California must receive auction proceeds only in USD. Québec must receive auction proceeds only in CAD. Thus, the total amount of auction proceeds received by the jurisdictions from the sale of allowances may be higher or lower than the auction settlement price multiplied by allowances sold depending on the prevailing exchange rates in effect at the time of currency exchange prior to the distribution of auction proceeds. Each jurisdiction will separately post information on March 19, 2019, providing the final amount of proceeds transferred.

Auction 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 after the list of qualified bidders for descriptions of all summary information.

Table 1: Auction Results for February 2019 Joint Auction #18

| | Current | | | Current | Advance |
|---|----------------|-------------|------------|------------|-----------|
| | 2016 | 2017 | 2019 | | |
| | Vintage | Vintage | Vintage | Vintage | Vintage |
| Total Allowances Available for | | | | | |
| Sale | 1,914,995 | 14,254,485 | 64,677,924 | 80,847,404 | 9,038,000 |
| CA Entity Consignment | - | - | 22,065,941 | 22,065,941 | - |
| CARB | - | 14,254,485 | 34,952,002 | 49,206,487 | 7,687,500 |
| MELCC | 1,914,995 | - | 7,659,981 | 9,574,976 | 1,350,500 |
| | | | | | |
| Total Allowances Sold at | | | | | |
| Auction | 1,914,995 | 14,254,485 | 64,677,924 | 80,847,404 | 5,983,000 |
| CA Entity Consignment | - | - | 22,065,941 | 22,065,941 | - |
| CARB | - | 14,254,485 | 34,952,002 | 49,206,487 | 5,088,992 |
| MELCC | 1,914,995 | - | 7,659,981 | 9,574,976 | 894,008 |
| Total Qualified Bids Divided by Total | Allowances Ava | ailable for | | | |
| Sale | | | | 1.21 | 0.66 |
| Proportion of Allowances Purchased by Compliance Entities | | | | 93.0% | 81.6% |
| Herfindahl-Hirschman Index | | | 563 | 2312 | |







Qualified Bid Summary Statistics

All Qualified Bid Summary Statistics are determined in USD including all bids submitted in USD and CAD. The CAD equivalent of the USD Qualified Bid Summary Statistics is based on the Auction Exchange Rate. USD statistics are converted into CAD in whole cents to be able to compare statistics on a common basis.

Table 2: Qualified Bid Summary Statistics for February 2019 Joint Auction #18

| | Current 2016/ Vinta | | Advance 2022 Vintage | |
|------------------------------------|------------------------|---------|----------------------|---------|
| | USD | CAD | USD | CAD |
| Auction Reserve Price | \$15.62 | \$20.68 | \$15.62 | \$20.68 |
| Settlement Price | \$15.73 | \$20.82 | \$15.62 | \$20.68 |
| Maximum Price | \$58.35 | \$77.24 | \$17.11 | \$22.65 |
| Minimum Price | \$15.62 | \$20.68 | \$15.62 | \$20.68 |
| Mean Price | \$16.21 | \$21.46 | \$15.88 | \$21.02 |
| Median Price | \$15.86 | \$21.00 | \$15.71 | \$20.80 |
| Median Allowance Price | \$15.84 | \$20.97 | \$15.76 | \$20.86 |
| Auction Exchange Rate (USD to CAD) | | | | 1.3238 |







List of qualified bidders for the February 2019 Joint Auction #18

A qualified bidder is an entity that completed an auction application, submitted a bid guarantee² that was accepted by the Financial Services Administrator, and was approved by CARB or MELCC to participate in the auction. Qualified bidders may or may not have participated in the auction.

| CITSS Entity ID | Entity Legal Name |
|-----------------|--|
| CA1185 | Aera Energy, LLC |
| CA1019 | Air Liquide Large Industries U.S. LP |
| CA1561 | AltaGas Power Holdings (U.S.), Inc. |
| QC1724 | Bell-Gaz Itée |
| CA2759 | Bellus Ventures II, LP |
| CA1180 | BNSF Railway Company |
| CA1913 | BP Products North America, Inc. |
| CA2743 | California Department of Water Resources |
| CA1108 | California Resources Elk Hills, LLC |
| CA1119 | Calpine Energy Services, LP |
| CA1201 | CalPortland Company |
| QC2580 | Chauffage Benwell Fuels Ltd. |
| CA1075 | Chevron U.S.A., Inc. |
| CA1037 | City of Anaheim, Public Utilities Department |
| CA1732 | City of Long Beach, Gas and Oil Department |
| CA1166 | City of Vernon, Vernon Public Utilities |
| CA1068 | ConAgra Foods Packaged Foods, LLC |
| QC1901 | Coopérative de solidarité Carbone |
| CA2050 | CP Energy Marketing (US), Inc. |
| CA1417 | Direct Energy Business, LLC |
| CA1091 | DTE Energy Trading, Inc. |
| CA2809 | ECP Opportunity Fund II LLC |
| QC2448 | Elbow River Marketing Ltd. |
| QC2159 | Énergie LGP Inc. |
| QC1384 | Énergie Valero Inc. |
| QC1515 | Entreprise Indorama PTA Montréal S.E.C. |
| CA1260 | Flyers Energy, LLC |
| QC1750 | Gazifère Inc. |
| QC1764 | Gestion Énergie Québec Inc. |
| QC1458 | Glencore Canada Corporation |

² The term "bid guarantee" refers to "bid guarantee" as described in the California Regulation and "financial guarantee" as defined in the Québec Regulation.







| CITSS Entity ID | Entity Legal Name |
|-----------------|--|
| QC2118 | Hamel Propane Inc. |
| QC1359 | Hydro-Québec |
| CA1807 | Idemitsu Apollo |
| CA1727 | Jaco Oil Company |
| CA1141 | Kern Oil & Refining Co. |
| QC2501 | Le Groupe Harnois Inc |
| QC1730 | Les Produits Pétroliers Norcan S.E.N.C |
| CA1233 | Liberty Utilities (CalPeco Electric), LLC |
| CA1830 | Luminus Energy Partners, LLC |
| QC2095 | MacEwen Petroleum Inc |
| CA1104 | Macquarie Energy, LLC |
| CA2111 | Mag Energy Solutions, Inc. |
| CA2645 | Mercuria Energy America, Inc. |
| CA1107 | Midway Sunset Cogeneration Company |
| CA1239 | Morgan Stanley Capital Group, Inc. |
| CA1302 | Naftex Operating Company |
| CA1672 | NextEra Energy Marketing, LLC |
| QC2107 | NGL Supply Co. Ltd. |
| CA1191 | Northern California Power Agency |
| CA1138 | NRG Power Marketing, LLC |
| CA1034 | PacifiCorp |
| CA2106 | PBF Energy Western Region, LLC |
| CA1410 | Petro Diamond, Inc. |
| QC2673 | Petro-Francis Inc |
| CA1279 | Phillips 66 Company |
| CA1321 | Pittsburg Power Company |
| CA1595 | Pixley Cogen Partners, LLC |
| CA1304 | Portland General Electric Company |
| CA1505 | Powerex Corporation |
| QC1474 | Produits Suncor Énergie S.E.N.C. |
| CA1834 | River City Petroleum |
| CA1774 | Robinson Oil Supply & Transport, Inc. |
| CA1102 | Royal Bank of Canada |
| CA1163 | Sacramento Municipal Utility District (SMUD) |
| CA1085 | San Diego Gas & Electric Company |
| CA1760 | San Diego Gas and Electric Company |
| CA1011 | San Joaquin Refining Company, Inc. |
| QC2744 | Sanimax ACI Inc. |







| CITSS Entity ID | Entity Legal Name |
|-----------------|---|
| CA2175 | Sempra Gas & Power Marketing, LLC |
| CA1366 | Seneca Resources Corporation |
| CA1251 | Shell Energy North America (US), LP |
| CA1757 | Shiralian Enterprises |
| CA1031 | Silicon Valley Power (SVP), City of Santa Clara |
| CA1029 | Southern California Edison Company |
| CA1170 | Southern California Gas Company |
| | Southern Counties Oil Company, a California Limited |
| CA1800 | Partnership |
| CA1674 | Southwest Gas Corporation |
| CA1921 | Statkraft US, LLC |
| QC1873 | Superior Gas Liquids Partnership |
| CA1165 | Tesoro Refining & Marketing Company, LLC |
| CA2100 | Tricor Refining, LLC |
| CA1635 | Valero Marketing and Supply Company |
| CA1135 | Vitol, Inc. |
| QC2174 | W.O. Stinson & Son Ltd |
| QC2066 | W.R. Grace Canada Corp. |
| CA2056 | Wild Goose Storage, LLC |







Explanatory Notes: Qualified Bid Summary Statistics

Total Allowances Available for Sale: Total allowances available, by vintage, for

> purchase in the Current Auction, including allowances consigned by consigning entities and allowances offered for sale by the State of California and the Province of

Québec.

Total Allowances Sold at Auction: Total allowances purchased, by vintage, in

the Current Auction in metric tons.

Total Qualified Bids Divided by Total

Allowances Available for Sale:

Total number of allowances (all vintages) 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

Compliance Entities:

The total number of Current Auction allowances (by vintage) purchased in the **Current Auction by Compliance Entities** divided by the total number of Current Auction allowances sold in the Current Auction. A Compliance Entity is a Covered Entity or Opt-in Covered Entity as defined in California's Cap-and-Trade Regulation or an Emitter as defined in Québec's Cap-and-

Trade Regulation.

The HHI is a measure of the concentration Herfindahl–Hirschman Index (HHI):

> of allowances purchased by winning bidders relative to the total sale of Current Auction allowances (regardless of vintage)

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., 100x100=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 USD and CAD.

Qualified Bids: The bids that remain after a qualified

bidder's submitted bids have been

evaluated and reduced to meet all bidding

limitations.

Auction Reserve Price: The minimum acceptable auction bid price

for Current Auction allowances shown in both USD and CAD per metric ton.

Settlement Price: The Current Auction allowance price that

resulted from the auction, in USD and CAD

per metric ton.

Maximum Price: Highest qualified bid price.

Minimum Price: Lowest qualified bid price.

Mean Price: Average qualified bid price calculated as

the sum of the qualified bid prices times the bid allowances at each qualified bid price divided by the sum of all qualified bid

allowances.

Median Price: The price per metric ton calculated so that

50% of the qualified bid prices fall above and 50% fall below the median bid price.

Median Allowance Price: The price per metric ton calculated so that

50% of the qualified bid allowances fall above and 50% fall below the median

allowance price.

Auction Exchange Rate (USD to CAD FX

Rate):

The exchange rate in effect for the joint auction that is set the business day prior to the joint auction as the most recently available daily average exchange rate for USD and CAD as published by the Bank of Canada the day before the joint auction.







Advance Auction

The statistics presented in the report for the Advance Auction are computed in the same manner as the statistics computed for the Current Auction. No allowances are consigned by consigning entities to the Advance Auction.





