California Cap-and-Trade Program and Québec Cap-and-Trade System May 2022 Joint Auction #31

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 May 18, 2022. The auction included a Current Auction of 2016, 2020, and 2022 vintage allowances and an Advance Auction of 2025 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, 2020, and 2022 vintage allowances and for the Advance Auction of 2025 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 May 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

¹ Ministry of the Environment and the Fight against Climate Change







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 June 16, 2022. As provided in the California Cap-and-Trade Regulation, 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 June 16, 2022, providing the final amount of proceeds transferred.

Auction Results

The first three tables below provide key data and information on the results of the auction. The fourth 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: Allowances Offered for Sale in the May 2022 Joint Auction #31

| Description of Allowances | Current Auction Vintage 2016 | Current Auction Vintage 2020 | Current Auction Vintage 2022 | Current Auction Vintage Total | Advance Auction Vintage 2025 |
|---|---------------------------------------|---------------------------------------|---------------------------------------|--|---------------------------------------|
| Allowances offered by CA Entity Consignment | - | - | 20,508,139 | 20,508,139 | - |
| Allowances offered by CARB | - | - | 29,417,528 | 29,417,528 | 6,685,000 |
| Allowances offered by MELCC | 71 | 1,278,608 | 7,126,954 | 8,405,633 | 1,257,750 |
| Total Allowances Offered for Sale | 71 | 1,278,608 | 57,052,621 | 58,331,300 | 7,942,750 |







Table 2: Allowances Sold in the May 2022 Joint Auction #31

| Description of Allowances | Current Auction Vintage 2016 | Current Auction Vintage 2020 | Current Auction Vintage 2022 | Current Auction Vintage Total | Advance Auction Vintage 2025 |
|---|---------------------------------------|---------------------------------------|---------------------------------------|--|---------------------------------------|
| Allowances sold for CA Entity Consignment | - | - | 20,508,139 | 20,508,139 | - |
| Allowances sold for CARB | - | - | 29,417,528 | 29,417,528 | 6,685,000 |
| Allowances sold for MELCC | 71 | 1,278,608 | 7,126,954 | 8,405,633 | 1,257,750 |
| Total Allowances Sold at Auction | 71 | 1,278,608 | 57,052,621 | 58,331,300 | 7,942,750 |

Table 3: Auction Data for May 2022 Joint Auction #31

| Auction Data | Current Auction | Advance Auction |
|---|--------------------|--------------------|
| Total Qualified Bids Divided by Total Allowances Available for Sale | 1.62 | 2.40 |
| Proportion of Allowances Purchased by Compliance Entities | 87.7% | 85.7 |
| Herfindahl-Hirschman Index | 615 | 1622 |







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. The Auction Exchange Rate for this auction was 1.2834 CAD to one USD.

Table 4: Qualified Bid Summary Statistics for May 2022 Joint Auction #31

| Auction Statistics | Current Auction USD | Current Auction CAD | Advance Auction USD | Advance Auction CAD |
|------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Auction Reserve Price | \$19.70 | \$25.28 | \$19.70 | \$25.28 |
| Settlement Price | \$30.85 | \$39.59 | \$28.13 | \$36.10 |
| Maximum Price | \$60.06 | \$77.08 | \$40.01 | \$51.35 |
| Minimum Price | \$19.70 | \$25.28 | \$19.70 | \$25.28 |
| Mean Price | \$32.96 | \$42.30 | \$26.58 | \$34.11 |
| Median Price | \$29.20 | \$37.48 | \$23.99 | \$30.79 |
| Median Allowance Price | \$31.66 | \$40.63 | \$27.65 | \$35.49 |







List of qualified bidders for the May 2022 Joint Auction #31

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 |
|-----------------|--|
| CA3185 | AC Carbon, LP |
| CA1185 | Aera Energy, LLC |
| CA1019 | Air Liquide Large Industries U.S., LP |
| CA1561 | AltaGas Power Holdings (U.S.), Inc. |
| CA3249 | Atreaus Family, LLC |
| CA2919 | BC Carbon Portfolio, LLC |
| QC1724 | Bell-Gaz Itée |
| CA3036 | Blackstone Alternative Multi-Strategy Sub Fund IV, LLC |
| CA3054 | BLAM Carbon Fund, LLC |
| CA3063 | BNP Paribas US Wholesale Holdings, Corporation |
| QC2959 | Bombardier inc. |
| CA1913 | BP Products North America, Inc. |
| CA3065 | Braeswood Carbon Partners, LP |
| QC2193 | Bridgestone Canada Inc. |
| CA2743 | California Department of Water Resources |
| CA1119 | Calpine Energy Services, LP |
| CA1201 | CalPortland Company |
| CA3214 | Carbon Point Partners, LP |
| QC1525 | CEPSA CHIMIE BÉCANCOUR INC. |
| QC1491 | CGC Inc. |
| CA1075 | Chevron U.S.A., Inc. |
| CA1112 | Citigroup Energy, Inc. |
| CA1037 | City of Anaheim, Public Utilities Department |
| CA1732 | City of Long Beach, Gas and Oil Department |
| CA1038 | City of Palo Alto |
| CA1016 | City of Riverside Public Utilities |
| CA1344 | City of Shasta Lake |
| CA1166 | City of Vernon, Vernon Public Utilities |

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 |
|-----------------|---|
| CA3288 | Clear Power, LLC |
| CA1408 | ClimeCo Corporation |
| QC1524 | Compagnie Selenis Canada |
| CA2050 | CP Energy Marketing (US), Inc. |
| CA3139 | CRBN California Carbon Fund, LP |
| CA2063 | DRW Commodities, LLC |
| CA1091 | DTE Energy Trading, Inc. |
| QC2448 | Elbow River Marketing Ltd. |
| CA1259 | Element Markets, LLC |
| QC1384 | Énergie Valero Inc. |
| QC2586 | ÉNERGIES SONIC INC. |
| QC1502 | Énergir, s.e.c. |
| CA1110 | Exelon Generation Company, LLC |
| CA1260 | Flyers Energy, LLC |
| QC2711 | Formica Canada Inc |
| CA1081 | Foster Poultry Farms |
| QC1750 | Gazifère Inc. |
| QC1764 | Gestion Énergie Québec Inc. |
| CA2916 | Green Trading Capital, LP |
| QC2118 | Hamel Propane Inc. |
| QC2501 | Harnois Énergies Inc. |
| QC1359 | Hydro-Québec |
| CA1807 | Idemitsu Apollo |
| QC2789 | Ifastgroupe 2004 L.P. |
| CA1293 | J. Aron & Company, LLC |
| CA1727 | Jaco Oil Company |
| CA2932 | Kcarbon Holdings, LLC |
| CA1141 | Kern Oil & Refining Company |
| CA3208 | Klima Holdings I, LLC |
| CA3046 | LCP Carbon, LLC |
| QC1770 | Les Pétroles Irving Commercial s.e.n.c |
| CA1233 | Liberty Utilities (CalPeco Electric), LLC |
| CA3121 | Liminality Partners, LP |
| CA1111 | Los Angeles Department of Water & Power |
| CA2553 | Luminus EC, LP |
| CA1830 | Luminus Energy Partners, LLC |
| CA1104 | Macquarie Energy, LLC |
| CA2645 | Mercuria Energy America, LLC |







| CITSS Entity ID | Entity Legal Name |
|-----------------|--|
| CA2887 | Merrill Lynch Commodities, Inc. |
| CA1261 | Midstream Energy Partners (USA), LLC |
| CA1239 | Morgan Stanley Capital Group, Inc. |
| CA2232 | Musket Corporation |
| CA3190 | Mystic Harbor Partners, LLC |
| CA1302 | Naftex Operating Company |
| QC2761 | Nexans Canada inc. |
| CA1672 | NextEra Energy Marketing, LLC |
| QC2107 | NGL Supply Co. Ltd. |
| CA1191 | Northern California Power Agency |
| CA3237 | Northern Trace Capital, LLC |
| QC3061 | Nutrinor Coopérative |
| CA1301 | Olam West Coast, Inc. |
| CA2905 | PA Carbon I, LLC |
| CA1046 | Pacific Gas and Electric Company |
| CA2046 | Pacific Gas and Electric Company |
| CA3165 | Pacific Summit Energy, LLC |
| CA1034 | PacifiCorp |
| CA2106 | PBF Energy Western Region, LLC |
| QC2673 | Petro-Francis Inc |
| CA1410 | Petro Diamond, Inc. |
| QC1706 | Pétrolière Impériale |
| CA1279 | Phillips 66 Company |
| CA1595 | Pixley Cogen Partners, LLC |
| QC1713 | Plant-E Corp |
| CA1003 | Plumas-Sierra Rural Electric Cooperative |
| CA1505 | Powerex Corporation |
| QC1474 | Produits Suncor Énergie S.E.N.C. |
| CA3049 | Radicle (US), Inc. |
| CA1834 | River City Petroleum |
| CA1774 | Robinson Oil Supply & Transport, Inc. |
| CA1102 | Royal Bank of Canada |
| CA1163 | Sacramento Municipal Utility District (SMUD) |
| CA1760 | San Diego Gas and Electric Company |
| QC2744 | Sanimax ACI Inc. |
| CA3207 | SARHEN CCA, LP |
| CA3238 | Sarkis Environmental Fund, LLC |
| CA2175 | Sempra Gas & Power Marketing, LLC |







| CITSS Entity ID | Entity Legal Name |
|-----------------|---|
| CA1251 | Shell Energy North America (US), LP |
| CA1757 | Shiralian Enterprises |
| CA1031 | Silicon Valley Power (SVP), City of Santa Clara |
| QC2781 | Sivaco Wire Group 2004 L.P. |
| CA3201 | Skyview Finance Company 2, LLC |
| CA1029 | Southern California Edison Company |
| CA1170 | Southern California Gas Company |
| CA1674 | Southwest Gas Corporation |
| CA3280 | SRV Associates I, LLC |
| CA1921 | Statkraft US, LLC |
| QC1873 | Superior Gas Liquids Partnership |
| CA1172 | Surprise Valley Electrification Corporation |
| CA1165 | Tesoro Refining & Marketing Company, LLC |
| CA3072 | Trafigura Trading, LLC |
| QC1467 | TransCanada Energy Ltd. |
| QC1377 | TransCanada PipeLines Limited |
| CA1216 | Turlock Irrigation District |
| CA1346 | United States Gypsum Company |
| CA1635 | Valero Marketing and Supply Company |
| CA1135 | Vitol, Inc. |
| QC2174 | W.O. Stinson & Son Ltd |







Explanatory Notes: Qualified Bid Summary Statistics

General Term Explanation

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-









General Term Explanation

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 (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.







General Term Explanation

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.





