

**California Cap-and-Trade Program and
Québec Cap-and-Trade System
November 2016 Joint Auction #9**

Summary Results Report

Background

The California Air Resources Board (ARB) and Québec's ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC)¹ held the ninth joint auction of greenhouse gas (GHG) allowances on November 15, 2016. The auction included a Current Auction of 2015/2016 vintage allowances and an Advance Auction of 2019 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, ARB and MDDELCC staff and the 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. 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 participant for the current vintage auction for 2015/2016 vintage allowances and for the advance auction for 2019 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 recommends that ARB and MDDELCC approve the November 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 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.

Proceeds to the jurisdictions are paid after all bidder payments are received and will occur by December 14, 2016. 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.

¹ Ministry of Sustainable Development, Environment and the Fight against Climate Change.

California must receive auction proceeds only in USD and Québec must receive auction proceeds only in CAD. Thus, the total amount of auction proceeds received by California and by Québec from the sale of state- and province-owned allowances may vary (upwards or downwards) depending on the prevailing exchange rates in effect at the time of distribution of auction proceeds. Each jurisdiction will issue a Post Joint Auction Public Proceeds Report on December 14, 2016 providing the final amount of proceeds transferred.

**California Cap-and-Trade Program and
Québec Cap-and-Trade System
November 2016 Joint Auction #9**

The California Air Resources Board (ARB) and Québec's ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC) held the ninth joint auction of GHG allowances on November 15, 2016. The auction included a Current Auction of 2015/2016 vintage allowances and an Advance Auction of 2019 vintage allowances. 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.

Auction Results

	Current		Current	Advance
	2015 Vintage	2016 Vintage	Vintage Total	2019 Vintage
Total Allowances Available for Sale			87,069,495	10,078,750
CA Entity Consignment		40,254,802	40,254,802	
ARB	827,375	35,870,364	36,697,739	8,657,500
MDDELCC		10,116,954	10,116,954	1,421,250
Total Allowances Sold at Auction			76,960,000	1,020,000
CA Entity Consignment		40,254,802	40,254,802	
ARB	827,375	26,935,532	27,762,907	876,165
MDDELCC		8,942,291	8,942,291	143,835
Total Qualified Bids Divided by Total Allowances Available for Sale			0.88	0.10
Proportion of Allowances Purchased by Compliance Entities			89.9%	60.8%
Herfindahl-Hirschman Index	600	600		2628

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.

	2015/2016 Vintage		Advance 2019 Vintage	
	USD	CAD	USD	CAD
Auction Reserve Price	\$12.73	\$17.29	\$12.73	\$17.29
Settlement Price	\$12.73	\$17.29	\$12.73	\$17.29
Maximum Price	\$47.55	\$64.58	\$19.17	\$26.04
Minimum Price	\$12.73	\$17.29	\$12.73	\$17.29
Mean Price	\$13.64	\$18.52	\$13.16	\$17.87
Median Price	\$12.79	\$17.37	\$12.80	\$17.38
Median Allowance Price	\$12.98	\$17.63	\$12.74	\$17.30
Auction Exchange Rate (USD to CAD)				1.3582

List of Qualified Bidders for the Current Auction of 2015/2016 Vintage Allowances and the Advance Auction of 2019 Vintage Allowances

A Qualified Bidder is an entity that completed an auction application or confirmed an intent to bid for the auction, submitted an acceptable bid guarantee, and was approved by ARB or MDDELCC to participate in the auction.

CITSS General Account Number	Entity Legal Name
CA1185	Aera Energy, LLC
QC2096	ArcelorMittal Produits longs Canada s.e.n.c.
QC1724	Bell-Gaz Itée
CA1913	BP Products North America, Inc.
CA1119	Calpine Energy Services, L.P.
CA1075	Chevron U.S.A., Inc.
CA1037	City of Anaheim, Public Utilities Department
CA1105	City of Banning
CA1732	City of Long Beach, Gas and Oil Department
CA1443	City of Los Angeles, Department of Airports
CA1166	City of Vernon, Vernon Gas & Electric
QC2137	Clearblue Ltd.
CA1408	ClimeCo Corporation
QC1400	COLACEM CANADA
CA1261	Crestwood West Coast, LLC
CA1417	Direct Energy Business, LLC
CA2063	DRW Commodities, LLC
QC1384	Énergie Valero, Inc.
QC1515	Entreprise Indorama PTA Montréal S.E.C.
CA2085	Escondido Energy Center, LLC
CA1110	Exelon Generation Company, LLC
CA1260	Flyers Energy, LLC
QC1750	Gazifère, Inc.
QC1764	Gestion Énergie Québec, Inc.
QC1374	Graymont (QC), Inc.
CA1917	Greenleaf Energy Unit 1, LLC
CA1918	Greenleaf Energy Unit 2, LLC
QC2118	Hamel Propane Inc.
QC1359	Hydro-Québec
CA1807	Idemitsu Apollo
CA1665	IPC (USA), Inc.
CA1727	Jaco Oil Company
CA1141	Kern Oil & Refining Co.

CITSS General Account Number	Entity Legal Name
QC1901	La Coop Carbone
CA1198	Lassen Municipal Utility District
QC1730	Les Produits Pétroliers Norcan S.E.N.C
CA1233	Liberty Utilities (CalPeco Electric), LLC
CA1111	Los Angeles Department of Water & Power
CA1830	Luminus Energy Partners, LLC
CA1104	Macquarie Energy, LLC
CA2111	MAG ENERGY SOLUTIONS INC.
CA1239	Morgan Stanley Capital Group, Inc.
CA1106	Noble Americas Gas & Power Corp.
CA1138	NRG Power Marketing, LLC
CA2046	Pacific Gas and Electric Company
CA1046	Pacific Gas and Electric Company
CA1034	PacifiCorp
CA2106	PBF Energy Western Region, LLC
CA1279	Phillips 66 Company
CA1595	Pixley Cogen Partners, LLC
CA1003	Plumas-Sierra Rural Electric Cooperative
CA1304	Portland General Electric Company
CA1505	Powerex Corp.
QC1474	Produits Suncor Énergie S.E.N.C.
QC1731	Propane Québec Inc.
QC1960	Révolution VSC LP
CA1834	River City Petroleum
CA1102	Royal Bank of Canada
CA1163	Sacramento Municipal Utility District (SMUD)
CA1085	San Diego Gas & Electric Company
CA1015	Sempra Generation
CA1366	Seneca Resources Corporation
CA1757	Shiralian Enterprises
CA1054	Signal Hill Petroleum, Inc.
CA1031	Silicon Valley Power (SVP), City of Santa Clara
CA1029	Southern California Edison Company
CA1170	Southern California Gas Company
CA1921	Statkraft US, LLC
QC1873	Superior Gas Liquids Partnership
QC1486	TEMBEC
CA1165	Tesoro Refining & Marketing Company, LLC
CA1888	The Soco Group, Inc.

CITSS General Account Number	Entity Legal Name
QC1377	TransCanada PipeLines Limited
CA1079	Truckee Donner Public Utility District
CA1216	Turlock Irrigation District
CA1346	United States Gypsum Company
CA1274	USS-POSCO Industries
QC1613	Viterra Inc.
CA1135	Vitol, Inc.
QC2174	W.O. Stinson & Son Ltd.
CA1229	Walnut Creek Energy, LLC

Explanatory Notes: Qualified Bid Summary Statistics Current Auction of 2015/2016 Vintage Allowances

Total Allowances Available for Sale:	Total allowances available, by vintage, for purchase in the Current Auction in metric tons, including allowances consigned by consigning entities and allowances sold by the State of California and the Province of Québec.
Total Allowances Sold at Auction:	Total allowances, by vintage, purchased 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 the Cap-and-Trade Regulation or an Emitter as defined in Québec's Cap-and-Trade Regulation.
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., $100 \times 100 = 10,000$).

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 USD and CAD.
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
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):	The most recently available noon daily buying rate for USD and CAD as published by the Bank of Canada the day before the auction.

Advance Auction of 2019 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. No allowances are consigned to the Advance Auction.