



Portland General Electric Company
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portlandgeneral.com

June 8, 2020

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Filing Center
201 High Street, SE
P.O. Box 1088
Salem, OR 97308-1088

RE: UE 377 – PGE Minimum Filing Requirements

Commission Order No. 08-505 in Docket No. UE 198 adopted a list of Minimum Filing Requirements (MFRs) for Net Variable Power Cost (NVPC) proceedings. The MFRs define the documents PGE will provide in conjunction with the initial and update filings in its Annual Power Cost Update Tariff and general rate case proceedings.

Attached for filing, PGE is submitting an intermediary MONET Update providing MFR details regarding the MONET modeling of the Douglas PPA and expected impact to the 2021 Net Variable Power Cost forecast. Please note that the intermediary MONET update reflects February 28, 2020 forward price curves which are subject to change in the July 15, 2020 MONET update.

Attachment 1 is one (1) ZIP file containing the confidential MFRs. This information is too large to send via email and will be sent to the filing center via FedEx. Attachment 2 is one (1) ZIP file containing the non-confidential MFRs. Attachment 1 contains Protected Information Subject to Protective Order No. 20-100.

If you have any questions, please contact Stefan Cristea at (503) 464-8033. Please direct all formal correspondence and requests to the following e-mail address: pge.opuc.filings@pgn.com.

Sincerely,

/s/ Jaki Ferchland
Jaki Ferchland
Manager, Revenue Requirement

Enclosure

California Cap-and-Trade Program, and Québec Cap-and-Trade System August 2019 Joint Auction #20

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 August 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 August 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 September 17, 2019. 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 September 17, 2019, providing the final amount of proceeds transferred.

Auction Results

The first and the second tables below provides key data and information on the results of the auction. The third 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 August 2019 Joint Auction #20

Description of Allowances	Current Auction Vintage 2016	Current Auction Vintage 2017	Current Auction Vintage 2019	Current Auction Vintage Total	Advance Auction Vintage 2022
Allowances offered by CA Entity Consignment	-	60	21,762,477	21,762,537	-
Allowances offered by CARB	-	-	34,952,002	34,952,002	7,687,500
Allowances offered by MELCC	1,914,995	-	7,659,981	9,574,976	1,350,500
Total Allowances Offered for Sale	1,914,995	60	64,374,460	66,289,515	9,038,000



Description of Allowances	Current Auction Vintage 2016	Current Auction Vintage 2017	Current Auction Vintage 2019	Current Auction Vintage Total	Advance Auction Vintage 2022
Allowances sold for CA Entity Consignment	-	60	21,762,477	21,762,537	-
Allowances sold for CARB	-	-	34,952,002	34,952,002	7,687,500
Allowances sold for MELCC	1,914,995	-	7,659,981	9,574,976	1,350,500
Total Allowances Sold at Auction	1,914,995	60	64,374,460	66,289,515	9,038,000

Table 2: Auction Data for August 2019 Joint Auction #20

Auction Data	Current Auction	Advance Auction
Total Qualified Bids Divided by Total Allowances Available for Sale	1.49	1.07
Proportion of Allowances Purchased by Compliance Entities	87.2%	71.1%
Herfindahl-Hirschman Index	623	1369

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 1.3298 (USD to CAD).



Table 3: Qualified Bid Summary Statistics for August 2019 Joint Auction #20

Auction Statistics	Current Auction USD	Current Auction CAD	Advance Auction USD	Advance Auction CAD
Auction Reserve Price	\$15.62	\$20.77	\$15.62	\$20.77
Settlement Price	\$17.16	\$22.82	\$16.85	\$22.41
Maximum Price	\$58.35	\$77.59	\$25.00	\$33.25
Minimum Price	\$15.62	\$20.77	\$15.62	\$20.77
Mean Price	\$17.86	\$23.75	\$17.61	\$23.42
Median Price	\$17.25	\$22.94	\$17.05	\$22.67
Median Allowance Price	\$17.35	\$23.07	\$17.18	\$22.85

List of qualified bidders for the August 2019 Joint Auction #20

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
CA1561	AltaGas Power Holdings (U.S.), Inc.
CA2919	BC Carbon Portfolio, LLC
QC1724	Bell-Gaz Itée
CA2759	Bellus Ventures II, LP
CA1913	BP Products North America, Inc.
CA2935	Brookdale Receivables, LLC
CA2743	California Department of Water Resources
CA1463	California Power Holdings, LLC
CA1119	Calpine Energy Services, L.P.
QC1491	CGC Inc.
QC2580	Chauffage Benwell Fuels Ltd.
CA1075	Chevron U.S.A., Inc.
CA1732	City of Long Beach, Gas and Oil Department
CA1038	City of Palo Alto
CA1166	City of Vernon, Vernon Public Utilities
QC1524	Compagnie Selenis Canada
CA1068	ConAgra Foods Packaged Foods, LLC
QC1901	Coopérative de solidarité Carbone
CA2050	CP Energy Marketing (US), Inc.
CA2648	CWP Energy, Inc.
CA1091	DTE Energy Trading, Inc.
CA2809	ECP Opportunity Fund II, LLC
QC2448	Elbow River Marketing Ltd.
QC2159	Énergie LGP Inc.
QC1384	Énergie Valero Inc.
QC2586	ÉNERGIES SONIC INC.
CA1110	Exelon Generation Company, LLC

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
CA1260	Flyers Energy, LLC
QC2711	Formica Canada Inc
QC1750	Gazifère Inc.
QC1764	Gestion Énergie Québec Inc.
CA2916	Green Trading Capital, LP
CA1917	Greenleaf Energy Unit 1, LLC
QC2118	Hamel Propane Inc.
CA2113	Hartree Partners, LP
QC1359	Hydro-Québec
CA1807	Idemitsu Apollo
CA1665	IPC (USA), Inc.
CA1727	Jaco Oil Company
CA1141	Kern Oil & Refining Co,
QC1541	LA CIE MATÉRIAUX DE CONSTRUCTION BP CANADA
QC1770	Les Pétroles Irving Commercial s.e.n.c
QC1730	Les Produits Pétroliers Norcan S.E.N.C
CA1233	Liberty Utilities (CalPeco Electric), LLC
CA2553	Luminus EC, L.P.
CA1830	Luminus Energy Partners, LLC
CA1104	Macquarie Energy, LLC
CA2645	Mercuria Energy America, Inc.
CA1107	Midway Sunset Cogeneration Company
CA1239	Morgan Stanley Capital Group, Inc.
CA1302	Naftex Operating Company
QC2806	National Silicates Partnership
QC2761	Nexans Canada inc.
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 INCORPORATED
QC2673	Petro-Francis Inc
CA1279	Phillips 66 Company
CA1595	Pixley Cogen Partners, LLC
CA1003	Plumas-Sierra Rural Electric Cooperative

CITSS Entity ID	Entity Legal Name
CA1505	Powerex Corp.
QC1474	Produits Suncor Énergie S.E.N.C.
QC1486	Rayonier A.M. Canada société en nom collectif
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
CA2175	Sempra Gas & Power Marketing, LLC
CA1366	Seneca Resources Corporation
CA2905	Sequoia Carbon, LLC
CA1251	Shell Energy North America (US), L.P.
CA1757	Shiralian Enterprises
CA1054	Signal Hill Petroleum, Inc.
CA1029	Southern California Edison Company
CA1170	Southern California Gas Company
CA1674	Southwest Gas Corporation
CA1804	Stan Boyett & Son, Inc.
CA1921	Statkraft US, LLC
QC1873	Superior Gas Liquids Partnership
CA1172	Surprise Valley Electrification Corp.
CA1165	Tesoro Refining & Marketing Company, LLC
CA1662	The Metropolitan Water District of Southern California
CA1216	Turlock Irrigation District
CA1598	United States Pipe & Foundry Co., LLC
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-Trade Regulation.

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., $100 \times 100 = 10,000$).

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.

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.



Sophiya Vhora

From: Geoffrey Moore - Merchant
Sent: Friday, June 5, 2020 5:09 PM
To: Sophiya Vhora
Subject: Douglas PPA MONET Inputs Update
Attachments: MONET Input Calculationsv1.xlsx

Sophiya,

Attached is an update to the MONET Wells percentage shares input based on the following corrections:

- 1) Percentage share derived using MONET Wells monthly capacities. The previous file used a different set of values.
- 2) Removed 3% contingency reserve obligation on the surplus. MONET should be internally accounting for this already.

Thanks,
Geoff



Geoff Moore | Structuring & Origination

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Sophiya Vhora

From: Geoffrey Moore - Merchant
Sent: Thursday, June 4, 2020 1:24 PM
To: Sophiya Vhora
Subject: Douglas Supporting Data for 2021 AUT
Attachments: EA Payment Projection.xlsx; MONET Input Calculations.xlsx

Sophiya,

Attached please find the following files:

- 1) MONET Input Calculations – This file contains the historical data and summary projections that were used to derive the adjusted monthly Wells percentage shares to be input into MONET.
- 2) EA Payment Projection – This file contains our most recent projection of the 2021 EA payment as detailed per the Douglas PPA.

The historical data for Douglas and Okanogan was provided to us during negotiations by Douglas. Additionally, please update the EA forecasts for the most recent CARB quarterly auction current vintage settled prices. As detailed in the contract, these values will be updated in September of this year to reflect the payment for 2021, but we should work to try and update ahead of that as much as possible so our NVPC forecast is accurate.

Thanks,
Geoff



Geoff Moore | Structuring & Origination

Portland General Electric Co. | 121 SW Salmon Street 3WTC0306 | Portland, OR 97204

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**California Cap-and-Trade Program,
and
Québec Cap-and-Trade System
February 2020 Auction #22**

Summary Results Report

Update Issued on February 27, 2020

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 19, 2020. The auction included a Current Auction of 2017 and 2020 vintage allowances and an Advance Auction of 2023 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 2017 and 2020 vintage allowances and for the Advance Auction of 2023 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).

¹ Ministry of the Environment and the Fight against Climate Change



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 17, 2020. 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 March 17, 2020, providing the final amount of proceeds transferred.

Auction Results

The first and the second tables below provide key data and information on the results of the auction. The third 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 2020 Joint Auction #22

Description of Allowances	Current Auction Vintage 2017	Current Auction Vintage 2020	Current Auction Vintage Total	Advance Auction Vintage 2023
Allowances offered by CA Entity Consignment	-	21,143,360	21,143,360	-
Allowances offered by CARB	0	26,877,811	26,877,811	7,352,500
Allowances offered by MELCC	1,813,781	7,255,125	9,068,906	1,319,750
Total Allowances Offered for Sale	1,813,781	55,276,296	57,090,077	8,672,250



Description of Allowances	Current Auction Vintage 2017	Current Auction Vintage 2020	Current Auction Vintage Total	Advance Auction Vintage 2023
Allowances sold for CA Entity Consignment	-	21,143,360	21,143,360	-
Allowances sold for CARB	0	26,887,811 <u>26,877,811</u>	26,877,811	7,352,500
Allowances sold for MELCC	1,813,781	7,255,125	9,068,906	1,319,750
Total Allowances Sold at Auction	1,813,781	55,276,296	57,090,077	8,672,250

Table 2: Auction Data for February 2020 Joint Auction #22

Auction Data	Current Auction	Advance Auction
Total Qualified Bids Divided by Total Allowances Available for Sale	1.52	1.96
Proportion of Allowances Purchased by Compliance Entities	87.3%	71.0%
Herfindahl-Hirschman Index	624	1615

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 1.3258 (USD to CAD).



Table 3: Qualified Bid Summary Statistics for February 2020 Joint Auction #22

Auction Statistics	Current Auction USD	Current Auction CAD	Advance Auction USD	Advance Auction CAD
Auction Reserve Price	\$16.68	\$22.11	\$16.68	\$22.11
Settlement Price	\$17.87	\$23.69	\$18.00	\$23.86
Maximum Price	\$25.00	\$33.15	\$25.00	\$33.15
Minimum Price	\$16.68	\$22.11	\$16.68	\$22.11
Mean Price	\$18.66	\$24.74	\$18.08	\$23.97
Median Price	\$17.82	\$23.63	\$17.82	\$23.63
Median Allowance Price	\$17.98	\$23.84	\$18.00	\$23.86

List of qualified bidders for the February 2020 Joint Auction #22

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
CA2988	Aetos Capital Opportunities Fund, LP
CA1019	Air Liquide Large Industries U.S., LP
CA1561	AltaGas Power Holdings (U.S.), Inc.
CA2919	BC Carbon Portfolio, LLC
QC1724	Bell-Gaz ltée
CA2759	Bellus Ventures II, LP
CA1143	Berry Petroleum Company
CA1913	BP Products North America, Inc.
CA1108	California Resources Elk Hills, LLC
CA1119	Calpine Energy Services, LP
CA1201	CalPortland Company
QC1525	CEPSA CHIMIE BÉCANCOUR INC.
CA1075	Chevron U.S.A., Inc.
CA1112	Citigroup Energy, Inc.
CA1037	City of Anaheim, Public Utilities Department
CA1288	City of Cerritos
CA1732	City of Long Beach, Gas and Oil Department
CA1038	City of Palo Alto
CA1166	City of Vernon, Vernon Public Utilities
QC1524	Compagnie Selenis Canada
QC1901	Coopérative de solidarité Carbone
CA2050	CP Energy Marketing (US), Inc.
QC1578	DIAGEO CANADA INC.
CA1091	DTE Energy Trading, Inc.
CA2809	ECP Opportunity Fund II, LLC
QC2448	Elbow River Marketing Ltd.
QC1384	Énergie Valero Inc.

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
QC2586	ÉNERGIES SONIC INC.
CA1110	Exelon Generation Company, LLC
CA1260	Flyers Energy, LLC
QC2711	Formica Canada Inc
QC1750	Gazifère Inc.
QC1764	Gestion Énergie Québec Inc.
CA2970	Green Future Opportunity Fund, LLC
CA2916	Green Trading Capital, LP
CA1918	Greenleaf Energy Unit 2, LLC
QC2118	Hamel Propane Inc.
CA2113	Hartree Partners, LP
QC1359	Hydro-Québec
CA1807	Idemitsu Apollo
CA1727	Jaco Oil Company
CA2932	Kcarbon Holdings, LLC
CA1141	Kern Oil & Refining Company
CA2944	Kiva Energy, Inc.
QC1431	Lantic Inc.
QC1770	Les Pétroles Irving Commercial s.e.n.c
QC1730	Les Produits Pétroliers Norcan S.E.N.C
CA1233	Liberty Utilities (CalPeco Electric), LLC
CA2553	Luminus EC, LP
CA1830	Luminus Energy Partners, LLC
CA1104	Macquarie Energy, LLC
CA2645	Mercuria Energy America, LLC
CA2887	Merrill Lynch Commodities, 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
CA2905	PA Carbon I, LLC
CA1046	Pacific Gas and Electric Company
CA2046	Pacific Gas and Electric Company
CA1034	PacifiCorp

CITSS Entity ID	Entity Legal Name
CA2106	PBF Energy Western Region, LLC
CA2923	PCAF I, LLC
CA1410	Petro Diamond, Inc.
QC2673	Petro-Francis Inc
CA1279	Phillips 66 Company
CA1595	Pixley Cogen Partners, LLC
CA1003	Plumas-Sierra Rural Electric Cooperative
CA1505	Powerex Corporation
CA1925	Pro Petroleum, Inc.
QC1474	Produits Suncor Énergie S.E.N.C.
CA1834	River City Petroleum
CA1774	Robinson Oil Supply & Transport, Inc.
CA1102	Royal Bank of Canada
CA1085	San Diego Gas & Electric Company
CA1760	San Diego Gas and Electric Company
QC2744	Sanimax ACI Inc.
CA2175	Sempra Gas & Power Marketing, LLC
CA1366	Seneca Resources Corporation
CA1251	Shell Energy North America (US), LP
CA1757	Shiralian Enterprises
CA2973	Skyview Finance Company, LLC
CA1029	Southern California Edison Company
CA1170	Southern California Gas Company
CA1800	Southern Counties Oil Company, a California Limited Partnership
CA1674	Southwest Gas Corporation
CA1804	Stan Boyett & Son, Inc.
CA1921	Statkraft US, LLC
CA1165	Tesoro Refining & Marketing Company, LLC
CA1662	The Metropolitan Water District of Southern California
CA1216	Turlock Irrigation District
CA1635	Valero Marketing and Supply Company
CA1135	Vitol, Inc.
QC2174	W.O. Stinson & Son Ltd
QC2066	W.R. Grace Canada Corp.

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-Trade Regulation.

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., $100 \times 100 = 10,000$).
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.
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.



**California Cap-and-Trade Program,
and
Québec Cap-and-Trade System
May 2020 Auction #23**

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 20, 2020. The auction included a Current Auction of 2017 and 2020 vintage allowances and an Advance Auction of 2023 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 2017 and 2020 vintage allowances and for the Advance Auction of 2023 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 17, 2020. 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 17, 2020, providing the final amount of proceeds transferred.

Auction Results

The first and the second tables below provides key data and information on the results of the auction. The third 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 May 2020 Joint Auction #23

Description of Allowances	Current Auction Vintage 2017	Current Auction Vintage 2020	Current Auction Vintage Total	Advance Auction Vintage 2023
Allowances offered by CA Entity Consignment	-	21,594,014	21,594,014	-
Allowances offered by CARB	0	26,877,811	26,877,811	7,352,500
Allowances offered by MELCC	1,813,781	7,255,125	9,068,906	1,319,750
Total Allowances Offered for Sale	1,813,781	55,726,950	57,540,731	8,672,250

Description of Allowances	Current Auction Vintage 2017	Current Auction Vintage 2020	Current Auction Vintage Total	Advance Auction Vintage 2023
Allowances sold for CA Entity Consignment	-	17,825,847	17,825,847	-
Allowances sold for CARB	0	0	0	1,494,705
Allowances sold for MELCC	1,813,781	1,521,372	3,335,153	268,295
Total Allowances Sold at Auction	1,813,781	19,347,219	21,161,000	1,763,000

Table 2: Auction Data for May 2020 Joint Auction #23

Auction Data	Current Auction	Advance Auction
Total Qualified Bids Divided by Total Allowances Available for Sale	0.37	0.20
Proportion of Allowances Purchased by Compliance Entities	98.8%	91.0%
Herfindahl-Hirschman Index	2850	4197

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 1.3893 (USD to CAD).

Table 3: Qualified Bid Summary Statistics for May 2020 Joint Auction #23

Auction Statistics	Current Auction USD	Current Auction CAD	Advance Auction USD	Advance Auction CAD
Auction Reserve Price	\$16.68	\$23.17	\$16.68	\$23.17
Settlement Price	\$16.68	\$23.17	\$16.68	\$23.17
Maximum Price	\$24.00	\$33.34	\$17.12	\$23.78
Minimum Price	\$16.68	\$23.17	\$16.68	\$23.17
Mean Price	\$17.77	\$24.69	\$16.83	\$23.38
Median Price	\$16.96	\$23.56	\$16.71	\$23.22
Median Allowance Price	\$17.00	\$23.62	\$16.78	\$23.31

List of qualified bidders for the May 2020 Joint Auction #23

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
CA2988	Aetos Capital Opportunities Fund, LP
CA1561	AltaGas Power Holdings (U.S.), Inc.
CA1184	California Steel Industries, Inc.
CA1119	Calpine Energy Services, LP
CA1075	Chevron U.S.A., Inc.
CA1037	City of Anaheim, Public Utilities Department
CA1732	City of Long Beach, Gas and Oil Department
CA1038	City of Palo Alto
CA1091	DTE Energy Trading, Inc.
CA1110	Exelon Generation Company, LLC
CA1260	Flyers Energy, LLC
QC2711	Formica Canada Inc
QC1764	Gestion Énergie Québec Inc.
QC2118	Hamel Propane Inc.
CA2113	Hartree Partners, LP
QC1359	Hydro-Québec
QC1431	Lantic Inc.
CA1233	Liberty Utilities (CalPeco Electric), LLC
CA2553	Luminus EC, LP
CA1830	Luminus Energy Partners, LLC
CA1104	Macquarie Energy, LLC
CA2111	Mag Energy Solutions, Inc.
CA1107	Midway Sunset Cogeneration Company
CA1239	Morgan Stanley Capital Group, Inc.
QC2107	NGL Supply Co. Ltd.
CA1191	Northern California Power Agency
CA2905	PA Carbon I, LLC
CA1046	Pacific Gas and Electric Company

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
CA2046	Pacific Gas and Electric Company
CA1034	PacifiCorp
QC1713	Plant-E Corp
QC1486	Rayonier A.M. Canada société en nom collectif
QC2744	Sanimax ACI Inc.
CA1251	Shell Energy North America (US), LP
CA1757	Shiralian Enterprises
QC2781	Sivaco Wire Group 2004 L.P.
CA1674	Southwest Gas Corporation
CA1921	Statkraft US, LLC
CA1165	Tesoro Refining & Marketing Company, LLC
CA1346	United States Gypsum 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-Trade Regulation.

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., $100 \times 100 = 10,000$).

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.

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.



**California Cap-and-Trade Program,
and
Québec Cap-and-Trade System
November 2019 Joint Auction #21**

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 November 19, 2019. The auction included a Current Auction of 2013, 2014, 2015, 2016, 2017, 2018, 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 2013/2014/2015/2016/2017/2018/2019 (current) 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 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 linked

¹ Ministry of the Environment and the Fight against Climate Change



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 December 18, 2019. 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 December 18, 2019, providing the final amount of proceeds transferred.

Auction Results

The 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: Auction Results for November 2019 Joint Auction #21

Description of Allowances	Current Auction Vintage 2013-2018	Current Auction Vintage 2019	Current Auction Vintage Total	Advance Auction Vintage 2022
Allowances offered by CA Entity Consignment	-	21,996,805	21,996,805	-
Allowances offered by CARB	787,032	35,076,844	35,863,876	7,687,500
Allowances offered by MELCC	1,914,996	7,659,984	9,574,980	1,350,500
Total Allowances Offered for Sale	2,702,028	64,733,633	67,435,661	9,038,000



Description of Allowances	Current Auction Vintage 2013-2018	Current Auction Vintage 2019	Current Auction Vintage Total	Advance Auction Vintage 2022
Allowances sold for CA Entity Consignment	-	21,996,805	21,996,805	-
Allowances sold for CARB	787,032	35,076,844	35,863,876	7,687,500
Allowances sold for MELCC	1,914,996	7,659,984	9,574,980	1,350,500
Total Allowances Sold at Auction	2,702,028	64,733,633	67,435,661	9,038,000

Table 2: Summary of 2013 to 2018 Vintage Allowances for November 2019 Joint Auction #21

Description of Allowances	Current Auction Vintage 2013	Current Auction Vintage 2014	Current Auction Vintage 2015	Current Auction Vintage 2016	Current Auction Vintage 2017	Current Auction Vintage 2018
Allowances offered by CARB	80,026	416,086	212,730	5,382	23,348	49,460
Allowances offered by MELCC	-	-	-	1,736,736	178,260	-
Total Allowances Offered for Sale	80,026	416,086	212,730	1,742,118	201,608	49,460
Allowances sold for CARB	80,026	416,086	212,730	5,382	23,348	49,460
Allowances sold for MELCC	-	-	-	1,736,736	178,260	-
Total Allowances Sold at Auction	80,026	416,086	212,730	1,742,118	201,608	49,460

Table 3: Auction Data for November 2019 Joint Auction #21

Auction Data	Current Auction	Advance Auction
Total Qualified Bids Divided by Total Allowances Available for Sale	1.28	1.10
Proportion of Allowances Purchased by Compliance Entities	92.6%	79.5%
Herfindahl-Hirschman Index	815	1551

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 1.3214 (USD to CAD).

Table 4: Qualified Bid Summary Statistics for November 2019 Joint Auction #21

Auction Statistics	Current Auction USD	Current Auction CAD	Advance Auction USD	Advance Auction CAD
Auction Reserve Price	\$15.62	\$20.64	\$15.62	\$20.64
Settlement Price	\$17.00	\$22.46	\$16.80	\$22.20
Maximum Price	\$34.22	\$45.22	\$20.15	\$26.63
Minimum Price	\$15.62	\$20.64	\$15.62	\$20.64
Mean Price	\$17.66	\$23.34	\$17.25	\$22.79
Median Price	\$17.05	\$22.53	\$16.91	\$22.34
Median Allowance Price	\$17.20	\$22.73	\$17.16	\$22.68

List of qualified bidders for the November 2019 Joint Auction #21

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
QC2594	A&L Pinard Inc
CA1185	Aera Energy, LLC
CA1561	AltaGas Power Holdings (U.S.), Inc.
QC1724	Bell-Gaz ltée
CA2759	Bellus Ventures II, LP
CA1913	BP Products North America, Inc.
CA2971	Brian Anast
CA1119	Calpine Energy Services, LP
QC2580	Chauffage Benwell Fuels Ltd.
CA1075	Chevron U.S.A., Inc.
CA1288	City of Cerritos
CA1732	City of Long Beach, Gas and Oil Department
CA1038	City of Palo Alto
CA1166	City of Vernon, Vernon Public Utilities
QC1901	Coopérative de solidarité Carbone
CA2050	CP Energy Marketing (US), Inc.
QC1578	DIAGEO CANADA INC.
CA1091	DTE Energy Trading, Inc.
CA2809	ECP Opportunity Fund II, LLC
QC2448	Elbow River Marketing Ltd.
QC2159	Énergie LGP Inc.
QC1384	Énergie Valero Inc.
CA2085	Escondido Energy Center, LLC
CA1110	Exelon Generation Company, LLC
QC1489	Fibretek s.e.n.c.
CA1260	Flyers Energy, LLC
QC2711	Formica Canada Inc
QC1750	Gazifère Inc.

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
QC1764	Gestion Énergie Québec Inc.
CA2916	Green Trading Capital, LP
CA1918	Greenleaf Energy Unit 2, LLC
QC2118	Hamel Propane Inc.
CA2902	Harspring Environmental, LP
QC1359	Hydro-Québec
CA1807	Idemitsu Apollo
QC2789	Ifastgroupe 2004 L.P.
CA1727	Jaco Oil Company
CA2932	Kcarbon Holdings, LLC
CA1141	Kern Oil & Refining Co,
CA2944	Kiva Energy, Inc.
QC1431	Lantic Inc.
QC1730	Les Produits Pétroliers Norcan S.E.N.C
CA1233	Liberty Utilities (CalPeco Electric), LLC
CA2553	Luminus EC, LP
CA1830	Luminus Energy Partners, LLC
QC2095	MacEwen Petroleum Inc
CA1104	Macquarie Energy, LLC
CA2645	Mercuria Energy America, Inc.
CA1107	Midway Sunset Cogeneration Company
CA1239	Morgan Stanley Capital Group, Inc.
CA1302	Naftex Operating Company
QC2107	NGL Supply Co. Ltd.
CA1191	Northern California Power Agency
CA1138	NRG Power Marketing, LLC
CA2905	PA Carbon I, LLC
CA1046	Pacific Gas and Electric Company
CA2046	Pacific Gas and Electric Company
CA1034	PacifiCorp
CA1534	Panoche Energy Center, LLC
CA2106	PBF Energy Western Region, LLC
CA1410	Petro Diamond, Inc.
QC2673	Petro-Francis Inc
CA1279	Phillips 66 Company
CA1595	Pixley Cogen Partners, LLC
CA1003	Plumas-Sierra Rural Electric Cooperative
CA1505	Powerex Corporation

CITSS Entity ID	Entity Legal Name
QC1474	Produits Suncor Énergie S.E.N.C.
QC1960	Révolution VSC LP
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
CA2175	Sempra Gas & Power Marketing, LLC
CA1366	Seneca Resources Corporation
CA1251	Shell Energy North America (US), L.P.
CA1757	Shiralian Enterprises
CA1031	Silicon Valley Power (SVP), City of Santa Clara
QC2781	Sivaco Wire Group 2004, LP
CA1029	Southern California Edison Company
CA1170	Southern California Gas Company
CA1674	Southwest Gas Corporation
CA1921	Statkraft US, LLC
QC1873	Superior Gas Liquids Partnership
CA1165	Tesoro Refining & Marketing Company, LLC
CA1662	The Metropolitan Water District of Southern California
CA1195	TransAlta Energy Marketing (U.S.), Inc.
CA1216	Turlock Irrigation District
CA1635	Valero Marketing and Supply Company
CA1135	Vitol, Inc.
QC2174	W.O. Stinson & Son Ltd
CA2056	Wild Goose Storage, LLC

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-Trade Regulation.

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., $100 \times 100 = 10,000$).

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.

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.

