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Key Summary

A. Trading Report

- CCA prices saw a 2-cent gain at the start of the week and continued a steady increase until a 1 cent drop as the week ended. The current front and benchmark (V17 Dec17), closed the week at USD 15.19
- The OCA front and the benchmark prices now stand at CAD 19.28.
- Open interest contracts saw a dramatic gain since last week of 4,377,000 contracts
- The total traded volumes saw a slight increase from 7,360,000 tons to 7,513,000 tons

B. Price Expectations

- Prices continue to trend flatly as spread trading dominates
- CCA market front yet to see a big trading week after November auction
- Ontario auction likely to clear and add 25.29 million allowances to supply

C. CCO Tracker

- Close to 300K ROCs were approved by the Climate Action Reserve last week.
- Garcia River Forest – ARB (CAR1098) accrued the highest proportion of ROCs for the week with over 156K ROCs received
- CCO 8 prices declined 19 cents while CCO 3 prices saw a 6-cent gain
- The backlog of ROCs awaiting ARB's approval has now increased to 34.3 million due to the recent ROC issuances

D. Key Dates

- **Dec 6-** Results of the Ontario Cap and Trade Auction of Greenhouse Gas Allowances.
- **Dec 14-** Third Public Board Meeting on the Proposed Scoping Plan
- **Jan 1-** California and Quebec's Cap-and-Trade program will link with Ontario's Cap-and-Trade Program

Section A. Trading Report

Calendar rolls increase under steady liquidity, price momentum

The California carbon allowances (CCA) prices experienced frequent price changes throughout the week. CCA prices saw a 2-cent gain at the start of the week and continued a steady increase until a 1 cent drop as the week ended. The current front and benchmark (V17 Dec17), closed the week at USD 15.19, indicating a 4-cent increase in price since last week.

This weeks' volumes traded were concentrated within four vintages. The total traded volumes saw a slight increase from 7,360,000 tons to 7,513,000 tons which is a 2.08% increase since last week. V2017 was the major contributor with 5,504,000 tons exchanged and accounted for 73.26% of total traded volume. The second highest contributor this week is V2018 with 1,700,000 tons traded making up 22.63% of total weekly volume. Contributions from V2019 made up 3.99% and V2016 contributed 0.16% of weekly volume, while V2015 and V2020 showed no traded volumes.

Delivery-wise, majority of the trading was spread out between three deliveries – Dec17 (3,988,000 tons), Dec 18 (3,125,000 tons) and Jun 18 (400,000 tons). These accounted for 53.08%, 41.59% and 5.32% of the total. 2.3 million were traded as spreads between Dec17 and Dec18 at an implied funding rate of 2.89% (annualized).

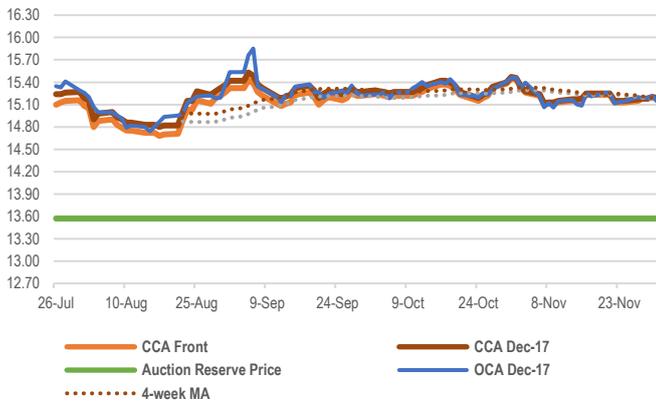
Open interest contracts saw a dramatic gain since last week of 4,377,000 contracts. Last week 147 contracts closed as Nov17 ended, however the overall net gain seen on other deliveries more than made up for the closed contracts. Dec17 and Dec18 had the largest share of OI gain with 1,852,000 for Dec17 and 2,525,000 for the latter. We see this continuing trend of entities rolling their trades over to next year because of market certainty as a result of AB398.

While the Ontario carbon market saw no new trades last week, frequent price changes continued in anticipation of the upcoming auction. Beginning of the week OCA gained 12 cents followed by a 33 cent drop as the week came to a close. As of Friday (11/16) the OCA front and the benchmark prices now stand at CAD 19.28.

ICE Price Movements		
ICE CCA	Wk Close	Wk Δ
V17 Front	15.19	0.04
V15 Dec17	15.20	0.04
V16 Dec17	15.20	0.04
V18 Dec17	15.15	0.04
V19 Dec17	15.14	0.04
V20Dec17	15.10	0.03
V17 Jun 18	15.41	0.04
V17 Dec18	15.63	0.05
V17 Dec19	16.05	0.05
V17 Dec 20	16.49	0.05
OCAV17 Dec 17	15.15	0.01
ICE Traded Volumes		
ICE CCA	Delivery	Vol. ('000)
V 16	Dec 17	9
V 17	Dec 17	2,979
	Dec18	2,525
V 18	Dec 17	800
	Jun 18	400
	Dec 18	500
V 19	Dec 17	200
	Dec 18	100
Total		7,513
4-week average		9,447
CCO Price Movements		
OTC	Wk Close	WkΔ
Golden '16	13.89	-0.02
CCO-3 '16	13.14	0.07
CCO-8 '16	12.41	-0.17

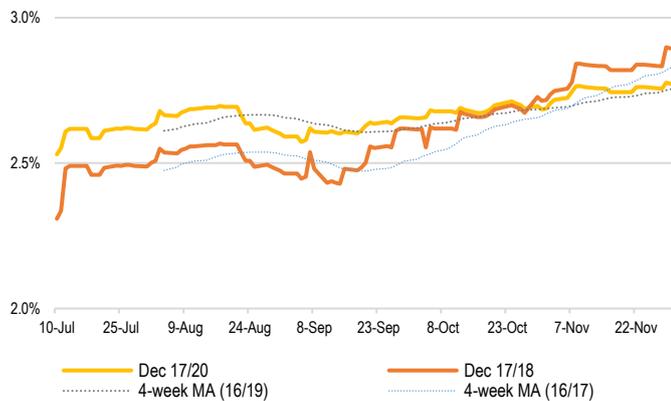
Section B. Price Expectations

CCA Instrument Prices



CCA prices crossed above the 4-week MA of USD\$15.17 to settle at USD \$15.19, this is a return to the same levels where the market was in the week following the August auction results. As discussed in previous editions of the Weekly Outlook, we expect market to remain close to its 4-month average of US\$ 15.14, rising to US\$15.30 as the February auction draws closer.

Implied Annual Funding Rates (Current)



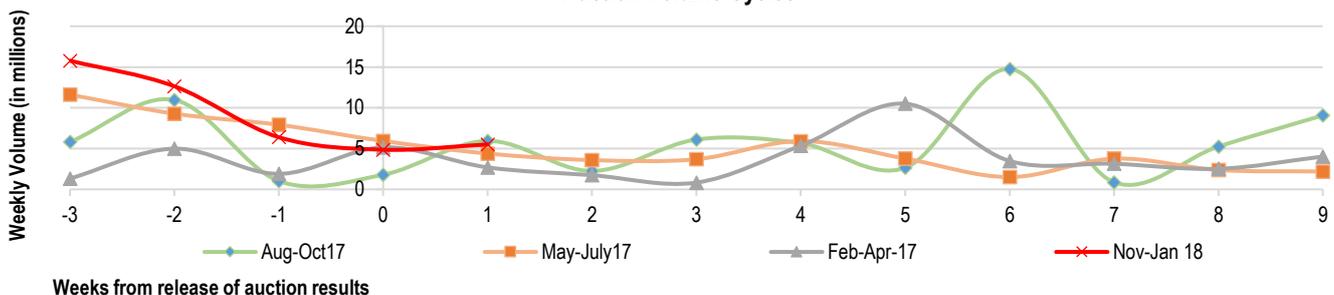
Liquidity remained similar to previous week at 7,513,000 tons. Furthermore, historically the auction volume cycle shows an average volume of over 23 million on the current vintage during the 5 week period (2 week preceding the auction, the auction week and 2 weeks following the auction). However, for the same time frame in the current this auction cycle a total of 44 million V2017s have traded. This is likely a result of various factors, such as the expiry of the Dec17 contract, impending price floor increase, the price for the front being significantly higher than next year's floor, and the increased auction volume in November. This leads to the question of whether the fresh auction allowances were already carried forward sufficiently to mitigate the auction volume peaks that we observe after each week. Last week's volumes would suggest so, however, keeping in mind that we haven't witnessed a 'peak week' for this auction cycle yet, and that the Dec17 contract still has 42 million contract open, liquidity should likely rise over the current level before the holidays

Monthly Volume Comparison



North of the border, Ontario's market participants are awaiting the results of the auction to be announced on Wednesday 6th December. Keeping in mind the soon to be short Ontario market, we expect this auction also to be fully subscribed which will add 25, 296,369 allowances to the Ontario spot volume. Its linkage next year with WCI will increase demand for CCAs in the WCI as a whole as we expect the province to be short by 2.9 million in 2018.

Auction Volume Cycles



Section C. CCO Tracker

Last issuance date: November 22, 2017	Issued CCO total: 86,102,660
Next issuance date: December 13, 2017	Quebec offsets: 563,993
Last ARB issuance total: 1,045,213	WCI offsets eligible for future compliance:
CCO-0s: 14,819,103	54,479,373

Close to **300K** ROCs were approved by the Climate Action Reserve last week. The credits were awarded to a forestry project and an ODS project. Last week also saw three new projects being listed.

Garcia River Forest – ARB(CAR1098), a Californian forestry IFM project being developed by The Conservation Fund, accrued the highest proportion of ROCs for the week with over **156K** ROCs received. It was closely followed by **ClimeCo ODS Destruction 21 (CAR1271)** ODS project which was awarded over **140K** credits by CAR.

Three new projects were listed last week comprising of two ODS projects and one forest carbon project. **Finite Carbon - MWF Ned Lake IFM (ACR395)**, being developed by Maas Energy Works, was the sole forestry project to be listed last week on the 27th of November. **Perfect Cycle ODS-3 (CAR1287)** being developed by Perfect Score Technologies and **Tradewater ODS 10 (ACR401)** being developed by Tradewater are both ODS projects and were listed last week on the 28th and 29th of November respectively.

CCO 8s registered the highest decline last week on Tuesday with a decline of 19 cents. Despite gaining a cent on the next day, prices remained unchanged for the rest of the week. Golden CCOs saw a subtler decline in prices with a loss of 4 cents on Tuesday and mostly remained unchanged for the rest of the week. Bucking the trend, CCO 3 prices saw a gain of an overall 6 cents for the week with a 2-cent gain on Tuesday and a 4-cent gain on Wednesday with no change subsequently.

The backlog of ROCs awaiting ARB's approval has now increased to **34.3 million** due to the recent ROC issuances

Section D. Key Dates

Date	Item	Observations
Dec 6th	Ontario Cap-and-Trade Auction	Results: Ontario cap and trade auction of greenhouse gas allowances.
Dec 14 th	ARB Board Meeting	Third Public Board Meeting on the Proposed Scoping Plan
Jan 1 st	Ontario Linkage	California and Quebec's Cap-and-Trade program will link with Ontario's Cap-and-Trade Program

Section F. Back Matter

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