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## Key Summary

### A. Trading Report

- CCA prices plunged 29-31 cent drop across the curve on Thursday, a day after Ontario announced an under-subscription of the V17 OCAs
- The current front and benchmark (V17 Dec17) closed the week at USD 14.95
- Open interest contracts saw a dramatic gain since last week of 2,791,000 contracts
- The total traded volumes saw a 50% increase from the previous week as 11,295,000 tons were traded

### B. Price Expectations

- Market likely to recuperate from last week's fall as fundamentals take hold again
- Unsold supply in Ontario should materialize as demand in 2018
- Price floor impacts not expected as year transitions

### C. CCO Tracker

- A massive **12.6 million** ROCs were approved by the Climate Action Reserve last week.
- The bulk of the credits went to the forestry project Finite Carbon - Ahtna Native Alaskan IFM (**ACR360**) which received **12.5 million** ROCs with over 2.3 million in the buffer pool
- CCO prices saw a decline last week with CCO 3s seeing the highest decline
- The backlog of ROCs awaiting ARB's approval shot up to an all-time high of **46.9 million** due to the ROC issuances last week

### D. Key Dates

- **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

### Ontario auction results, holding limits show impact on CCA market as prices dip

California Carbon Allowance (CCA) prices plunged 29-31 cent drop across the curve on Thursday, a day after Ontario announced an [under-subscription of the V17 Ontario Carbon Allowances \(OCAs\) auction](#) which was held on 29<sup>th</sup> Nov. However, prices rebounded by 10 cents the very next day on the back of a significant 1,067,000 tons in traded volume which might indicate that Thursday's price drop was not commensurate with wider market sentiments.

The current front and benchmark (V17 Dec17) closed the week at USD 14.95 resulting in a 24-cent drop in price since last week.

### Ontario Auctions and Holding Limits in play?

The drastic price drop which coincided with the Ontario auctions this week could indicate that entities are being cautious due to unexpected under-subscriptions at the Ontario auctions. Some market sources are pointing to the amalgamation of Enbridge Gas Distribution Inc. and Union Gas Limited which could halve the holding limit of the combined entity next year.

*"In 2017, Enbridge Gas Distribution Inc. and Union Gas Limited shall be treated, for the purposes of this section [Holding Limit], as if each registered participant were a separate registered participant that is not related to the other registered participant, within the meaning of subsection 2 (2). O. Reg. 56/17, s. 1."*

The holding limit is the maximum number of allowances an entity, or a group of affiliated entities, may hold at any point in time. This is calculated as:

$$\text{Holding Limit (L)} = 2,500,000 + 0.025 \times (C - 25,000,000)$$

C = the number of emission allowances created for the year, both in Ontario and in designated jurisdictions (California and Quebec).

For 2017, the maximum allowances of vintage that one covered can hold in Ontario is 5,433,300 tons considering 'C' for Ontario stand-alone. While considering the budget for the entire WCI, holding limits in 2017 would be **16,220,300 tons** and 2018 would be **15,717,500 tons**.

[CaliforniaCarbon.info forecasts](#) Ontario emissions in 2017 to be **136,174,290 tons** and 2018 to be **135,307,739 tons**. Furthermore, we expect that Ontario singularly will be short of 1.8 million tons in 2018 and the **whole WCI market would be short by 624 million tons in 2030** (which would be bought at the price ceiling ultimately). Considering the scale of shortage in the long run with the volume of allowances unsold in the last OCA auction (**4.398 million** which would be offered again in August 2018 at earliest), the magnitude of the price fall last week again seems disproportionate and Friday's rebound could carry further this week.

### Liquidity and Spreads over the last week

The total traded volumes saw a dramatic increase of over 50% from the previous week as 11,295,000 tons were traded. V2017 was the major contributor with 7,088,000 tons exchanged which accounted for 62.75% of total traded volume. The second highest contributor this week is V2018 with 3,951,000 tons traded making up 34.98% of total weekly volume. Contributions from V2015 made up 0.41%, V2016 contributed 0.44%, V2019 made up 0.66% and lastly V2020 contributed 0.75% of total weekly volume.

ICE Price Movements		
ICE CCA	Wk Close	Wk Δ
V17 Front	14.95	-0.24
V15 Dec 17	14.95	-0.25
V16 Dec 17	14.95	-0.25
V18 Dec 17	14.94	-0.21
V19 Dec 17	15.94	-0.20
V20 Dec 17	14.93	-0.17
V17 Jun 18	15.16	-0.25
V17 Dec 18	15.37	-0.26
V17 Dec 19	15.79	-0.26
V17 Dec 20	16.23	-0.26
OCAV17 Dec 17	14.96	-0.19
ICE Traded Volumes		
ICE CCA	Delivery	Vol. ('000)
V 15	Dec 17	46
V 16	Dec 17	50
V 17	Dec 17	5,037
	Sep 18	2,000
V 18	Dec18	51
	Dec 17	1,560
V 18	Dec 18	2,391
	V 19	Dec 18
V 20	Dec 17	85
<b>Total</b>		11,295
4-week average		8,374
CCO Price Movements		
OTC	Wk Close	WkΔ
Golden '16	13.79	-0.10
CCO-3 '16	12.99	-0.15
CCO-8 '16	12.32	-0.09

Delivery-wise, majority of the trading was spread out between three deliveries – Dec17 (6,778,000 tons), Dec18 (2,517,000 tons) and Sep18 (2,000,000 tons). These accounted for 60.01%, 22.28% and 17.71% of the total.

Around 2 million were traded as spreads between Dec17 and Sep18 at an implied funding rate of 2.15% (annualized).

### **Open Interest changes**

An additional 2,791,000 open interest contracts were opened last week. 161 contracts closed under Dec17 but 2,000,000 contracts opened under Sep18 is a major contributor to the weekly OI gain. Followed by Sep18, Dec18 had the largest share of OI gain with 952,000 new contracts. Focus is shifting from Dec17 to Sep18 because entities have starting rolling trades in anticipation of joint auction in August and 100% compliance surrender in November commemorating the end of CP2.

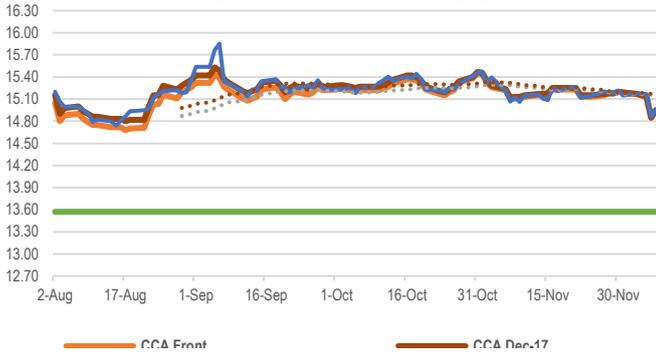
### **OCA reaction**

Beginning of the week OCA dropped a cent followed by an 11 cent gain mid-week, right before Ontario auction results were released. Like CCA prices, OCA prices went down 27 cents following the release of the Ontario auction results but not before rebounding 16 cents by the end of the week. As of Friday (12/8) the OCA front and the benchmark prices now stand at CAD 19.24.

*CaliforniaCarbon.info will publish a further update on the impact of holding limits and attempt to gain the perspective of Union Gas and Enbridge regarding the impact of their amalgamation on their holding limits.*

## Section B. Price Expectations

CCA Instrument Prices



CCA prices dropped drastically following the first undersubscribed current auction in soon to be partner jurisdiction Ontario. Front prices dropped by 29 cents in a day succeeding the Ontario auction results but recovered marginally to settle at US\$ 14.95 as the week closed. The front price breached the existing support price of US\$ 15.00 for the first time since late August; however it still enjoys a premium of US\$ 0.42 over the next year's floor price of US\$14.53.

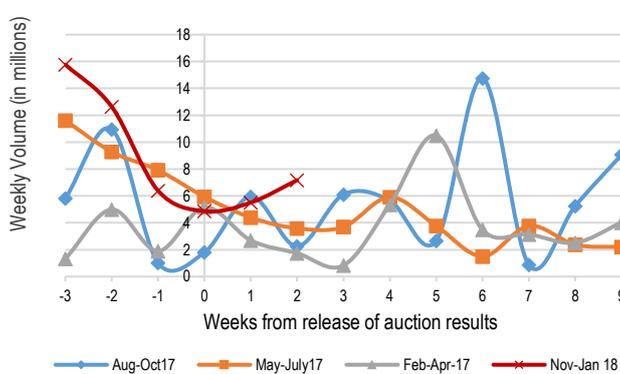
Historical analysis on of the final auction cycle of each year i.e. Dec to Feb points out that the average front price during the said period exceeds the next year's reserve price by over 40 cents which is also observed for the current front.

The first undersubscribed auction in Ontario's cap and trade program saw 4,398,369 allowances remaining unsold which will be available for sale only in next year's August auction given the first two of 2018 are fully subscribed. As a result of these unsold allowances Ontario faces an annual shortage in the first year of its inception. However, Ontario's surrender deadline in 2021 allows entities time to purchase their compliance needs without urgency and as such is less likely to cause immediate shocks to the market.

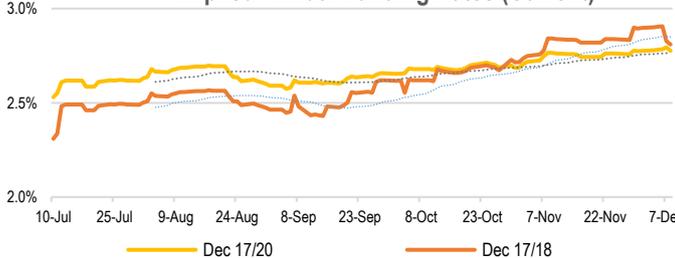
Linkage of Ontario with WCI is expected to add 132 million of allowances in the demand side vis-a-vis 129.6 million in the supply side to the joint WCI cap-and-trade program in 2018. Considering all joint auctions of 2018 being fully subscribed, the WCI carbon market will result into a cumulative surplus of 57.5 million by the end of 2018 rising from 44.3 million surplus at the end of 2017.

The impact of the price floor might still not be felt as the year transitions given the current front's premium over the 2018 floor, although prices are most likely to recuperate from last week's fall in the short-term and could likely regain a USD60-70 premium over the floor before the February auction. The market might find the new found level comfortable for trading and rolling, but if the price dip on Thursday was caused solely due to the auction results, fundamentals will ensure that the demand for allowances are transferred to the next year as well.

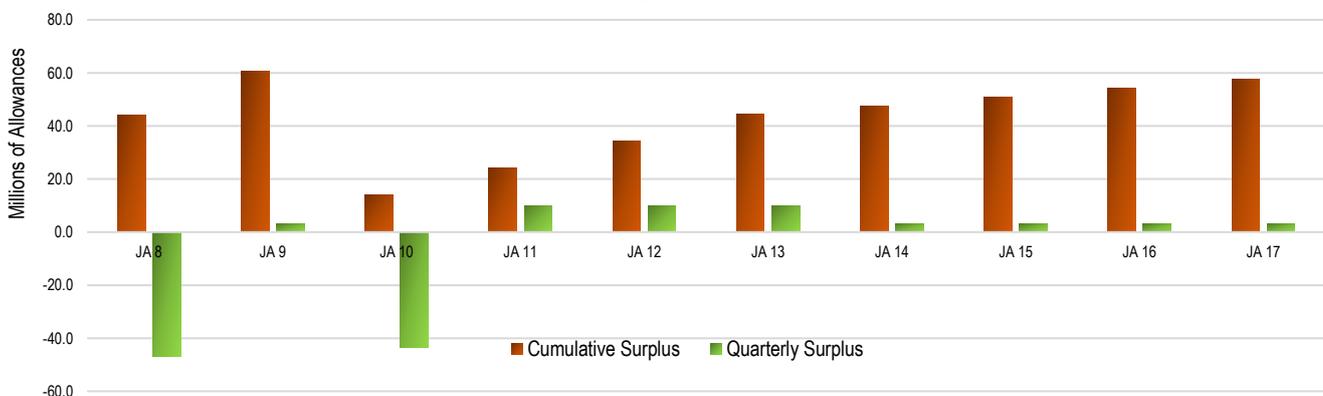
Auction Volume Cycles



Implied Annual Funding Rates (Current)



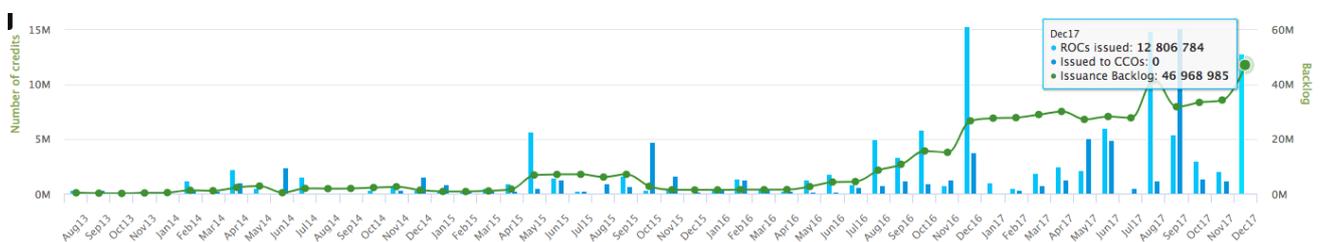
WCI Surplus/Shortage Under Fully Subscribed 2018 Auctions



## 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



A massive **12.6 million** ROCs were approved by the registries last week. The majority of the credits were awarded to the forestry project Finite Carbon - Ahtna Native Alaskan IFM (**ACR360**) which received **12.5 million** ROCs from its first reporting period with over 2.3 million in the buffer pool. This project is currently having the second highest number of ROCs issued and the is the single largest issuance so far.

The other two projects to be issued ROCs were an ODS and a Livestock project. Tradewater ODS 9 (**ACR387**) received close to 130K ROCs on the 6<sup>th</sup> of December last week. Roeslein South Meadow (**CAR1083**) received over 15.2K credits on the 4<sup>th</sup> last week.

CCO prices took a dip last week with Golden CCOs and CCO 8s losing 10 cents and 9 cents respectively. CCO 3s lost 15 cents, the highest loss among CCOs.

The backlog of ROCs awaiting ARB’s approval shot up to an all-time high of 46.9 million due to the ROC issuances last week

## Section D. Key Dates

Date	Item	Observations
Dec 14 <sup>th</sup>	ARB Board Meeting	Third Public Board Meeting on the Proposed Scoping Plan
Jan 1 <sup>st</sup>	Ontario Linkage	California and Quebec’s Cap-and-Trade program will link with Ontario’s Cap-and-Trade Program

## Section E. Back Matter

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