

Auction Summary

At the fourth auction, held on August 16, 2013, the California Air Resources Board (CARB) sold all of the approximately 13.9 million Vintage 2013 (V13) allowances available at a settlement price of \$12.22 per allowance, 14% above the \$10.71 floor price. There were 79 qualified bidders and close to 1.6 times more V13 credits bid on than were sold. The state also auctioned 9.56 million Vintage 2016 (V16) allowances of which all were sold at a settlement price of \$11.10. In total, the latest auction raised approximately \$138.5 million for the state, money that will be used to advance the goals of AB 32. A complete <u>CARB report (PDF)</u> gives more details on the results.

EDF Analysis

After four auctions, the cap-and-trade program remains competitive and strong while maintaining its aggressive emissions-reduction goals. Complete sale of both current and future vintage allowances at a settlement price above the floor price is clear indication of sustained confidence among auction participants in the market and the longevity of the program.

Key takeaways include:

- > The 100% sale of V13 allowances during all four auctions points to a strong and viable carbon market.
- The complete sale of V16 future allowances in the latest auction is a striking indication that companies are confident in the future of California's carbon market.
- A lower price for V13 allowances should not signal an alarm in confidence of the market. What is most important is not a high price per allowance but rather the maintenance of the cap's integrity. As we get closer towards the end of the year, companies may be realizing their need for allowances and cost for complying is less than expected.
- The approximately \$140 million generated from the sale of utility-owned allowances and an equal amount raised by the sale of state-held allowances will go back to furthering the goals of the program and move California towards a clean energy economy.
- Since its initiation, California's cap-and-trade program has come to serve as a model for other countries to learn from, including China and Australia. Linkage with Quebec's carbon market is set to begin in January 2014.

Auction Proceeds

The state is in the process of developing an investment plan for the cap-and-trade auction proceeds. EDF continues to advocate for an investment strategy that is targeted towards the cost-effective advancement of clean transportation, energy generation, and energy efficiency while protecting disadvantaged communities of California. EDF will continue to monitor and provide our input during the plan's development. Our California Climate Team has enjoyed working closely with CARB, the Governor's Office, and the Legislature to make sure implementation proceeds efficiently and effectively. We welcome feedback and input on our analysis and thoughts on the program.

For more information, some good reads:

- EDF's California Dream 2.0 Blog Posts:
 - o <u>California's latest cap-and-trade auction shows staying power, sparks international interest</u>
 - o An effective carbon market for a stronger California
 - o <u>The right way to judge a carbon market (hint: it's not the prices)</u>
 - o <u>California's refineries data yet again shows climate change controls are working</u>

CALIFORNIA CAP-AND-TRADE AUCTION

Overview of the Auction

California Carbon Allowances (CCAs) are auctioned quarterly – 4 times a year through 2020.

Who is selling?

The auction is run by the state, but some of the allowances auctioned are owned by the <u>state</u> and some are owned by the <u>utilities</u> (e.g. PG&E, Southern California Edison, etc.).

What is auctioned?

2 types of allowances are auctioned: **CURRENT YEAR VINTAGE + FUTURE YEAR VINTAGE**

Current year allowances are eligible for use starting in the current year and future year allowances can be banked for later use but may not be used for compliance until their vintage year. Each auction has a minimum allowable bid, or "floor price," which started at \$10 in 2012 and increases every year by 5% plus the rate of inflation.

Floor Price 2012: \$10.00 2013: \$10.71

Note: A Vintage Year 2013 Allowance is abbreviated as V13. Likewise a Vintage Year 2015 is V15.

Auction Results to Date: Current Allowances (August 2013)

Summary: All of the 64,438,402 V13 allowances available for sale in the first four auctions sold at a price per allowance above the set floor. In all auctions, there were more bids than allowances available for V13, indicating a competitive market. The great majority of bid winners in all auctions were compliance entities.

Current Allowances	Nov'12	Feb'13	May'13	Aug'13
Floor price	\$10.00	\$10.71	\$10.71	\$10.71
Settlement Price	\$10.09	\$13.62	\$14.00	\$12.22
V13 allowances offered	23,126,110	12,924,822	14,522,048	13,865,422
% purchased	100%	100%	100%	100%

Key Takeaways

- The 100% sale of V13 in all auctions point to a strong and viable carbon market with high competition and demand.
- The absence of a price spike indicates that bidders believe they will have lower than expected costs in complying with the carbon cap.
- The small price dip in settlement price during the last auction is an indication that regulated companies predict lower costs of compliance than previously expected.
- Declining prices can also be a sign that companies are seeing the benefits of investments in energy efficiency projects, reducing the demand for emissions allowances.



Auction Results to Date: Future Allowances (August 2013)

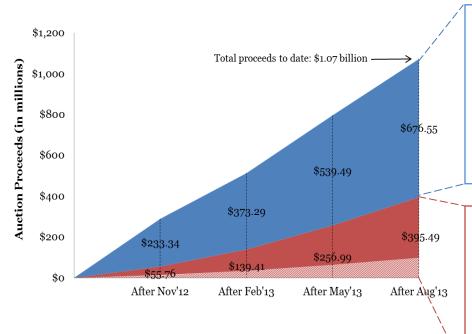
Summary: Interest in the sale of future vintage allowances V15 and V16 has increased over the past four auctions. All future allowances available for sale were purchased during the most recent auction at a settlement price above the set floor price.

Future Allowances	Nov'12	Feb'13	May'13	Aug'13
Floor price	\$10.00	\$10.71	\$10.71	\$10.71
Settlement price	\$10.00	\$10.71	\$10.71	\$11.10
Allowances offered	39,450,000	9,560,000	9,560,000	9,560,000
% allowances purchased	14%	46%	79%	100%

Key Takeaways

- The 100% sale of V16 allowances in the most recent auction reflects bidder confidence in ARB's commitment to the longevity of California's maturing carbon market.
- Bidders are preparing to meet their compliance obligations as we approach the second compliance period.

Auction Proceeds for a Clean California



This money gets returned to customers of California's investor-owned electric utilities (PG&E, So Cal Edison & SDG&E) in the following breakdown:

- \$575,068,479 (85%) to households
- \$67,655,115 (10%) to small businesses (demand not more than 20kW in more than three months)
- \$33,827,558 (5%) to leakage exposed industries

This money must be dedicated by the state for use to advance the goals of AB 32*. A detailed investment plan is currently developed and will focus on making costeffective advancements of clean transportation, energy generation, and energy efficiency. At least 25% (\$98,871,388) must go to benefit disadvantaged communities.

*Amounts listed are from first four auctions only *Funds raised from 2012 and 2013 auctions are being borrowed by the state and will be paid back in full with interest.

A Look at the Qualified Bidders

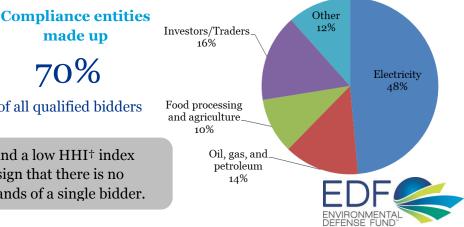
Number of Oualified Bidders at Each Auction

Nov	Feb	May	Aug
'12	'13	'13	'13
73	91	81	79

138 unique qualified bidders

A diverse array of qualified bidders and a low HHI⁺ index mean a competitive market and is a sign that there is no concentration of allowances in the hands of a single bidder.

Breakdown of Oualified Bidders by Industry (over all auctions)



Finding the ways that work

[†] The Hirschman-Herfindahl index (HHI) is a measure of the concentration of allowances purchased by winning bidders relative to the total sale of current vintage allowances in the auction. See official auction results at: http://www.arb.ca.gov/cc/capandtrade/auction/auction.htm

made up

70%

of all qualified bidders