

CARBON MARKET BUSINESS BRIEF

CALIFORNIA

CALIFORNIA ETS AT A GLANCE

Years in operation	<p>First compliance period: 2013-14 Second: 2015-17 Third: 2018-20 Fourth: 2021-22 Fifth: 2023-24 Sixth: 2025-27 Seventh: 2028-29 Eighth: 2030-31</p> <p>*The programme switched from three-year to two-year compliance periods upon its reauthorisation in 2019.</p>
Overall cap & trajectory	<p>The 2020 cap is 334.2 million t CO₂e. The cap declines 12.7 million t CO₂e annually on average, to reach 193.8 million by 2031.</p>
Target(s)	<p>California has a series of longer-term climate targets, including a 2030 state reduction target of 40% below 1990 levels, and carbon neutrality goal in 2045.</p> <p>Cap-and-trade is operational through 2030 and is expected to achieve 38% of the state's abatement toward that goal, indicating a further reliance on the programme to be the workhorse of emissions reductions (details in most recent 2017 Scoping Plan). The role of cap-and-trade beyond 2030 and, by extension, in achieving the state's carbon neutrality goal is uncertain.</p>
Sectors covered	<ul style="list-style-type: none"> • Electricity generation (including imports) • Large stationary sources (including refineries, oil and gas production facilities, food processing plants, cement production facilities, and glass manufacturing facilities) that emit more than 25,000 tCO₂e annually • Since 2015, distributors of transportation fuels, natural gas, and other fuels were also covered. Fuels exclusively for aviation or marine use are not covered.
GHGs covered	<p>CO₂, methane, N₂O, SF₆, HFCs, PFCs, NF₃ and other fluorinated GHGs</p>
# of covered entities	<p>Approximately 600 entities have reporting obligations, and approximately 400 of those have compliance obligations</p>
Allocation method	<p>California distributes allowances differently to each of the three capped sectors:</p> <ul style="list-style-type: none"> • The industrial sector currently receives about 90% of its allowances for free based on output and efficiency, such that a producer is not penalised for making more goods and a producer who can make more goods with fewer emissions is rewarded. • The utility sector receives free allowances but must sell those allowances at auction and use the revenue to benefit its ratepayers, primarily through a climate credit on utility bills. • The transportation sector does not receive free allowances and must purchase them, either via the quarterly state-administered auctions or the private secondary market.

Trading rules	The programme imposes holding and purchase limits that stem the overall quantity of allowances that entities can hold or purchase, respectively. Third-party financial entities can also participate in trading if they meet certain prerequisites.
Use of offsets and linking	<p>The use of offsets is limited to 8% of a covered entity's compliance obligation for the first three compliance periods, 4% for the fourth compliance period, and 6% for the fifth and sixth compliance periods. At least half of offsets post-2020 must provide direct environmental benefit to the state (DEBs). The California Air Resources Board has established rigorous US forestry, urban forestry, livestock, ozone depleting substances, mine methane capture, and rice cultivation compliance protocols.</p> <p>The programme linked to Quebec's cap-and-trade system in January 2014. It was linked to Ontario in January 2018, but a de-link occurred in mid-2018 when the province abruptly scrapped its system following a change of governance. There have been discussions on linkage with Oregon or Washington if they were to establish cap-and-trade programmes.</p>
Other features	<p>California has a complex series of price controls, including an Auction Reserve Price which started at \$10 per tonne in 2012 and increases 5% annually plus inflation. The 2020 price floor is \$16.68.</p> <p>Starting in 2021, a portion of allowances will be set aside in two reserves which are triggered at different price points. The reserves will be triggered at \$41.40/t CO₂e and \$53.20, increasing by 5% plus inflation annually. These will replace three reserves that existed before 2021.</p> <p>A price ceiling will also be set starting in 2021, starting at \$65/t and rising by 5% plus inflation. If this threshold is triggered, units from the reserve will be offered at the price ceiling.</p> <p>Banking is allowed; borrowing is not allowed.</p>
Penalties for non-compliance	<p>Annual Compliance Obligation: A covered entity must surrender allowances equivalent to 30% of emissions from the previous year within the current compliance period by 1 November annually.</p> <p>Triennial Compliance Obligation: A covered entity must surrender allowances equivalent to 100% of emissions for the compliance period, less allowances already surrendered.</p> <p>Failure to surrender on time results in an immediate surrender obligation equivalent to four times the missing balance.</p>
Use of revenues	<p>Some revenue is returned directly to utility ratepayers through the California Climate Credit on utility bills.</p> <p>The rest makes up the Greenhouse Gas Reduction Fund (GGRF), which reduces greenhouse gas emissions through California Climate Investments (CCI) which emphasises benefits to low-income and disadvantaged communities. To date, the CCI has appropriated more than \$6 billion in investments.</p>

MAJOR DEVELOPMENTS

A recent reauthorisation, which took effect on 1 April 2019, extended the cap-and-trade programme until 2030. The reauthorisation modified the price ceiling, introduced allowance reserves triggered at prices below ceiling levels, and changed certain rules regarding offsets, including the so-called DEBs requirement that 50% of all credits used from 2021 onwards are from projects which provide direct environmental benefit to the state.

Current debates over programme design are primarily taking place through the Offset Protocol Task Force (OPTF), launched in January 2020, and the Independent Emissions Market Advisory Committee (IEMAC), launched in June 2018. The OPTF was created to provide guidance to the California Air Resources Board (CARB) in approving new offset protocols for use in the cap-and-trade programme. Conversations surrounding the OPTF focus on ensuring that new protocols exhibit additionality, permanence, and conservative baselines.

The IEMAC meanwhile was created to analyse the economic and environmental performance of the cap-and-trade programme. Conversations surrounding the IEMAC focus on allowance supply, specifically whether the CARB is issuing too many allowances and, if so, whether to intervene in the market to restrict allowance supply.

MARKET COMMENTARY

Over the course of the WCI cap-and-trade programme, an increasing oversupply of allowances have kept prices close to the annual auction floor price. Legislators' 2017 agreement to extend the programme to 2030 boosted confidence in the market, and this drew outside interest. In August 2018, financial market participants' interest in the market increased though they did not hold a significant position in the market.

After the February 2019 auction, more financial participants, including several hedge funds, started taking large positions in the market. The position of these participants kept growing and reached a high of nearly 71 million tonnes in futures and options on the exchanges by 10 March 2020. This increase in demand pushed prices well above the auction floor price over this period, to nearly \$20.

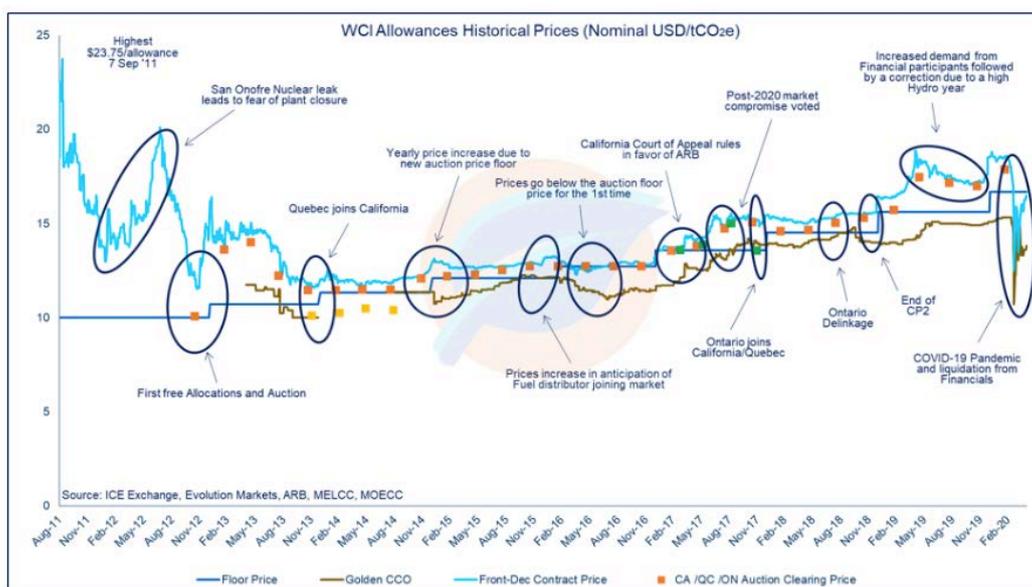


FIGURE 1
California Carbon Allowance Price History (\$/tCO₂e)

However, the COVID-19 outbreak in March 2020 quickly led to market uncertainty as California and Quebec both enforced jurisdiction-wide travel restrictions and business closures. As a result, many market participants – especially financial participants – liquidated a large portion of their positions, which drove prices down to unprecedented lows far below the 2020 auction floor price of \$16.68.

Throughout April 2020, market prices slowly returned to the auction floor price as selling pressure eased. However, the lack of demand expected due to ongoing COVID-19 lockdowns will likely keep a lid on prices going forward. In addition, the economic disruptions caused by the lockdowns have led Canada into a recession and will likely do the same to the US, which will prolong reduced emissions levels and thus allowance demand. Demand over the remaining 2020 auctions will likely be low, diverting unsold allowances to 2021 and 2022 auctions. If demand remains low going into 2021, some allowances could be diverted to the APCR, which would be bullish in the long run. Further out, CCA prices are expected to uncouple from the floor price in 2022, when the market begins seeing growing yearly deficits.

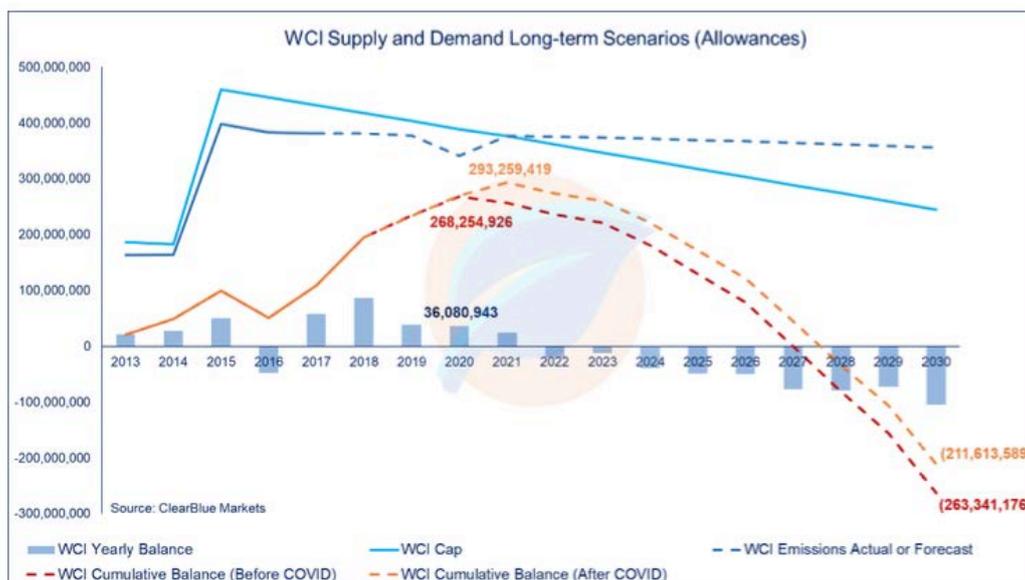


FIGURE 2
WCI Supply and Demand Forecast Scenarios (Allowances)

USEFUL LINKS

[ICAP California ETS Fact Sheet](#)

[Use of Auction Revenue](#)

[IEMAC Home Page](#)

[OPTF Home Page](#)

REFERENCES

[California Air Resources Board Cap-and-Trade Home Page](#)

AUTHORS

Katie Sullivan
Managing Director, IETA
sullivan@ieta.org

Clayton Munnings
West Coast Representative, IETA
munnings@ieta.org

Nicolas Girod
Managing Director, ClearBlue Markets
ngirod@clearbluemarkets.com

Ben Evans
Market Analyst, ClearBlue Markets
bevans@clearbluemarkets.com