International Carbon Action Partnership
ETS Detailed Information

USA - California Cap-and-Trade Program

General Information

Summary	**Status:** ETS in force **Jurisdictions:** California Initiated in 2012, the California Cap-and-Trade Program began its compliance obligation on 1 January 2013. California has been part of the Western Climate Initiative (WCI) since 2007 and formally linked its system with Québec's on 1 January 2014. In July 2017, California passed legislation extending the cap-and-trade program to 2030. The cap-and-trade program covers sources responsible for approximately 85% of California's GHG emissions. In 2016, California passed legislation to reduce emissions by 40% compared to 1990 levels by 2030. Regulation for the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms California Air Resources Board Website on the Cap-and-Trade Program
Overall GHG emissions (excluding LULUCF)	**Emissions:** 429.4 $MtC0_2e$ (2016) Estimations generally follow a top down-approach. Bottom-up data from the Mandatory Reporting Program is used exclusively in the case of cement plants and refineries and as a complement to top-down sources for in-state electricity generation and imported electricity. All methods are consistent with IPCC 2006 guidelines.
Overall GHG emissions by sector	Sector Name — MtCO2e Transportation — 169.38 Electric Power — 84.09 Commercial and Residential — 49.10 Industrial — 102.97 Agriculture and Forestry — 34.65 Other — 0.17
Overall GHG reduction target	**By 2020:** Return to 1990 GHG levels. **By 2030:** 40% reduction from 1990 GHG levels. **By 2050:** 80% reduction from 1990 GHG levels.
Type of ETS	Mandatory
Cap and trajectory	**Type of Cap:** Absolute The caps are listed below in MtCO2e allowances. **First Compliance Period (2013-2014):** 2013: 162.8; 2014: 159.7. **Second Compliance Period (2015-2017):** 2015: 394.5; 2016: 382.4; 2017: 370.4. **Third Compliance Period (2018-2020):** 2018: 358.3; 2019: 346.3; 2020: 334.2.

	From 2021 to 2031, the annual caps are: 2021: 320.8; 2022: 307.5; 2023: 294.1; 2024: 280.7; 2025: 267.4; 2026: 254.0; 2027: 240.6; 2028: 227.3; 2029: 213.9; 2030: 200.5; 2031: 193.8 Beyond 2020, compliance periods will be between two and three years long (2021–2022, 2023–2024, 2025–2027, 2028–2029, and 2030–31), if US Environmental Protection Agency (EPA) approves California's plan for compliance with the federal Clean Power Plan by 1 January 2019. Otherwise, the fourth compliance period will start on 1 January 2021, and end on 31 December 2023, and each subsequent compliance period will be three years long.
Carbon Price	*Current Allowance Price (per t/CO2e):* USD 15.05 (clearing price of August 2018 auction)

ETS Size

Emissions covered by the ETS	0.85
GHG covered	CO_2, CH_4 and N_2O, SF_6, HFCs, PFCs, NF_3 and other fluorinated GHGs.
Sectors covered and thresholds	**First compliance period (2013-2014):** Covered sectors include those which have one or more of the following processes or operations: Large industrial facilities (including cement production, glass production, hydrogen production, iron and steel production, lead production, lime manufacturing, nitric acid production, petroleum and natural gas systems, petroleum refining, pulp and paper manufacturing, including cogeneration facilities co-owned/operated at any of these facilities), electricity generation, electricity imports, other stationary combustion, and CO_2 suppliers. **Second compliance period (2015-2017) and beyond:** In addition to the sectors listed above, suppliers of natural gas, suppliers of reformulated blendstock for oxygenate blending (RBOB) and distillate fuel oil, suppliers of liquid petroleum gas in California and suppliers of liquefied natural gas. **Inclusion Thresholds:** Facilities ≥25,000 tCO_2e (metric) per data year.
Number of liable entities	Approximately 450 entities (2015-2017) "Covered Entity" means an entity within California that has one or more of the processes or operations and has a compliance obligation as specified in subarticle 7 of the Cap-and-Trade Regulation; and that has emitted, produced, imported, manufactured, or delivered in 2008 or any subsequent year more than the applicable threshold level specified in section 95812 (a) of the Regulation. General threshold for compliance is 25,000 $mtCO_2$.
Point of regulation	Mixed

Phases & Allocation

Compliance period	Three calendar years (after first compliance period of two years). Allowances for emissions of the whole compliance period must be surrendered by 1 November (or the first business day thereafter) of the year following the last year of a compliance period. Note: California's trading period is referred to as 'compliance period', though a portion (30%) of allowances must be submitted for each year's emissions depending on the year of the trading/compliance period. **First compliance period:** 2013-2014 **Second compliance period:** 2015-2017 **Third compliance period:** 2018-2020

	* **Fourth compliance period and following:** Usually 2-year periods, with one three-year period (either 2021-2023 or 2025-2027 depending on U.S. EPA decision (see *). * If U.S. EPA has not approved California's plan for compliance with the Clean Power Plan by 1 January 2019, then the fourth compliance period starts on 1 January 2021 and ends on 31 December 2023, and each subsequent compliance period will be three years long.
Trading period	California's trading period is referred to as a "compliance period" (see "compliance period"). Allowances are allocated and auctioned with calendar year vintages. Some allowances from future vintages are offered for sale at each auction and may be traded but not used for compliance until the compliance date for the vintage year.
Allocation	Allowances are distributed either via auction or free allocation. **Electrical distribution utilities and natural gas suppliers:** Receiveallowances on behalf of their ratepayers (consignment allowances). All natural gas and electrical utilities must use the allowance value for ratepayer benefit and for emissions reductions. **Industrial facilities:** Receive allowances for transition assistance and to prevent leakage. The amount of free allocation is determined by leakage risk (measured through emissions intensity and trade exposure, used to define assistance factors), sector-specific benchmarks and production volumes as well as a general cap-adjustment factor. In the third compliance period, the assistance factor is differentiated across sectors based on leakage risk. For the post-2020 period, assistance factors for allocation will be part of a new rulemaking to reflect the direction provided in (AB) 398, which specifies an assistance factor of 100% in the post-2020 period. The majority of industrial allocation is based on production benchmarks and is updated annually based on verified production data. There is no cap on the total amount of industrial allocation. **Other allocation:** Other categories of transition assistance are provided for public wholesale water entities, legacy contract generators, universities, and public service facilities. The remainder of allowances is auctioned. In 2017, almost 70% of allowances were available through auction, including allowances from Air Resources Board (ARB) as well as consigned allowances to utilities.

Flexibility

Banking and borrowing	Banking is allowed but the emitter is subject to a general holding limit. Borrowing of future vintage allowances is not allowed.
Offsets and credits	**Quantitative Limit:** Up to 8% of each entity's compliance obligation. **Qualitative Limit:** Currently six domestic offset types are accepted as compliance units originating from projects carried out according to six 'protocols': 1. U.S. forest projects 2. Urban forest projects 3. Livestock projects (methane management) 4. Ozone depleting substances projects 5. Mine methane capture (MMC) projects 6. Rice cultivation projects **From 2021:** AB 398 lays out two significant changes to the offset program from 2021 onwards: (1) The share of offsets that can be used to fulfill the compliance obligation will reduce to 4% between 2021–2025 and will remain reduced at 6% thereafter (from 8% now). (2) In addition, half of the compliance obligation will have to stem from offsets creating direct environmental benefits in California.
Provisions for price management	Auction Reserve Price: USD 14.53 in 2018 per allowance. The auction reserve price increases annually by 5% plus inflation, as measured by the Consumer Price Index.

	An Allowance Price Containment Reserve will be allocated allowances from various budgets (1% from budget years 2013-2014; 4% from budget years 2015-2017; and 7% from budget years 2018-2020). AB 398 requires two-thirds of the reserve allowances that remain on December 31, 2017 to be used to populate the two price containment points starting in 2021. The reserve sale administrator can sell accumulated allowances on a regular basis in three equal price tiers. For 2017, these prices are USD 50.69, 57.04, and 63.37 (EUR 48.61, 54.70 and 60.77). Tier prices increase by 5% plus inflation (as measured by the Consumer Price Index). If the allowances in the reserve are all sold, allowances from future years are transferred to the reserve and made available for sale. AB 398 reforms the price management provisions starting in 2021: Two price containment points triggered at increasing price levels will be filled with remaining APCR allowances. A third price level, yet to be determined, will be a price ceiling. At this level, allowances can be bought in unlimited quantities, with the revenues having to be invested in real, permanent, quantifiable, verifiable, enforceable, and additional emissions reductions on at least a metric ton for metric ton basis.

Compliance

Monitoring, Reporting, Verification (MRV)	**Reporting frequency:** One year **Verification:** Emission data reports and their underlying data require independent third-party verification annually for all entities covered by the program (generally defined as entities with emissions that equal or exceed 25,000 tCO_2e per year). **Other:** Reporting is required for most operators at or above 10,000 tCO_2e (metric) per year. Operators must implement internal audits, quality assurance and control systems for the reporting program and the data reported. More information: Mandatory Greenhouse Gas Reporting Regulation - Overview
Enforcement	Penalties may be assessed pursuant to Health and Safety Code section 38580 (misdemeanor, fines, and possibly imprisonment). There are separate and substantial penalties for mis- or non-reporting under the Mandatory GHG Reporting Regulation.

Other Information

Institutions involved	California Air Resources Board (CARB)
Linkage with other schemes	California linked with Québec's ETS on 1 January 2014. The two extended their joint market by linking with Ontario on 1 January 2018. This link was terminated in July 2018 after newly elected Ontario Premier Douglas Ford revoked the province's cap-and-trade regulation.

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