

OFFSETS IN CALIFORNIA'S CAP-AND-TRADE PROGRAM



What are offsets?

Under the California cap-and-trade program, there are two types of compliance instruments: allowances and offsets. Allowances are initially generated by the government and initially distributed to sources subject to the cap (regulated entities) via auction or allocation. In contrast, an offset is an alternative compliance instrument voluntarily generated by a non-Regulated Entity (a private market participant) pursuant to a California Air Resources Board (ARB) rules, and sold to regulated entities through bi-lateral purchase agreements. Both allowances and offsets can be traded on the secondary market.

An offset represents the reduction, removal or avoidance of one tonne of greenhouse gas (GHG) emissions that would not have otherwise occurred and which is generated from an ARB-registered project. Regulated Entities can use offsets to fulfill up to 8% of their compliance obligation under the cap-and-trade program. The 8% limit ensures that 92% of emission reductions under cap-and-trade are made directly by regulated entities at sources subject to the cap and not just compensated by offsets. Offsets must be generated from projects developed based on rules (called offset protocols) adopted by ARB and administered by Offset Project Registries (OPRs) which assist ARB by reviewing projects and providing expertise on the protocols. ARB also approves offset projects which private market participants undertook before the effective date of the cap-and-trade program (called early action offset projects) if they meet certain regulatory requirements, including registration under one of the approved early action protocols.



Key criteria for offsets

- **Real:** offset must represent real emission reductions that have already occurred (i.e. the reduction is not projected to occur in the future)
- **Additional:** offset must represent emission reductions that are in addition to what would have occurred otherwise
- **Permanent:** offset must represent emission reductions that are non-reversible or must be sequestered for 100-years or more
- **Verifiable:** sufficient data quantity and quality must be available to ensure emission reductions can be verified by an independent third party auditor (verifier) against an established protocol
- **Quantifiable:** emission reductions represented by offsets must be reliably measured or estimated, and capable of being quantified
- **Enforceable:** offset ownership is undisputed and enforcement mechanisms exist to ensure that all program rules are followed.



Benefits of offsets

Offsets achieve completely voluntary GHG emission reductions at sources outside of the cap. And because ARB retains oversight of the offset approval process, it can encourage certain types of source reductions via approving offset protocols targeting selected uncapped sectors (e.g. forestry). Further, offsets can increase flexibility by giving regulated entities another option for compliance in addition to just allowances. Finally, and perhaps most importantly, offsets can help reduce compliance costs because reductions can often be generated outside of the cap less expensively than they could be within the capped sectors. Due to this and the risk of invalidation of offset credits (discussed below), offsets often sell at a discount to allowances. Less expensive emission reduction costs lead to overall lower compliance costs, this reduces the cost impact on consumers. Development of offsets can spur technology innovation in areas outside of capped sectors, and deliver economic benefit by creating new job opportunities for stakeholders involved in offset projects.

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Risks associated with offsets

Under the California program, offsets can be cancelled (or invalidated) for, inter alia, failure to comply with a given offset protocol even after offsets have been surrendered for compliance. This risk of cancellation is called “invalidation risk.” If invalidation occurs, the entity which used the invalidated offset for compliance must surrender another valid offset or allowance, thus increasing the costs. The ability to review an offset’s compliance with a given protocol after surrender for compliance ensures the environmental integrity of the compliance program, but makes offsets less attractive as a compliance instrument compared to allowances, which can never be invalidated. However, robust and efficient verification requirements and review by OPRs prior to issuance, as well as due diligence prior to purchasing offsets can reduce invalidation risk.



ARB Adopted Offset Protocols

ARB has adopted five protocols to date covering: U.S Forest Projects, Urban Forests Projects, Ozone Depleting Substances (ODS) Projects, Livestock Projects, and Mine Methane Capture (MMC) Projects. ARB is continuously working to adopt new offset protocols and is now assessing rice cultivation projects as another offset protocol type.



How many offsets have been issued?

ARB has issued over 17 million compliance offsets to date, far short of the supply needed to satisfy the maximum demand of 58 million offsets through 2015.



How do offset prices compare to allowance prices?

California Compliance Allowances: \$12.50 - \$13.00 | California Compliance Offsets: \$9.00 - \$11.00



More information

More information is available at: <http://www.arb.ca.gov/cc/capandtrade/offsets/issuance/issuance.htm>