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AB 32 and Offset Basics

To keep you updated on exciting developments in California's groundbreaking Cap-and-Trade Program, this final *Alert* in a three-part series focuses on yet another important element of the carbon trading system: Offsets. Offsets could significantly impact a company's ability to comply with the new program, due to begin on January 1, 2013. Additionally, rules governing offsets will likely shape compliance strategies. Our previous two *Alerts* in this series explained the fundamental features of the California Cap-and-Trade Program and the rules of the soon-to-be-launched auction system. To further understand cap and trade in California, this *Alert* will discuss the basic elements of the offset program and how offset credits will work in the cap-and-trade system.

Offsets will help regulated entities reduce the potentially enormous cost of complying with the California Cap-and-Trade Program. As intended by the California Air Resources Board (ARB), entities subject to limits on greenhouse gas (GHG) emissions may cushion the transition to expensive emission-reducing technologies by purchasing offset credits through the Compliance Offset Program.¹

— OFFSETS AT A GLANCE —

- ARB will issue offset credits, and each offset credit will be equal to 1 metric ton of carbon dioxide equivalent (MtCO₂e).
- Regulated entities may use offset credits to achieve up to 8 percent of their compliance obligations.
- To be eligible for credit, an offset must be real, quantifiable, permanent, verifiable, additional, and enforceable.
- Offset credits are to be quantified using an approved Offset Protocol.

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- ARB has approved detailed protocols for four types of projects: forestry, urban forestry, livestock operations, and destruction of ozone-depleting substances.
- Verification must be obtained from an independent third party before ARB will issue credits for a project.
- Buyers and sellers of offset credits will use the Compliance Instrument Tracking System Service (CITSS), which will track compliance offset credits just as it tracks allowances and all other compliance instruments.
- If an offset credit is invalidated, the holder of the credit will be legally liable and must replace the credit in order to stay under its carbon cap.

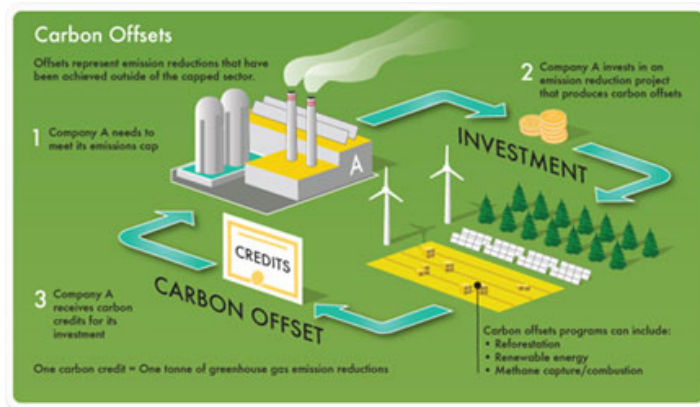
OFFSET BASICS Offset credits are reductions of GHG emissions achieved by an entity that is outside of one of the sectors regulated by the Cap-and-Trade Program, but the reductions may be purchased in the form of offset credits and used by a covered entity to meet its compliance obligations under the program.

A covered entity may offset up to 8 percent of its “compliance obligation” (i.e., its total reported greenhouse gas emissions) by buying offsets generated by other entities.² Compliance periods are annual or triennial, except the first compliance period, which is only two years because of the delay in implementation. ARB compliance offsets may not be carried over into the next compliance period.³ This is significant to those who follow the EU ETS, as the Marrakesh rules⁴ state that parties are allowed to carry over certified emissions reductions (CERs) and emission reduction units (ERUs) to the potential subsequent commitment period, up to 2.5 percent of the party’s initial assigned amount units (AAUs) under the Kyoto Protocol.⁵

Under the California Cap-and-Trade Program, each offset credit is equal to 1 metric ton of carbon dioxide equivalent (MtCO₂e) and can only be quantified using an ARB-approved compliance offset protocol.

Subarticle 13 of the ARB’s Cap-and-Trade Program regulations⁶ details the legal requirements for compliance offset protocols, implementation and verification of offset projects, and issuance of ARB offset credits.⁷

Only ARB may issue compliance offset credits.⁸



How Carbon Offset Trading Works

Source: GreenWorld

Eligible Offsets To be eligible for credit under the California Cap-and-Trade Program, an offset must be real, quantifiable, permanent, verifiable, and enforceable.⁹ To be credited as an offset, the action or project must also be “additional” to what is required by law or regulation, or would otherwise have occurred.¹⁰ This is no different from the standard requirements for offsets under other existing cap-and-trade schemes. As always, these standards are meant to ensure that an offset actually contributes to emission reductions in order to be eligible for the program.

Verification: Offsets must be independently verified by a third party before ARB will issue a credit, which is meant to ensure that the greenhouse gas reductions achieved by an offset credit are “real.”¹¹ Only ARB-accredited offset verification bodies and offset verifiers may provide offset verification services under the compliance offset program.¹² ARB is currently conducting training programs and will provide a list of accredited verifiers for offset project operators.¹³

Offset Protocols: In order to ensure that offsets meet ARB’s standards, the agency is initially restricting qualifying offsets to projects in four areas: forestry, urban forestry, livestock operations, and destruction of ozone-depleting substances.¹⁴

Forest Project Protocol, ecological regions and subregions



Source: California Environmental Protection Agency, Air Resources Board

Each offset must comply with a detailed set of requirements, known as an

“offset protocol,” which includes standardized methods for quantifying emission reductions, criteria for determining additionality, and monitoring and reporting requirements.¹⁵ All offsets must be verified by a third party. The current protocols are all based on (but not identical to) protocols developed by the Climate Action Reserve.¹⁶ ARB will consider and is expected to approve additional protocols in the future.¹⁷ Future protocols could include landfill gas reductions, nitrous oxide destruction, and agricultural soil management to reduce nitrous oxide emissions.¹⁸ The International Emissions Trading Association (IETA) is also encouraging ARB to include carbon capture and storage as an eligible offset activity.¹⁹

Currently, the offset program is limited to emissions-reduction projects in the United States, but ARB has established a framework for future inclusion of international offset programs.²⁰ This is potentially an exciting development and would bring ARB offsets more in-line with the United Nations Clean Development Mechanism (CDM).

Many of the projects that have already been approved for use as offsets are landfill operations in the Southeast that have been isolating and destroying methane, earning offset credits that can be sold on California’s carbon market.²¹ Another example of a potentially successful offset program is Clean Harbors, a Massachusetts company whose hazardous waste disposal operation in El Dorado, Arkansas, destroys chlorofluorocarbons (CFCs), old refrigerants that are potent greenhouse gases. These pre-1995 refrigerants, the production of which is now banned worldwide because of their deleterious effect on the ozone layer, may otherwise have been recycled for reuse in older grocery freezer compartments. According to a list of approved offset projects prepared by the Climate Action Reserve, the Clean Harbor project has already offset the equivalent of 2.3 million tons of carbon dioxide emissions, which would translate to 2.3 million offset credits potentially worth \$10 or more each. Cargill, the agricultural and food processing company, will market the credits generated from the Clean Harbors operation.²²

Registries: ARB’s cap-and-trade regulation allows the agency to approve Offset Project Registries to help facilitate the listing, reporting, and verification of offset projects developed using the compliance offset protocols. Offset Project Registries must meet specific regulatory criteria to be approved by ARB. Offset credits listed on a registry cannot be used for compliance with the Cap-and-Trade Program until they are converted to an ARB offset credit. Agency staff plan to release an instructional guidance document to explain how to participate in registries. There are currently no approved Offset Project Registries.²³

Crediting Period ARB has provided offset project crediting periods for each of the offset protocols discussed above. Offset credits will be issued for emissions avoided or reduced by a project during the crediting period. Depending on

the category of offset, the credit periods for the four currently approved offset protocols are either 10 years or 25 years. ARB would also determine crediting periods for future protocols. With regard to sequestration projects, ARB's regulation establishes a crediting period range of 10 to 30 years.²⁴

The crediting period applies to an offset project, as compared with a compliance period, which applies to a covered entity. During the course of a project's crediting period, the project may continue to generate annual offset credits based on its verified emissions offsets. The project operator would then sell those offset credits to a covered entity or some other buyer, which would be able to use the credit during the course of the buyer's compliance period. For example, a forestry project that generates 1 MtCO₂e per year of emissions reductions may sell 1 offset credit per year for each of the 25 years of its crediting period. Once sold, the credit is good for the duration of the buyer's compliance period. The covered entity that buys the offset credit generated during the project's first year may use that credit for the compliance period in which the entity purchased the credit. The next year, the project would generate another offset credit that it would be able to sell to the same covered entity or another buyer, which would then be able to use that second-year credit toward its current compliance period. Once the covered entity's compliance period ends, its offset credits would basically expire and the entity would have to buy new credits, either from the same forestry project or some other project. Meanwhile, the project would continue generating offset credits on an annual basis and would continue to sell those credits to any entity that wants to buy the credit. This system of annual credit generation would last for the rest of the project's crediting period.

Project Approval The first step in ARB's approval process for offset projects is "listing," in which a project developer, called an Offset Project Operator, or its designee, provides an initial submission of information on the project to ARB or an Offset Project Registry, assuming any registries are eventually approved by ARB. Listing information is provided in each offset protocol. To list a project, an Offset Project Operator must register with ARB to open an account to hold compliance instruments, and must attest in writing as to the veracity and completeness of the information provided. ARB or the Offset Project Registry would then determine whether the information is complete and if the project "generally meets" the requirements of additionality. If so, then the project is listed as a "proposed project." The status would change to "active" when credits are issued for the project. Approval for listing is not the same as project approval, which occurs after verification.²⁵

After a project is listed, the Offset Project Operator must submit an Offset Project Data Report on an annual basis. The report is used in project monitoring and to calculate emissions reductions achieved by the project. Specific reporting requirements are set forth in the applicable offset protocol.²⁶

The next step prior to credit issuance is verification, during which an independent third-party verifier reviews the information provided by the Offset Project Operator to ensure that claimed emission reductions will be achieved. If a project is successfully verified, the verifier will issue a Positive or Qualified Positive Verification Statement and attest to the accuracy of the verification.²⁷ As noted above, ARB is in the process of accrediting verifiers.

When an Offset Project Operator has completed all of these steps and received a verification statement, ARB or the Offset Project Registry will issue offset credits equal to the emissions reductions or removals verified in the verification statement. Remember, however, that only ARB may issue an offset credit, so any credits issued by a registry must be converted to ARB credits. The initial crediting period for a project begins on the date of the first verified emission reductions.²⁸

Once ARB has issued an offset credit, the agency will transfer the credit into the Holding Account of the Offset Project Operator or designee, the credit will be assigned a serial number, and the credit is then entered into the account of the registered owner of the credit. After that point, the credit may be sold, traded, or transferred, just like allowances.²⁹

Offsets and the Auction System As with allowances, the Compliance Instrument Tracking System Service (CITSS) will provide accounts for market participants to hold and retire compliance instruments, including offsets, and to participate in transactions of offsets with other account holders.³⁰ The CITSS will track compliance offset credits just as it tracks allowances and all other compliance instruments.³¹

Vintage	Issuing Jurisdiction	Type (B)	Type (C)	Category (D)	Project Code
2013	-	Allowance		N/A	N/A
-	-	Allowance	ERA	N/A	N/A
-	-	Allowance	Reserve	N/A	N/A
2012	CA	Offset		Livestock	PR05685

How Offsets Will Be Represented in the Compliance Instrument Tracking System Service (CITSS)

Source: California Environmental Protection Agency, Air Resources Board

ARB’s staff is still developing the agency’s regulatory guidance document on offsets, offset registries, and trading offsets in the auction system.³²

LIABILITY ARB plans to employ a “buyer liability” approach when addressing noncompliance. In other words, the covered entity that purchases an offset credit will be legally liable if the offset is invalidated. For example, a credit may be invalidated by ARB because of fraud or the Offset Project Operator’s “error”—that is, malfeasance, incompetence, or simply the failure of the project to deliver the claimed emission reductions. When a credit is invalidated by ARB, it will be

canceled and removed from the credit holder's account. The credit holder would then have to replace the invalidated credit and pursue legal action against the seller. Replacement liability falls on the project operator only if the credit owner is out of business. The rationale for this approach to liability is that ARB prefers a liability system in which it can enforce compliance on in-state businesses rather than out-of-state or foreign entities.³³

COMPARISON TO THE CLEAN DEVELOPMENT MECHANISM The European Union Emissions Trading System (EU ETS) is a mandatory cap-and-trade program, which allows operators use of compliance carbon credits from Kyoto project-based mechanisms (Clean Development Mechanism (CDM) and Joint Implementation (JI)), up to a certain limit. The EU-ETS has been implemented in three "phases".

Similar to the use of offsets under ARB, the use of CDM and JI project credits, under the EU ETS program, is supposed to be "supplemental" to emissions reductions that take place within the EU. Limitations on the use of CDM/JI credits for compliance under the EU ETS vary by member state. The Directive for Phase III of the EU-ETS extends the rights to use these credits for the third trading period and allows a limited additional quantity to be used in such a way that the overall use of credits is limited to 50 percent of the EU-wide reductions over the period 2008 to 2020. In practice, this means that existing operators will be able to use credits up to 11 percent of their allocation during the period 2008 to 2012. Note that the limit under California's Cap-and-Trade Program is 8 percent, so the use of offsets under the California system is slightly narrower.

During the second phase of the EU-ETS, all CDM and JI project types are eligible under the EU ETS, except those from Land Use, Land Use Change, and Forestry (LULUCF), and credits from hydrofluorocarbon (HFC) and adipic acid projects are generally excluded after January 1, 2013. California, on the other hand, will recognize certain HFC reductions as offsets and, in this way, the California system is slightly broader than the EU system.

Tradable units and pricing information for offset credits under the EU ETS are based on those used for the CDM and JI project-based mechanisms, respectively. Because the EU is the largest purchaser of such credits, the secondary market price for CDM/JI credits follows the same trend as the price for European Union Allowances (EUAs), factoring in a discount to take account for certain delivery uncertainties. The pricing for offsets under the California system is also very likely to take into account the delivery uncertainties, and the price of California offsets is likely to be significantly depressed as a result of California implementation of "buyer liability"—that is, the covered entity that purchases an offset credit will be legally liable if the offset is invalidated. Because California offsets are expected to be in short supply for at least the first compliance period, however, this short

supply will tend to drive up the price of offsets. As a result, most experts do not expect the pricing of California offsets to follow the demand for CCAs, but rather to be subject to pricing fluctuation based on availability.

PROS AND CONS OF THE USE OF OFFSETS UNDER ARB'S CAP-AND-TRADE PROGRAM Offset credits have several advantages and disadvantages that covered entities will have to consider as they determine how to meet their emission-reduction requirements.

In some ways, offsets are an attractive option compared with other methods of achieving emission reductions. First, offsets will likely reduce the costs of compliance. Purchasing offset credits may turn out to be much less expensive than buying and installing new technology, training employees on how to use that technology, and instituting changes in the industrial or operating processes needed to reduce emissions. Second, and similarly, offsets may provide more flexibility to a covered entity in meeting its compliance obligations. In fact, reducing compliance costs and providing flexibility underlie ARB's rationale for setting up an offset program. Third, offsets also deliver financial benefits to those businesses, landowners, farmers, and foresters that participate in the offsets market by documenting emissions reductions and generating sellable credits. Further, offsets could spur innovation in sectors of the economy that are large sources of greenhouse gases, and that lack the necessary emissions measurement systems for inclusion in the Cap-and-Trade Program.³⁵ Finally, offsets are a method of getting entities not subject to emissions regulations to reduce their emissions in a verified manner.

At the same time, the offset program has several disadvantages that are also important to consider. First is the liability issue discussed above. The buyer of an offset credit loses out if a credit is canceled by ARB and the buyer must replace that credit. This shifts the cost of compliance to the buyer, and that cost may be high depending on the price of the credits. The second potential disadvantage is the expected limited availability of credits, at least at first. According to estimates, offset supply will likely be lower than the offset limit for the foreseeable future.³⁶

The potentially limited supply is due in part to the limit of four protocols and the potential difficulty in proving additionality.³⁷ As a result, there may not be enough offsets to meet demand, so it may be difficult and costly to purchase credits—driving the price of offset credits close to the price of carbon credits.³⁸ Finally, any offset used for compliance with the cap-and-trade scheme is, by definition, a reduction avoided by the compliance entity. This means that the use of offsets for compliance does nothing as a policy matter to reduce the “capped” emissions. Further, offsets tend to dilute the market, causing oversupply of compliance credits, and therefore suppressing the overall price of carbon credits. While this may be better for compliance entities (by reducing their cost of compliance), it

could undermine the market as a whole.

LITIGATION Plaintiffs have challenged the legitimacy of certain aspects of the ARB's offset program. This case is ongoing and will reach significant milestones before the cap and trade program is scheduled to start in January 2013.

In *Citizens Climate Lobby and Our Children's Earth Foundation v. California Air Resources Board*, the plaintiffs are challenging the validity of the Offset Protocols issued by ARB. The issue in the case is whether the Offset Protocols violate the Global Warming Solutions Act (AB 32) because they fail to ensure that each and every reduction that generates an offset credit will be additional to any greenhouse gas emission reduction that otherwise would occur. In essence, the plaintiffs argue that ARB has pre-determined that projects qualifying for one of the Offset Protocols have satisfied the statute's additionality requirement, even though some of the carbon reductions that result in credits may otherwise have occurred even in the absence of AB 32. According to the plaintiffs, because the Offset Protocols do not ensure that each and every reduction generating an offset credit will be additional, they all must be invalidated. Various parties have intervened on the side of ARB, including many that are not usually seen on the same side of an issue, such as the Environmental Defense Fund and the Nature Conservancy, along with many large utilities including Southern California Edison, PG&E, and San Diego Gas & Electric. The court will hear arguments November 6 and issue an opinion sometime thereafter, likely before the end of the year. If the court agrees with the plaintiffs and enjoins the use of offsets, only the offset program will be affected. The court's decision will not impact the rest of the Cap-and-Trade Program because the regulations include a severability clause. On the other hand, the offset program was developed by ARB as a cost-containment mechanism, so entities that planned to rely on offset credits may have difficulty achieving compliance.

In sum, offsets under the California Carbon Market are subject to a complex regulatory scheme. It is important for an entity interested in entering the California carbon market to understand the risks and opportunities afforded by ARB's compliance offset program.

HOW REED SMITH CAN HELP Reed Smith's transnational Environmental and Climate Change team has more than 22 years of collective experience dealing with buying, selling, and trading offsets under existing carbon trading systems. Our substantial experience working with offset trading in existing international carbon markets provides insight into the buying, selling, trading, and holding of offsets for compliance with the California Cap-and-Trade Program.

1. Felicity Barringer, *California Adopts Limits on Greenhouse Gases*, N.Y. TIMES, Oct. 20, 2011, at A25.
2. California Environmental Protection Agency, Air Resources Board (ARB), *Compliance Offset Program* (July 25, 2012), <http://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>; ARB, *Overview of ARB Emissions Trading Program* (Oct. 20, 2011), http://www.arb.ca.gov/newsrel/2011/cap_trade_overview.pdf; Anne C. Mulkern, *Offsets Could Make up 85% of California's Cap-and-Trade Program*, N.Y. TIMES, Aug. 11, 2011, <http://www.nytimes.com/gwire/2011/08/08/08greenwire-offsets-could-make-up-85-of-califs-cap-and-tra-29081.html>; Barringer, *supra* note 1.
3. Mulkern, *supra* note
4. Decision 13/CMP.1 9. [need full citation]
5. ARB, *Compliance Offset Program* (July 25, 2012), <http://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>.
6. Cal. Health & Safety Code §§ 95970-95988.
7. ARB, *Compliance Offset Program* (July 25, 2012), <http://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>.
8. *Id.*
9. Cal. Health & Safety Code § 95970(a)(1).
10. *Id.*; Electric Power Research Institute (EPRI), *Overview of California Greenhouse Gas Offsets Program 7* (April 2011), http://globalclimate.epri.com/doc/EPRI_Offsets_W10_Background%20Paper_CA%20Offsets_040711_Final2.pdf.
11. ARB, *Cap-and-Trade Regulation Instructional Guidance 11* (June 2012), <http://www.arb.ca.gov/cc/capandtrade/guidance/introduction.pdf>.
12. ARB, *Compliance Offset Program* (July 25, 2012), <http://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>.
13. See <http://www.arb.ca.gov/cc/reporting/ghg-ver/ghg-ver.htm>.
14. ARB, *Overview of ARB Emissions Trading Program* (Oct. 20, 2011), http://www.arb.ca.gov/newsrel/2011/cap_trade_overview.pdf.
15. EPRI, *supra* note 10, at 7.
16. *Id.* 6.
17. ARB, *Compliance Offset Program* (July 25, 2012), <http://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>; EPRI 7; Environmental Defense Fund (EDF), *The Role of Offsets in California's Cap-and-Trade Regulation 1* (April 2012), <http://www.edf.org/sites/default/files/OffsetsPercentagesFAQFinal%20041612.pdf>.
18. EPRI, *supra* note 10, at 7.
19. *Id.* at 7.
20. ARB, *Overview of ARB Emissions Trading Program* (Oct. 20, 2011), http://www.arb.ca.gov/newsrel/2011/cap_trade_overview.pdf; EPRI, *supra* note 10, at 6, 8-9; Barringer, *supra* note 1.
21. Barringer, *supra* note 1.
22. *Id.*
23. ARB, *Compliance Offset Program* (July 25, 2012), <http://www.arb.ca.gov/cc/capandtrade/offsets/offsets.htm>.
24. EPRI, *supra* note 10, at 12.

25. *Id.* at 13-14.
26. *Id.* at 14.
27. *Id.* at 15-16.
28. *Id.* at 17
29. *Id.*
30. ARB, *California Cap-and-Trade Program Implementation 2* (July 25, 2012), <http://www.arb.ca.gov/cc/capandtrade/implementation/faq.pdf>.
31. *Id.* at 5.
32. See ARB, *Regulatory Guidance Document* (June 21, 2012), <http://www.arb.ca.gov/cc/capandtrade/guidance/guidance.htm>.
33. EPRI, *supra* note 10, at 20.
34. EDF, *supra* note 17, at 1.
35. *Id.*
36. EPRI, *supra* note 10, at 11.
37. Mulkern, *supra* note 2.
38. *Id.*
39. *Assoc. of Irrigated Residents v. California Air Res. Bd.*, 206 Cal. App. 4th 1487 (2012).