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California Approves "Cap-and-Trade" Regulation

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On December 16, 2010, the California Air Resources Board ("CARB") approved a new regulation that establishes the country's first state-level "cap-and-trade" program regulating greenhouse gas ("GHG") emissions. The program establishes a "cap" on GHG emissions in California, which will be gradually reduced to 1990 levels.

Even as CARB approved the rule, Chairman Nichols acknowledged that the "cap-and-trade" program is likely to be amended as a result of comments received at or before CARB's December 16 hearing. In those comments, utilities and forest products companies praised the rules. Governor Schwarzenegger and other state officials have endorsed CARB's work in promulgating the rule, as have many environmental groups. At the hearing, industry groups, special governmental districts and other regulated entities identified a number of specific problems that CARB indicated would be reviewed in the first half of 2011.

Following is a summary of the final rule, followed by key issues identified in comments.

Background

In September 2006, California adopted AB32, the California Global Warming Solutions Act of 2006, which requires CARB to develop a regulatory program to reduce California's GHG emissions to 1990 levels by 2020. Under CARB's cap-and-trade rule, CARB will establish annual caps on aggregate GHG emissions in California and allocate the rights to emit GHGs among various industry segments. Covered entities will be required to obtain and submit "compliance instruments," – either an "allowance" or an "offset" – for each ton of "carbon dioxide equivalent," or "CO_2e,"[1] emitted during each three-year compliance period. By ratcheting down the aggregate limit and restricting the issuance of allowances and the creation of offsets, CARB intends to reduce the aggregate emissions of CO_2e to the desired levels by 2020.

Implementation

The program has five main elements: (1) covered GHGs; (2) covered entities; (3) the cap; (4) allowances; and (5) offsets.

Covered GHG Emissions. The most important gas included in the program is carbon dioxide (CO_2), which is really the driver behind AB32 and the reason that it is economically significant. Other gases that are included, but which are less significant (for different reasons) are methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulfur

[1] The global warming potential of GHGs varies, with some GHGs having a significantly higher global warming potential than CO_2. GHG regulations address GHGs in terms of their equivalence to CO_2, expressed as carbon dioxide equivalent, or CO_2e.

hexafluoride (SF_6); nitrogen trifluoride (NF_3); and certain other fluorinated GHGs.[2] The GHG emissions covered in the rule are the same as those required to be monitored and reported under EPA's mandatory GHG reporting rules, but are more extensive than those that will be regulated by EPA under federal regulations scheduled to take effect January 2, 2011, or the GHGs that are currently regulated internationally under the Kyoto Protocol.[3] This means that California's cap-and-trade program will impose obligations that are not expected to exist in any other jurisdiction.

Covered Entities. CARB decided to implement the program in two phases, focusing on large emitters in the electricity sector and certain industries in Phase I, and on the remaining regulated entities in Phase II. Phase I commences January 1, 2012 and will encompass the next three calendar years. Phase II commences on January 1, 2015, and terminates on December 31, 2017. A third compliance period will commence January 1, 2018, and terminate on December 31, 2020.

During Phase I, compliance obligations are imposed upon "first deliverers of electricity" and "operators of [covered] facilities." "First deliverers of electricity" include all electricity generating facilities located in California that emit more than 25,000 metric tons per year of CO_2e, as well as electricity importers.[4] Covered facilities include cogeneration facilities, stationary combustion facilities and certain other major industrial facilities[5] that emit more than 25,000 metric tons per year of CO_2e.

Phase II expands the group of entities regulated under the program to include the producers and importers of natural gas, liquefied petroleum gas and most liquid fossil fuels, in amounts representing the emission of more than 25,000 metric tons of CO_2e. This expansion effectively regulates uses of fossil fuels, including the use as fuel for small electric generation facilities, commercial facilities and industrial facilities, not covered in the first compliance period. Smaller emissions sources, including residential and small commercial sources, would not be directly regulated under the program, but would indirectly pay the costs of the program through higher energy prices and higher prices for goods and services that depend on fossil fuels.

The "Cap" of Cap and Trade. CARB intends to establish the GHG emissions cap at what it considers to be "business-as-usual" levels for 2012 and to reduce the emissions on a straight line basis (slightly less than 2% per year) until the end of the program in 2020. When natural gas and transportation fuels are added as part of Phase II of the program in 2015, the overall cap is increased to account for the new sources covered by the cap-and-trade program.[6] CARB established the cap in 2012 at 165.8 million metric tons ("mmt") of

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[2] "Other fluorinated GHGs" is defined to mean SF_6, NF_3, and "any fluorocarbon except for controlled substances as defined at 40 CFR Part 82, subpart A and substances with vapor pressures of less than 1 mm of Hg absolute at 25 C. With these exceptions, 'fluorinated GHG' includes any hydrofluorocarbon; any perfluorocarbon; any fully fluorinated linear, branched, or cyclic alkane, ether, tertiary amine, or aminoether; any perfluoropolyether; and any hydrofluoropolyether."

[3] EPA's Tailoring Rule and the Kyoto Protocol address only six GHGs, or carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

[4] Phase I will include imports of electricity from "specified" generation facilities if the imported electricity is associated with more than 25,000 metric tons CO_2e of GHG emissions. If the source of the electricity cannot be specifically identified, then the Phase I program will apply to all of the electricity imported by the importer, with an assumed default rate of GHG emissions assigned to that electricity.

[5] The applicable industrial processes or operations are: Cement production	Cogeneration	Glass production
Hydrogen production	Iron and steel production	Lime manufacturing
Nitric acid production	Oil and natural gas systems	Petroleum refining
Pulp and paper manufacturing	Self-generation of electricity	Stationary combustion

[6] The annual allowance budgets from 2012-2020, as set forth in CARB's Statement of Reasons:

CO_2e, with a peak of 394.5 mmt in 2015, and will decline to 334 mmt by 2020. Eighty-nine million allowances will be distributed to the electricity sector in the first compliance year, and that number will decline at the same rate as the aggregate cap over time. The remaining allowances, totaling approximately 76 million in 2012, will be allocated to the other covered entities. The cap in 2012 will be approximately 5% lower than actual emissions (from the same regulated sectors) in 2008.

Allowances. Each year, CARB will create or "issue" an aggregate number of allowances equal the cap for that year, each of which is intended to authorize the emission of one metric ton of CO_2e. In the initial compliance year, 97% of the allowances will be distributed to covered entities in accordance with as-yet-to-be-determined baseline calculations. One percent of the total allowances will be held in a "cost containment" reserve in the first year, with increasing percentages being held in reserve over time. Two percent of the allowances each year will be reserved for auction by CARB to fund governmental projects relating to clean air.

CARB's allocation of allowances is the principal unsettled issue in the rule. During Phase I, allowances will be issued for free to publicly-owned utilities and industrial users. Investor-owned utilities will also receive allowances for free ("IOU-Allocated Allowances"), but will be required to make them available to CARB to be publicly auctioned. Both the investor-owned utilities who receive "free" allocations and other electricity deliverers (including importers and independent generators covered by the rule) will be required to bid for and buy allowances through the auction process. Publicly-owned utilities may retain the freely allocated allowances for their own compliance purposes, and may, but are not required to, sell allowances.

Industrial facility operators will initially receive allocations for free from CARB, and will not be required to submit them back to CARB for auction or to purchase allowances at auction. Over time, a portion of the allowances allocated to industrial facilities will be subject to auction requirements. The auction requirements vary by industry and over time, in an effort to avoid adverse competitive impacts upon California industry that would essentially transfer demand to out-of-state suppliers (referred to as "leakage").

The regulation sets a minimum bid price of $10 per ton of CO_2e in the first year, and escalates that minimum reserve price by 5% each year. As a result, all investor owned-utilities and independent power producers who sell energy to the IOUs, will be required to pay at least $10 per CO_2e (or approximately $7 per MWh based on a gas-fired turbine generator) for allowances relating to their emissions. The auction is a closed-bid auction, and each quarterly auction will only consist of one round of bids.

Compliance Period	Year	Annual Allowance Budget
1st Compliance Period	2012	165.8 MM
	2013	162.8 MM
	2014	159.7 MM
2nd Compliance Period	2015	394.5 MM
	2016	382.4 MM
	2017	370.4 MM
3rd Compliance Period	2018	358.3 MM
	2019	346.3 MM
	202	334.2 MM

The proceeds from the auction of IOU-Allocated Allowances will be used primarily to benefit ratepayers. Proceeds from the auction of allowances other than IOU-Allocated Allowances will be used by the state to further the goals of AB 32, either through rebate programs to ratepayers, or the distribution of grants or other benefits to community benefit funds, or low carbon investment funds. Rebated auction revenues are intended to be redistributed to ratepayers on a per capita basis.

In an attempt to limit gamesmanship or the ability to corner the market on allowances, CARB adopted limits on the number of allowances a cap-and-trade participant may acquire. Covered entities may purchase a maximum of 10% of the total number of allowances available for a budget year. Voluntary participants (i.e., non-regulated entities) may purchase a maximum of four percent of the total number of allowances. IOUs are exempt from the purchase limitations. CARB will be collecting extensive information about companies and their shareholders and affiliations in order to enforce the prohibition on "cornering the market."

Offset Credits. A covered entity can demonstrate its compliance with cap-and-trade requirements either by acquiring allowances or offset credits. CARB will issue offset credits for authorized projects that result in verifiable emissions reductions. AB 32 requires that offset projects be evaluated to confirm that any reduction of emissions caused by the project are real, permanent, quantifiable, verifiable, enforceable, and additional. CARB will administer a program that is designed to define and enforce these criteria. CARB will also adopt protocols for specific project types that will be authorized to generate offsets. Only four protocols have been included in the program: urban forest projects, ozone depleting substances, livestock manure digester projects, and U.S. Forest projects, and currently, only projects in North America are likely to be eligible. CARB will consider the approval of offsets for "sector-based" programs that reduce deforestation in other countries. Offsets will be available for "early action" projects that reduce or offset GHG emissions before the program was finalized. CARB has limited the amount of offset credits that a covered entity may use at 8% of its compliance obligations.

Analysis

Commenters on the cap-and-trade rules raised many issues concerning the rule's impact on California.

Cap. The cap under the program will be established at a level that is likely to require a reduction in economic activity in California in 2012 and thereafter. The cap will initially be set at 5% below the same level of actual emissions in 2008. In addition, due to set asides and opt in rules (which allow non-regulated entities to buy and "retire" allowances), the actual cap available to industry and electricity generators in California is likely to be even further constrained. Companies subject to the rules will therefore have to decide whether to pay more for allowances or offsets, or curtail operations (or move their operations to other states or countries). CARB is fully aware of these arguments, and plans to "monitor" the economy to see how many companies leave California as a result of the rule.

Auctions. The auction process imposes a minimum price of $10 per CO_2e for the market participants required to bid for allowances. This fee will initially apply only to IOUs, and to electricity generators and importers who do not receive allocations of allowances (e.g., independent power producers). IOUs and these other covered entities will bid in CARB-managed auctions for the right to continuing using fossil fuels, and will be prohibited from importing or generating electricity unless they can outbid other market participants. Unsuccessful bidders will be required to curtail operations. The bidding rules apply only to large generators and importers of electricity in the first compliance period, and to all importers and producers of fossil fuels in the second compliance period. Commenters expressed concerns that the additional costs for goods and services would drive businesses and residents out of the California.

Redistribution of Auction Revenues. The costs of the cap-and-trade program will be borne by electricity ratepayers and by consumers of California goods and services. Most of the revenue generated by the cap-and-trade program is required to be rebated back to ratepayers. Likewise, the auction prices paid by third parties, such as independent generators and importers, will be rebated to electricity ratepayers. The passthrough mechanics have not yet been fully developed, but CARB contemplates collecting auction revenues in proportion to use, and rebating the proceeds on a per capita basis (meaning equally among all ratepayers). The larger users of electricity will, therefore, be subsidizing the smaller users of electricity. In addition, independent power generators and importers will be subsidizing ratepayers as well. Commenters expressed concern about the reallocation of costs from electricity ratepayers to industry, and about the fairness of increasing the costs of large users for the benefit of smaller users of electricity and energy.

Independent Power. Independent power generators and importers are the one sector that will not directly receive allowances. All allowances that are obtained by these entities will need to be purchased at auction, from allowances auctioned by their utility customers, for the most part. In some cases, the commercial arrangements may allow the generators and importers to recover their costs in the price of the energy they generate or import. In other cases, those contractual arrangements will not allow such a passthrough of costs. The regulation will therefore treat different independent power producers differently depending on their contract status.

Inter-Sector Competition. The allowances used in the electricity industry and in the industrial sectors are the same types of allowances, and they are freely tradable. It is likely that competition will develop between electricity generators or importers on one hand, and industrial users on the other. There is no mechanism in the program for preventing crossover price competition that could adversely affect one industry sector or another. IOUs should be able to recover the auction costs in their regulated rates, but other covered entities do not have the ability to force their customers to pay higher prices. Accordingly, utilities will be able to raise their rates to cover auction costs and will be able to outbid competing industrial and commercial entities in the same markets. This dynamic will raise non-electricity prices and cause adverse economic impacts upon covered entities other than utilities.

Opt-In Entities. The regulations permit entities to "opt in" to the program (i.e., become regulated) to establish status as a voluntary purchaser or seller of allowances or offsets. Once an entity chooses to opt-in, it must comply with all aspects of the rule, including the submission of allowances. But, the overall cap would not increase. So, any opt-in entity would compete with regulated parties for allowances and offsets, increasing compliance costs at the expense of existing generators or importers of electricity, or other industrial operators. The rule also allows voluntary retirement of allowances by non-regulated entities. Regulated entities expressed concern that both opt-in and voluntary participants in the market would drive up compliance costs.