June 29, 2011

Cap-and-Trade Market Issues

LEGISLATIVE ANALYST'S OFFICE

Presented to:
Senate Select Committee on the Environment, the Economy, and Climate Change
Hon. Fran Pavley, Chair

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A Changed Emissions Landscape Affects Planned Role for Cap-and-Trade

☑ ***Updated Economic Analysis: Downward Adjustment to 2020 Emissions Baseline.*** As part of its updated economic analysis completed in 2010, the Air Resources Board (ARB) reexamined the economic assumptions it used in the original 2008 AB 32 Scoping Plan (the board's plan to meet the AB 32 goal of reducing California's greenhouse gas [GHGs] emissions to 1990 levels by 2020). Based on its revised economic forecasts accounting for a reduced level of economic activity, the board made downward adjustments to the 2020 emissions baseline. The board also made other technical downward adjustments to the emissions baseline to more properly account in the baseline for emission reductions that result from legislation predating AB 32. In turn, these adjustments served to lower the targeted amount of emission reductions required to move the state to 1990 emission levels by 2020—from the original target of 174 million metric tons of carbon dioxide equivalent (MMTC02E) to the revised target of 80 MMTC02E.

☑ ***Planned Emission Reductions From Cap-and-Trade Adjusted Downward.*** As shown in Figure 1 (see next page), with the lowered total emission reduction target, the role for cap-and-trade to fill the gap between the total target and the emission reductions planned from traditional, command-and-control measures has been reduced accordingly. While the cap-and-trade program was to provide 34.4 MMTC02E of emission reductions in the 2008 Scoping Plan, the board's updated 2010 analysis shows 18 MMTC02E of emission reductions will now come from cap-and-trade.

A Changed Emissions Landscape Affects Planned Role for Cap-and-Trade *(Continued)*

Figure 1

Scoping Plan's Greenhouse Gas (GHG) Emissions Reduction Measures

(GHG Emissions in MMTCO2E)

Category of Measure	Original 2008 Scoping Plan Target	Updated 2010 Analysis Target
Low carbon fuel standard	15.0	15.0
Large industrial sources: direct regulation	1.4	—
High global warming potential gases	20.2	6.5[a]
Energy efficiency	26.3	12.0[a]
Renewables portfolio standard (RPS):[b]		
20 percent RPS and 33 percent RPS	21.3	—
33 percent RPS	—	11.4
Pavley standards:[c]		
Pavley 1 and Pavley 2	31.7	—
Pavley 2	—	3.8
Other measures	23.7	13.3[a]
Cap-and-trade	34.4	18.0
Totals	**174.0**	**80.0**

a Target excludes measures under this category which have not been updated, therefore, the updated total target for this category does not reflect all measures contained in the 2008 Scoping Plan.

b Updated baseline now includes 20 percent RPS. Therefore, 2010 target only reflects 33 percent RPS.

c Updated baseline now includes Pavley 1. Therefore, 2010 target only reflects Pavley 2.

MMTCO2E = millions of metric tons of carbon dioxide equivalents.

☑ ***The ARB Likely Still Overstates Emission Reductions Required From Cap-and-Trade.*** We find that the ARB's updated estimates as shown in Figure 1 potentially overstate the targeted level of emission reductions that will be required from cap-and-trade. This is because the board has not comprehensively scored the emission reductions planned to come from a number of complementary measures, such as the measure that would increase combined heat and power use to 30,000 GWh.

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Cap-and-Trade Markets: The Potential for Gaming

☑ ***California's Cap-and-Trade Program Gives Rise to Multiple Carbon Markets.*** The ARB's cap-and-trade program gives rise to a number of distinct but interrelated markets:

- *The primary market,* where emission allowances are initially allocated or auctioned by ARB or where offset credits are certified by ARB. (Emission allowances and offset credits are collectively referred to as compliance instruments.)
- *The spot market,* where compliance instruments are *traded* directly.
- *The derivatives market,* which involves the *trading* of financial contracts, primarily for hedging and investment, the value of which depends on the market behavior of compliance instruments.

☑ ***What Is Gaming and Its Potential Consequences?*** We define gaming broadly to include *manipulation* of both the various cap-and-trade markets described above and cap-and-trade program rules (such as through fraud). Such activities tend to distort market price signals and can result in lowered confidence in the market, decreased liquidity in the market, and more generally, declines in the overall economic efficiency of the market. This can lead to higher costs to the economy than necessary to meet the program's goals and potentially undermine the effectiveness of the cap-and-trade program in meeting the state's policy objectives. For example, such manipulation could result in program participants making unnecessarily expensive investments in GHG abatement technologies based on the artificial price signals that they are facing. In other cases, the intended programmatic benefits in terms of GHG emission reductions are degraded.

Cap-and-Trade Markets: The Potential for Gaming *(Continued)*

- ***Complexity of ARB's Cap-and-Trade Program Opens It Up to Potential Gaming.*** Carbon markets are, by their very nature, complex. In general, the more complex the markets are, the more challenging it will be to regulate them, and the more susceptible they become to manipulation and fraudulent activity. The cap-and-trade system as designed by ARB is particularly complex, in that it has a multitude of complex design features that are intended to address various policy objectives. These policy objectives include the ARB's stated desire to reduce the potential for economic activity to leave the state as a result of cap-and-trade implementation.

- ***The ARB Is On Its Own in Overseeing the Spot Market.*** Currently, no governmental oversight authority—federal or otherwise—is established to routinely monitor and regulate trading of compliance instruments in the spot market. The ARB has determined that it must step in to fill this regulatory gap. However, ARB has no experience in regulating such markets, and its lack of technical expertise and institutional knowledge of such matters increases the chance that market manipulation could go undetected, in spite of any monitoring efforts that it puts in place.

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Cap-and-Trade Markets: The Potential for Gaming *(Continued)*

☑ ***The ARB's Plans to Oversee the Spot Market.*** Although ARB will not be administering the spot trading market (that is, it will not be brokering trades or running a market clearinghouse), it has set rules that govern participation in the spot market. These rules address who may participate and at what level one may participate. The ARB also plans to contract with an independent market monitoring service to detect potential market manipulation. Violators of these market rules—such as parties who have failed to disclose conflicts of interest—can be banned under ARB's proposed cap-and-trade system from participating in the market. However, any disciplinary action would take place after the fact, and ARB may not be able to invalidate transactions once completed. While rules may guard against future malfeasance by participants who have proven to be bad actors, such actions may have already caused harm to the market and program that ARB may be unable to undo.

☑ ***State Lacks Authority to Regulate the Derivatives Market, but Federal Government Has an Oversight Role.*** The ARB has concluded that it does not have the authority to govern participation in the derivatives market because it is within the sole regulatory jurisdiction of the U.S. Commodities Futures Trading Commission.