

Putting Knowledge Into Action



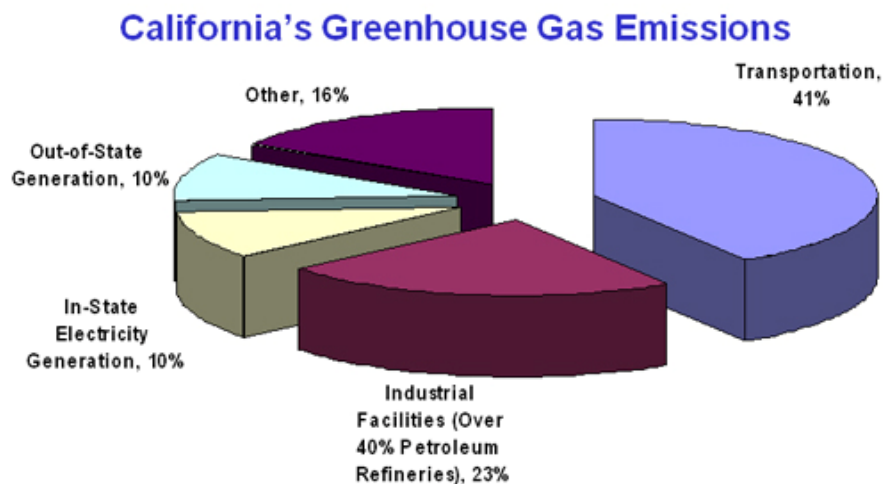
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California Carbon Markets

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California is about to embark on the creation of the world's most aggressive greenhouse gas market in the most energy efficient state in the United States. Already the state has enacted the most progressive renewable energy and demand response initiatives in the country with a Renewable Portfolio Standard of 20 percent by 2010 (which will most likely rise to 33.3 percent by 2020), a \$2.9 billion solar initiative, and an accelerating demand response regime. California has also recognized that to get significant greenhouse gas reductions you must burden share among all sectors for those reductions not just electric utilities like the Regional Greenhouse Gas Initiative in the Northeast does. (The California global warming report is available at www.climatechange.cagov/documents/indexhtml).

The California emissions profile is shown graphically below.



Source: CA Energy Commission

What is AB 32: The California Greenhouse Gas Statute?

California based its climate change law in August 2006 and is now implementing the regulatory framework to meet a 2012 deadline to make 25 percent reductions from 1990 levels in greenhouse gases by 2020. This reduction will rise to 80 percent by 2050. The law is mandatory, not following the path of the voluntary markets that the Bush Administration is touting. The crafting of that regulatory schema falls primarily on the Air Resources Board (ARB) but also has significant inputs from the California EPA (which supervise ARB), the California Public Utilities Commission (CPUC) which regulates the utility sector, and the California Energy Commission (CEC). The California EPA, lead by Secretary Linda Adams, has been the lead negotiator on the climate change law for the Governor. There is also input from other California state agencies including the water and transportation sector. The bottom line is that California is so serious about greenhouse gas reductions, the issue was passed in an election year, was bipartisan and contributed to the reelection of Governor Schwarzenegger. The California carbon footprint that must be reduced is 175 million metric tonnes of greenhouse gases by 2020.

While a mandatory market based "cap and trade" system is not written into the law, the reality is that California will be implementing a mandatory cap and trade system.

The California climate change law is really broad brush strokes. It is now the responsibility of the various state regulatory agencies to create the regulations. While there are many questions in developing the final rules, the primary issues are how will the allowances be allocated and will they be facility specific or industry specific, and how to determine the 1990 baseline. Benchmarking approaches have been suggested based on efficiency. There is also going to be some percentage of buying of credits in the Kyoto international markets for California emissions compliance. There is also the issue of how many carbon credits will be auctioned (RGGI, for example, is looking at 25 percent auctioning). Auctioning of course gives the state revenues, as companies have to buy the credits rather than a free allocation system, as we have under the SO₂ allowance scheme for acid rain remediation.

Climate change experts forecast broad impacts in California. They include coastal sea level rises, levee problems on the Delta region near Sacramento, water scarcity problems, fire, deforestation, agricultural destruction, and electric power. Energy costs will go up in the state because of extreme heat events.

Where we are today in California is that the Air Resources Board now has its budget to hire staff in late August 2007 and is now in the position of developing the scoping plan for market implementation. January 2010 early action measures as well as the low carbon fuels standard will be implemented. 40 percent of the emissions reductions will be achieved through ARB so there is the need to broaden the work of the "Climate Action Team." There are efforts to address energy efficiency and carbon footprints of state buildings, the state transportation fleet, state prisons and also various other water, energy and transportation efforts. Green building initiatives will be part of the mix. The bottom line is that all solutions to reducing the greenhouse gas footprint are being implemented and are at various stages of market development.

What California has done right is make the climate change regime broad and encompasses all facets of the greenhouse gas producers including the transportation sector. There are clean car regulations which have resulted in litigation with automobile manufacturers and the unfortunate position of the California government suing the U.S. EPA on a waiver under the Clean Air Act which will allow California to regulate tailpipe emissions. The low carbon fuel standards are an attempt to reduce California's 98 percent oil dependency. There are also initiatives to bring in cleaner diesel fuel as well as ethanol blend into the gasoline pool.

The Climate Registry

The California Climate Action Registry (www.climateregistry.org) now has 33 states involved in these efforts to create a viable emissions reduction registry. This will most probably be broadened into a larger platform. This registry will help with fungibility of carbon credit generation in other jurisdictions, and is developing a Project Registry to quantify, certify, and register the greenhouse gas emission benefits of emission reduction projects. The California registry has been voluntary but will become mandatory for reporting greenhouse gas emissions in 2009. The California registry is to be a benchmark for the establishment of The Climate Registry which will involve multiple states on one platform.

The Broadening of the California Market Efforts

The Western States Climate Initiative was created this year to broaden the California climate change efforts into a regional solution. It involves not only California but Washington, Oregon, Arizona, New Mexico and Utah as well as the Canadian provinces of British Columbia and Manitoba. The Mexican state of Sonora is an observer and other states such as Colorado, Kansas and Nevada, as well as other Canadian provinces such as Ontario and Saskatchewan, are thinking of joining. Unfortunately energy producing Alberta is not considering joining at this time. What is evolving is a Western regional greenhouse gas solution which is committing to 15 percent reductions of GHGs by 2020 from the 2005 baseline.

The goal of the Western States Climate Initiative is to reduce 350 million metric tonnes of GHGs by 2020 of which California is half that amount. The effort is to have the Western States follow the California implementation plan in parallel so there is little duplication of effort.

The California Carbon Gold Rush

Today, we are seeing the beginning of a California carbon gold rush. The coin of the realm will be CO₂e which is measurable as a metric tonne of carbon dioxide equivalent. It is a fungible commodity that is both measurable and verifiable. Now it is going to have a greater monetary value placed on it. Today's voluntary carbon is worth \$3 to \$4 per tonne in the United States. That is going to 10X and excites many. Project developers, consultants, lawyers, investors, entrepreneurs and the like indicate rising interest by both government and the private sector on how to create the real market for emissions reductions. California has put a stake in the ground called AB 32, and now it is time to implement the law. As the most energy efficient state transitions into a less greenhouse

gas polluting state, the opportunities to implement cleaner technology and greater efficiency are unprecedented as there will be market incentives to do so. This is the beginning of a real market. Watch this space!

Peter C. Fusaro is spending much time in California this year on market developments in the state. He will be holding his fourth California carbon markets seminar on October 2nd at the offices of Merriman Curhan Ford & Co. For further information, please go to

<http://www.pgsenergy.com/FusaroSanFranClassroom.html>.



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