

Success of Climate Change Law Depends on Cost-Effective Implementation

Much has changed since Governor Arnold Schwarzenegger signed AB 32, The Global Warming Solutions Act of 2006. Three years since its passage, the bill has spurred a regulatory program that is more far-reaching than any other and that affects all consumers and businesses in the state. California continues to be watched by other states and nations as the process for reducing the state's overall greenhouse gas emissions moves forward.

In 2008, the California Air Resources Board (ARB) adopted the "Scoping Plan" for implementing AB 32. This plan includes the overall framework for achieving the greenhouse gas (GHG) reduction goals outlined in the bill. It includes strategies and reductions that are expected from various sectors. Without question, it will affect the entire California economy in some capacity.

The amount of regulatory uncertainty due to the nature of the Scoping Plan and ARB's efforts to implement its myriad measures continues to be a major issue for businesses and industries statewide. With the state's grim economic outlook for the current fiscal year and beyond, the business community is increasingly concerned about the additional costs that are expected from implementation of this plan.

The Implementation Timeline

The timeline for implementation is tight, especially considering the broad scope of the plan. In 2009, ARB began work on implementing the strategies included in the Scoping Plan through regulatory proceedings. Each strategy will go through its own regulatory process with the expected workshops, stakeholder meetings and analysis. With the enforcement date for the discrete early actions starting in 2010, and AB 32's 2012 implementation date just two years away, however, it is clear that the regulatory process will continue to be demanding for stakeholders who continue to engage in the process.

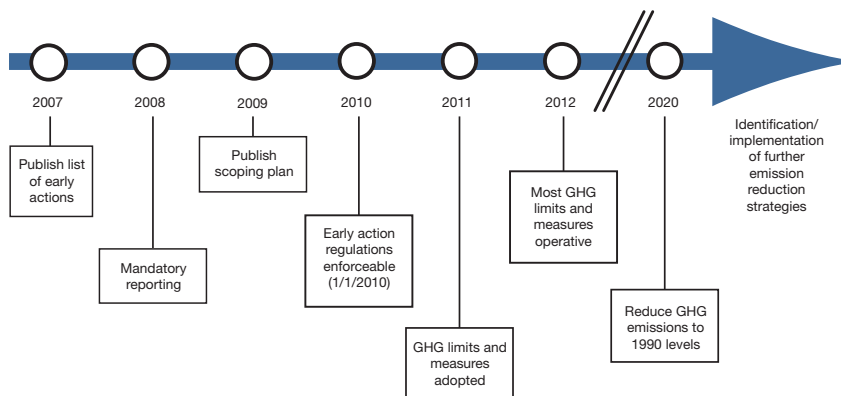
The Cap

One of the ARB's more important tasks since the implementation process began was to set the cap for the 2020 goal. This GHG cap is based on the state's

1990 GHG emission levels, which amounts to an approximately 30 percent reduction from "business as usual." According to the Scoping Plan, ARB estimates that business-as-usual emissions in 2020 would be 596 million metric tons of CO₂ (MMTCO₂E) if there were no cap. The ARB believes that with the Scoping Plan in place, the state can reduce emissions to 422 MMTCO₂E by 2020. This is a very significant reduction and will require businesses and industry to drastically alter practices in order to reach the 422 MMT cap.

The chart on the next page illustrates that there are a total of 146.7 MMTCO₂E in reductions coming from capped sectors. These are the sectors that would be included under a cap-and-trade system. The sectors include transportation, electricity, commercial and residential, and industry. An

AB 32 Implementation



Source: California Air Resources Board

estimated 27.3 MMTCO₂E would need to come from those sectors that are not under the cap-and-trade system, which includes sources such as sustainable forests and landfills.

Cap-and-Trade

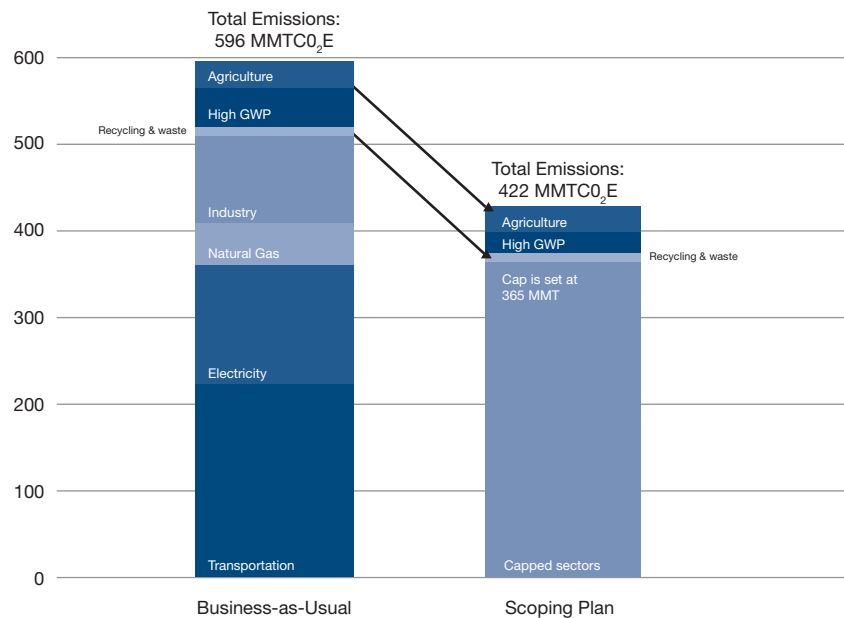
In a year marked by far-reaching regulatory development, state regulators in 2009 moved closer to determining the ultimate design of a carbon market structure for reducing greenhouse gas emissions in California, commonly referred to as “cap-and-trade.” A key aspect to developing a market structure will be to ensure that it remains cost-effective and makes real reductions in greenhouse gas emissions. A cap-and-trade system has the ability to garner significant reductions in GHGs and has the potential to do so in a more cost-effective manner than command-and-control regulations if designed appropriately.

A cap-and-trade system is a market-based tool that industries can utilize to reduce their GHG emissions. Under such a system, industries are regulated under a maximum emissions cap and are provided the flexibility to achieve their required emissions reductions in a variety of ways. For example, if it is too expensive or difficult for a business to make the required reductions itself, it would have the opportunity to buy emissions credits from other entities or to purchase offsets (see later in this article) in order to meet its reduction requirements. The structure would run as a marketplace where carbon is the commodity.

Timeframe for cap-and-trade rulemaking:

- **November 2009:** Preliminary draft regulation was released for public comment, but did not include decisions on some of cap-and-trade’s most controversial issues.
- **Spring 2010:** Release complete draft regulation for public comment.
- **August 2010:** Release staff report and draft regulation for formal 45-day review.
- **October 2010:** Board consideration of regulation.
- **Late 2011:** First auction of allowances.
- **January 1, 2012:** Program formally launches.

Greenhouse Gas Emissions in 2020 and Recommended Reduction Measures



Source: *Climate Change Proposed Scoping Plan*, California Air Resources Board (October 2008).

In May 2009, the California Environmental Protection Agency created a 17-member Economic and Allocation Advisory Committee (EAAC), made up of economic, financial and policy experts with various backgrounds and experiences, to examine proposals for market design and report back to ARB.

The EAAC is charged with providing advice on allocation of allowances and the use of their value, the implications of different allowance allocation strategies, and helping inform ARB on its revised economic analysis.

The committee is expected to release a report of its policy recommendations in early 2010.

Allowances and Allocation

One of the most controversial aspects of the market design recommended by EAAC is determining the allocation method of carbon allowances. The EAAC will review and ultimately recommend a method for allocation, choosing among free allowances, auctioning or a hybrid of both. If the allowances are distributed via an auction, industries will have to bear additional cost, whereas if

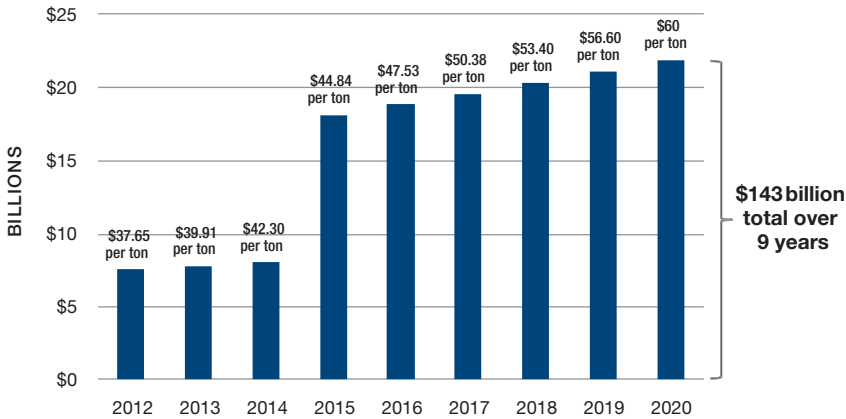
the allowances are freely allocated, industry would have more flexibility to invest in on-site improvements and energy-efficient equipment that can further reduce emissions. Auctioning allowances to the capped sectors will act as a tax on regulated industry because each entity would have to pay for each ton emitted, depending on the auction percentage.

According to the Scoping Plan, the ARB believes that “a transition to a full auction is a worthwhile goal for distributing allowances.” The Western Climate Initiative process also is proposing to use an auction method to allocate allowances, starting with 10 percent for the first three years and then increasing the auction percentage to 25 percent in 2020. The EAAC has also signaled a preference toward a 100 percent auction for allowance distribution.

The business community, however, is very concerned that jumping into an auction system will amount to a multibillion-dollar tax on California businesses that will only make current economic conditions worse. In fact, according to a draft report by the

Cost of 100% Auction on California Businesses

(Illustrative allowance price of \$60 per ton by 2020)



* As additional sectors of the California economy are covered by cap-and-trade, the cost of a ton of greenhouse gas emissions increases in successive stages, up to \$60 per ton by 2020 in the above example. Estimates from different studies show a 2020 allowance price that ranges anywhere from \$10 per ton to more than \$200 per ton.

Cal/EPA and ARB Economic and Allocation Advisory Committee, *Allocation Report Draft* (November 4, 2009), page 27. (Values in 2007 dollars.)

EAAC, plans to auction off 100 percent of the allowances under a cap-and-trade program could cost California businesses \$143 billion between 2012 and 2020 (see chart above). Such an outcome could spell disaster for California's economy as the cost of doing business in the state skyrockets.

Offsets

Another controversial issue that ARB has yet to determine is the availability of offsets that businesses can use to reach GHG emission reductions in the state and beyond. Offsets allow regulated industries to develop projects either off-site or in other regions to reduce emissions. Due to the global nature of climate change, offsets can play a large role in reducing GHG emissions in regions that are less efficient than California.

The Scoping Plan discusses the need for offsets and recognizes that there should not be regional boundaries for the use of offsets if they are real and verifiable. According to the Scoping Plan: "High quality offset projects located outside California can help lower compliance costs in California while reducing GHG emissions in areas that would

otherwise lack the resources needed to do so." Of particular interest would be regions such as Mexico, where there is much opportunity to reduce emissions right at the state's border. Many offset projects are being developed in China and India, where there is an increase in energy use and emissions.

The plan does, however, speak to restricting the amount of emissions an entity can offset in a compliance period. ARB will develop a limit on offsets to achieve a certain amount of reductions on-site. According to the WCI program design, no more than 49 percent of each partner jurisdiction's total emission reductions comes from offsets or other trading systems. It is uncertain whether ARB will defer to the WCI limits or develop a different quantitative limit. Regardless, regulated entities are facing considerable costs because only a portion of the reductions will be made through market structures.

In addition, 2009 saw an effort in the Legislature to arbitrarily limit the use of offsets under AB 32 to 10 percent of the reductions achieved through a cap-and-trade program (AB 1404-DeLeón; D-Los Angeles). Such limitations would prove to be extremely

costly for the business community as offsets remain one of the few cost-containment mechanisms available for California businesses to achieve compliance in a cost-effective manner.

Economic Analysis

Businesses will bear significant new costs as the far-reaching regulations created by AB 32 are implemented. However, a sound economic analysis of the program continues to be elusive. The necessity of a strong economic analysis is without question—ARB must have sound economic information with which to guide its decision making in order for AB 32 to be successful.

In late 2008, ARB peer reviewers and the independent Legislative Analyst concluded that the Scoping Plan's economic analysis was seriously flawed and did not provide reliable guidance to decision-makers. A better analysis is urgently needed.

As different policy choices are weighed by regulators, their decision making must be guided by an economic analysis that reveals the cost implications of those decisions. This is necessary if AB 32 is to be implemented in the most cost-effective manner. For example, in designing a cap-and-trade system, policymakers will need to make important decisions about how to distribute emissions allowances, either through free allocation, auctioning, or a combination of both. In addition, the availability of offsets that businesses can use for compliance will be determined largely by criteria that are established for California's allowance trading system. If the restrictions placed on the use of offsets are overly stringent, allowance prices will be higher, and vice versa.

The chart (next page) shows how allowance prices would fluctuate under various policy scenarios, according to several studies that examined inputs affecting allowance price. For example, under ARB's Scoping Plan analysis, the allowance price would be only \$10 per ton in 2020. Several other studies, however, conclude that the allowance price could ultimately be as high as \$214 per ton, depending on the scope of the market and the availability of offsets, etc.

Thus, if the ARB chooses to implement a program that allows

Allowance Price Fluctuations Depending on Policy

Study	Scope	Scenario	Additional Policies	Allowance Price Per Ton in 2020
ARB	California	Scoping Plan	Vehicle standards, 20%	\$10
Western Climate Initiative (WCI)	WCI members	Stationary sources only	Limited amount of offsets, banking allowed, current RPSs	\$71
	WCI members	Economy-wide		\$24
	WCI members	Economy-wide – High energy prices		\$18
	WCI members	Economy-wide – Low energy prices		\$56
	WCI members	Economy-wide – High natural gas prices		\$20
	WCI members	Economy-wide – No offsets	No offsets	\$63
Charles River Associates (EPRI)	California	Binding reductions	No offsets, no banking	~\$60 to ~\$100
BEAR (Roland-Holst)	California	Economy-wide	No banking, no offsets, all ARB policies	\$23 - \$214
	California	20% cap-and-trade		\$23 - \$179
	California	20% with efficiency innovation		\$8 - \$161
Haiku (electricity sector only)	California	Auction	20% RPS, no offsets, no banking, first-deliverer compliance	\$58
	California	Allocation		\$127
	WCI members	Auction		\$21
	WCI members	Allocation		\$26

Source: ARB Economic and Allocation Advisory Committee, *Allocation Report Draft* (November 4, 2009), Page 25.

for limited or no offsets, no banking, and favors auctioning of emission allowances over free allocation, then studies indicate that allowance prices will be drastically higher than ARB's initial assessment of \$10 per ton by 2020. This fact highlights the urgent need for a sound economic analysis now, so that policymakers can see the tangible cost implications of the decisions they make.

Heavy Control Measures

Although the Scoping Plan includes a cap-and-trade system as an element to reach the 2020 cap, a number of the sectors under the market would be subject to specific strategies the ARB has prescribed in the Scoping Plan. Just to name a few: the Low Carbon Fuel Standard (LCFS), which calls for at least a 10 percent reduction in the carbon-intensity of California's transportation fuels by 2020; a 33 percent Renewable Portfolio Standard (RPS), which calls for 33 percent of

California's electricity supply to come from renewable sources by 2020; and industry measures such as energy efficiency and co-benefit audits are listed as key strategies to achieving the reductions.

Businesses are concerned about a number of the measures outlined in the table. Many of the measures are very difficult to pursue, given various obstacles. For example, a 33 percent RPS raises many significant issues tied to transmission planning and the cost of renewables. In addition, the ARB has attributed 5 MMTCO₂ to regional transportation-related targets while much debate and many questions still exist about what methodology and what threshold actually should be used for land use development and transportation planning in the state.

The ARB also has included in the Scoping Plan imposing new building standards for both residential and commercial buildings. The plan supports the establishment of an

environmental performance rating system and suggests the state "adopt mechanisms to encourage and require retrofits for buildings that do not meet minimum standards of performance."

Developers are concerned about the additional cost that would result from additional mandates placed on buildings. New building requirements could add tens of thousands of dollars to home prices, making new homes less affordable and less marketable when new home sales already are down and office space is sitting vacant.

Business stakeholders are hoping that ARB minimizes the use of control measures that would limit industry's ability to meet their targets through a cap-and-trade market. Industry is concerned that more control measures will make it extremely difficult to minimize costs and that the market will be limited in scope due to the major reductions required through these measures.

CEQA and AB 32

Further complicating AB 32 implementation is the question of how land use projects should be evaluated for their climate change impacts pursuant to the California Environmental Quality Act (CEQA). Under CEQA, a land use project must undergo an extensive environmental review process, which in the past did not generally include consideration of GHG emissions. Because of the state's concerted efforts to regulate GHG emissions in California, however, that trend is changing and the political reality is that CEQA documents will likely require some level of climate change analysis in the near future.

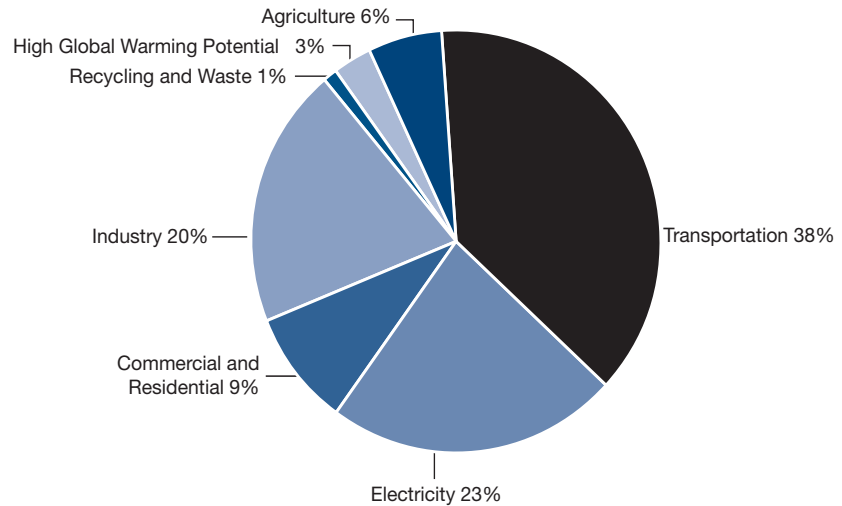
AB 32 clearly spells out that ARB is the sole agency charged with regulating GHG emissions in California. In fact, supporters of AB 32 insisted that ARB be given total authority to regulate GHG emissions due to the agency's expertise. Under AB 32's timeline, ARB has been given until 2012 to develop and implement regulations that will account for, cap and reduce California's GHG to 1990 levels by 2020. Part of this process will be determining the appropriate role for CEQA in addressing climate change.

To help in this process, SB 97 (Dutton; R-Rancho Cucamonga) was passed in 2007, requiring the Governor's Office of Planning and Research (OPR) to develop guidelines for the state Natural Resources Agency that address how climate change impacts should be mitigated under CEQA. The Natural Resources Agency received OPR's recommended guidelines in 2009 and began the rulemaking process for adoption, which was required by January 2010.

Impacts

Failure to remove the uncertainties associated with the treatment of GHGs under CEQA could be devastating for California's economy. Historically, CEQA has been the basis for an abundance of lawsuits that have stalled land use projects by tying them up in the court system indefinitely. This problem will certainly be intensified if project proponents continue to be sued for not following GHG rules and regulations that do not yet exist. Not only is this illogical, but it directly subverts the authority AB 32 granted

California's Greenhouse Gas Emissions (2002–2004 Average)



Source: California Air Resources Board

to ARB to be the lone agency charged with regulating GHGs in California. Until official regulations are adopted and in effect, it is imperative that land use projects are not held liable or put on hold indefinitely for failing to address their potential climate change impacts.

Determinations of Significance

One of the keys to ensuring that future CEQA regulations requiring climate change analysis are successful will be appropriately determining what levels of GHG emissions would qualify as significant, thus requiring mitigation from a project. The global nature of GHG emissions suggests that a statewide threshold of significance for GHG emissions is a superior approach to creating project-specific thresholds.

Accordingly, in determining whether a proposed project's GHG emissions may have a significant impact on climate change, CEQA lead agencies should consider whether, among other factors, the project complies with emissions standards promulgated by ARB under AB 32, the air districts or by other state agencies or commissions applicable to new and existing GHG emissions sources.

If a project does meet applicable

standards promulgated by ARB, the air district or other state agencies/commissions, then it should be determined that the project does not have a significant impact on climate change. Such an approach will provide much-needed certainty to project proponents and will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state.

Alternatively, project-specific thresholds could create the counterproductive effect of driving highly desirable projects outside of California, with the further unintended effect of causing global GHG emissions to rise as the distance between energy supply and consumption increases.

SB 375 Implementation

Land use will be further affected under AB 32 due to the passage of SB 375 (Steinberg; D-Sacramento, Chapter 728, Statutes of 2008). The law proposes to achieve GHG reductions from the transportation sector by coordinating the state's regional transportation planning and land use decision-making. If implemented as envisioned, the bill will reduce a portion of the GHG emissions

attributable to cars and light trucks by reducing overall vehicle miles traveled (VMT), which ARB has anticipated is necessary to reach the goals of AB 32. The pie chart on the previous page details the amount of California's overall greenhouse gas emissions that come from the transportation sector compared to other sectors.

Put simply, the bill hopes to get people out of their cars. To accomplish this goal, the bill encourages more compact growth in the future through incentives for residential development that is closer to public transit and places of employment and commerce. The legislation also seeks to increase urban core development, ease the approval process for development projects that facilitate alternative modes of transportation, and discourage transportation projects that do not coincide with the regional goals laid out in the SB 375 implementation process. The result, in theory, would be fewer VMTs, more people using alternative modes of transportation, and thus fewer GHG emissions.

The implementation of SB 375 will be a challenging and complicated process with potentially adverse consequences, but one that can be mitigated with additional modifications to the law provided by follow-up legislation. Several areas still need to be addressed if implementation of SB 375 is to be successful:

- **Non-Residential Projects Need Procedural Streamlining.** In order to develop truly sustainable communities under the Sustainable Communities Strategy (SCS) framework, the same procedural streamlining that was offered to residential projects in SB 375 needs to be extended to all development projects, including, but not limited to health facilities, educational facilities, retail facilities, commercial job centers, transportation and transit projects.

- **A True "Safe Harbor" Provision for SCS-Approved Projects.** Once an SCS has been adopted within a region and the ARB has determined that the plan will lead to achieving regional GHG emission targets, the region should be granted the security and certainty of knowing that the plan may be implemented without interference. A safe harbor provision should extend

to all SCS-compliant residential, transportation, transit, commercial, health care facility and education facility projects within the approved region, deeming them compliant with AB 32 and shielding them from legal challenge.

- **Exemption from SB 375 for All Projects Funded by Previously Approved Public Money.** Billions of federal dollars for infrastructure projects are potentially heading toward California within the next few years as economic stimulus. In addition, billions of state and local dollars have been approved by California voters through Proposition 1B and "self-help" county programs to fund various state transportation projects. To reap the economic benefits of these badly needed infrastructure projects quickly and efficiently, they should be exempted from SB 375.

Program Funding

The Scoping Plan proposed a number of new funding mechanisms that would help pay for the regulatory program and reduction strategies. For example, ARB recommends placing a public goods charge for water, collected on water bills to pay for water efficiency improvements, water recycling and other such actions. The ARB estimates such a fee could generate up to \$500 million annually. In addition, ARB has calculated that it will need \$55 million annually just to fund the administration, implementation and enforcement of the emission reduction measures. It is important that ARB be able to substantiate the administrative costs it has incurred in order to justify the imposition of such fees on the regulated community.

As mentioned earlier in this article, ARB also is looking to "auction" allowances to those entities participating in the cap-and-trade market. The revenues collected from this auction might be spent for a number of activities. The Scoping Plan outlines the following:

- Funding energy efficiency and renewable resource development.
- Achieving environmental co-benefits (criteria and toxic pollutant mitigation).
- Incentives to local governments.
- Consumer rebates.

- Direct refunds to consumers.
- Climate change adaptation programs.
- Subsidies.
- Research, development and demonstration funding.
- Worker transition assistance.
- Administration of GHG program.
- Direct emission reductions.

The above is a snapshot of what ARB is looking to fund through potential auction revenue. The regulated community is concerned about the fees and costs associated with the implementation of AB 32. When added up, the multiple proposed costs will be heavy for California consumers and businesses. It is certain that ARB will have to work hard to find a way to fund its program while keeping economic concerns in mind.

Emerging Action on National Front

In 2009, Congress worked extensively to move national legislation that would regulate the energy economy and reduce greenhouse gas emissions, similar to California's AB 32. H.R. 2454 (the "Waxman-Markey Bill"), the American Clean Energy and Security Act of 2009, or "ACES," was introduced in May 2009 and passed the U.S. House of Representatives in June following intense national debate. As the *Guide* went to print, the bill awaited hearing in the U.S. Senate.

ACES shares much in common with the goals and approaches set out under AB 32, including an aggressive emissions reduction target. The ACES legislation has broad authority and could interact with California's program in a variety of ways, including: having no effect, replacing or limiting California authority, providing complementary funding, creating additional reductions and, in some cases, creating legal ambiguity due to conflicting legal definitions.

The ACES legislation could make significant changes to the development and implementation of a carbon market.

- First, ACES would place a moratorium on full implementation of a California cap-and-trade program until 2017. A federal agency would need to determine the structure and details involved with a federal cap-and-trade program, including what to

do with existing state programs. After analysis and planning, implementation of the federal program would go online, possibly supplanting a California cap-and-trade program.

- Second, a federal, nationwide market would expand the pool of firms engaged in carbon trading, allowing reductions to occur where they are most efficient and cost-effective.

As the *Guide* went to print, federal climate change legislation was stalled in Congress, as other important national debates have taken center stage. The economic recession also has contributed to an increased likelihood that federal climate change legislation will be an ongoing issue for Congress through 2010 and perhaps beyond. This comes as the United States is engaged in international negotiations over a draft climate change treaty. Negotiations stalled in November 2009 as industrialized nations expressed worries that the international treaty could prolong the recession.

Although California has gotten a significant head start in this process, it is vital for the state to align itself with the future national program to prevent duplication and to minimize regulatory uncertainty. If designed

unilaterally, California's program could cost significantly more for the state's consumers and businesses by discarding the advantages associated with full integration into a potential federal program.

CalChamber Position

The California Chamber of Commerce will continue working to ensure that compliance costs are minimized by pushing for measures that effectively reduce carbon while allowing for continued economic growth. All regulations created by ARB should be implemented with stakeholder input. It is impossible to create a successful program and achieve real, quantifiable reductions without understanding the various industries targeted by the regulations. Furthermore, regulations should be developed in a way that allows for business growth in California.

The CalChamber believes that for the state to be a true leader on this issue, it needs to share its proven energy efficiency knowledge while harnessing the innovation and creativity of its citizens to pioneer new, low-carbon technologies. In fact, policy approaches that recognize and encourage California's

leadership and innovation in the environmental arena can be more effective than taxes or fees. Successful technologies developed in California and implemented throughout the world could provide a win-win situation for California businesses by both helping to reduce greenhouse gas emissions here and in other nations, and providing jobs in the state.



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