Annual Report to the Joint Legislative Budget Committee on Assembly Bill 32

(Chapter 488, Statutes of 2006)

The California Global Warming Solutions Act of 2006

January 2013

Fulfills the Requirements of:
Supplemental Report of the 2012 Budget Act (Item 3900-001-0001 Air Resources Board)
Senate Bill 1018 (Statutes of 2012)

California Environmental Protection Agency
Air Resources Board

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CONTENTS

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INTRODUCTION

Assembly Bill 32 (AB 32), The California Global Warming Solutions Act of 2006 designates the Air Resources Board (ARB or Board) as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. AB 32 set a goal for California to reduce greenhouse gases to 1990 levels by 2020, and to maintain and continue reductions beyond 2020. The law tasked ARB with quantifying this goal, implementing a mandatory emissions reporting system, and adopting a Scoping Plan that describes the measures and other actions California planned to achieve the target.

AB 32 also highlights the need to continue greenhouse gas reductions beyond 2020. In March 2012, Governor Brown signed Executive Order B-16-2012 establishing zero emission vehicle benchmarks and affirming a long-range climate goal for California to reduce greenhouse gases to 80 percent below 1990 levels by 2050.

Legislative Direction. The Supplemental Report of the 2012 Budget Act item 3900-001-0001 requires ARB to provide the Joint Legislative Budget Committee (JLBC) with multiple reports on its activities and resources to implement AB 32. This document is structured according to all of the required elements, as follows:

(1) Section 1 - A semi-annual AB 32 update on key climate programs, including recent developments and upcoming milestones;
(2) Section 2 - An annual AB 32 fiscal report for the prior fiscal year summarizing fees and proceeds coming in, and expenditures going out; and
(3) Section 3 - Annual AB 32 resource reports – one prospective and one retrospective – showing staffing, operations, and contract expenses by major program area.

Senate Bill 1018 (Budget and Fiscal Review), Chapter 39, Statutes of 2012 also requires ARB and the Secretary for Environmental Protection to submit reports to the Joint Legislative Budget Committee (JLBC) on the Western Climate Initiative, Incorporated (WCI, Inc.):

(4) Section 4 - A semi-annual report on any actions proposed by WCI, Inc. that affect California State government or entities located within the State, as well as advance notification of any planned ARB payments to WCI, Inc. over $150,000. The first WCI, Inc. report was submitted to the Legislature in July 2012.

Report Content. This document covers ARB's implementation of AB 32 and does not include the activities and resources of other State agencies to implement AB 32. The Cross-Cut of the State Budget includes the resources for those agencies and departments that are funded by the AB 32 Cost of Implementation Fee. The State Agency Greenhouse Gas Reduction Report Card published by the California Environmental Protection Agency details the activities of each agency and department to reduce greenhouse gas emissions. For more information, please see: http://www.climatechange.ca.gov/climate_action_team/reports/2013_CalEPA_Report_Card.pdf.

SECTION 1:

SEMI-ANNUAL AB 32 PROGRAM UPDATE

(January 2012-June 2013)

This report is required semi-annually by the Supplemental Report of the 2012-13 Budget[1] to highlight significant developments in the last six months and identify upcoming milestones in the next six months in ARB's implementation of AB 32. Since this is the first such report, the discussion of significant developments for each program area generally covers all of 2012. As a result, this report is longer than the subsequent six-month updates are expected to be. The upcoming milestones focus on the first half of 2013, but may mention major deliverables throughout 2013. The report format follows the Budget directive, beginning with major regulatory measures, followed by supporting programs, then a discussion of the greenhouse gas (GHG) emission reductions, and concluding with the current funding in the Greenhouse Gas Reduction Fund.

While this program update focuses on the high profile regulations and supporting programs identified in the Supplemental Budget Report, they represent a subset of ARB's activities and resources to address climate change. Additional activities include research, air monitoring, and emissions inventory (including the Mandatory Reporting Regulation), as well as the development, implementation, and enforcement of over 20 regulations that reduce GHGs as a primary objective or as a co-benefit. These other regulations affect a wide range of activities and facilities, including: passenger vehicles (including their tires and air conditioners); heavy trucks and the trailers they pull; ships at berth; and sources of high global warming potential (GWP) gases like semi-conductor manufacturing, appliance recycling, and consumer products.

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[1] "The California Air Resources Board (CARB) shall submit to the Legislature an AB 32 program update every six months summarizing key program activities. Each update should highlight developments since the previous update, provide advance notice of anticipated major milestones, and include current statewide greenhouse gas (GHG) emission updates. These developments may include, but are not limited to, board hearings and release of significant documents, key support contracts, lawsuits, compliance milestones, and other actions that have the potential to substantially affect the success and effectiveness of the program.

The scope of the program updates should include: significant activities related to CARB's GHG reduction measures (for example, cap-and-trade, low-carbon fuel standard, or advanced clean cars), including an analysis of which programs are having the greatest impact in terms of GHG reductions per dollar spent; key developments on supporting activities such as updates to the AB 32 Scoping Plan, cap-and-trade auction fund regulations, coordination with entities outside of California like the Western Climate Initiative, and SB 375 sustainable communities plans; and the amount of cap-and-trade auction funds deposited into the Greenhouse Gas Reduction Fund and the current balance in that fund."

I. ARB GREENHOUSE GAS EMISSION REDUCTION MEASURES

This section focuses on the activities of three major ARB regulatory programs to reduce GHG emissions: Cap-and-Trade, Low Carbon Fuel Standard, and Advanced Clean Cars. We also cover the landfill methane regulation mentioned in the supplemental budget language.

A. Cap-and-Trade

1. Background

California's Cap-and-Trade Regulation (Regulation) is the nation's first comprehensive market-based approach to reducing GHG emissions and is one of the key measures identified in the AB 32 Scoping Plan. The Regulation was finalized and adopted by the Board in October 2011. Given the complexity of this Regulation and the use of many unique concepts in its design, we provide a lengthier background description below to aid the reader's understanding of these program updates.

Emissions Cap. Beginning on January 1, 2013, the Regulation provides a firm declining limit on 85 percent of California's emissions, including emissions from electricity, large industrial sources, transportation fuels, and residential and commercial use of natural gas and propane. Reductions in these key sectors will help California achieve the AB 32 target of reducing GHG emissions to 1990 levels by 2020 and continue to reduce GHG emissions thereafter. The Regulation will reduce GHG emissions by about 18 million metric tons (MMT) in 2020, about 20 percent of the total needed to achieve the AB 32 target for that year. Further, the Regulation plays a key role in assuring the 2020 target is met by complementing other GHG emission reduction measures. For example, in the event that the anticipated reductions from other measures are not realized, the Regulation with its cap serves as a backstop for meeting the emission reduction targets.

Compliance. To comply with the Regulation, entities subject to the Program, termed "covered entities," must submit compliance instruments (i.e., allowances or offset credits) equal to their emissions. Each allowance or offset credit is equal to one metric ton of carbon dioxide equivalent emissions.

Allowances*.* Allowances are issued by ARB. A portion of the allowances are allocated for free to covered entities, some are placed in a cost containment reserve, and the remainder are auctioned. Each year, the number of allowances declines in proportion to the cap, ensuring that the Program achieves intended emission reductions. Covered entities that aggressively reduce their emissions can trade their surplus allowances to firms that find it more expensive to reduce their emissions.

In the early years of the Regulation, ARB will be allocating most allowances for free to industrial covered entities to provide transition assistance and minimize leakage, and to electrical utilities to protect ratepayers from program costs.

Leakage refers to a reduction in emissions of GHGs within the State that is offset by an increase in GHG emissions outside the State. Risk of leakage is highest for industries in which production is highly "emissions intensive" (leading to high compliance costs) and trade exposed (i.e., that face competition from out-of-state producers). As part of the development of the Cap-and-Trade Regulation over the past several years, ARB determined leakage risk for industrial sectors based on an evaluation of industry emissions and trade exposure. The results of the analysis informed the allocation of additional allowances to reduce compliance costs and maintain incentives to produce in California.

One of the factors that ARB utilizes to calculate the number of free allowances for each industrial covered entity is GHG emissions efficiency. ARB uses emissions performance standards that evaluate the efficiencies for similar operations in the same industrial sector. This means that the more efficient facilities within a sector received a larger percentage of their estimated compliance obligation for free as compared to less efficient facilities in the same sector. This process recognized early investments to improve efficiency at facilities within the covered industrial sectors.

ARB staff developed two distinct types of allocation methodologies: (1) product-based, which is tied to production activity and applies to specific industry sectors listed in the Regulation, including the oil and gas extraction and refining sectors; and (2) energy-based, which is tied to fuel use and applies to those industry sectors without a product-based benchmark, including the food processing sector.

In addition to allocation, a number of allowances were placed in the allowance price containment reserve. This account was established to provide a safety valve to the allowance price and help to mitigate potential volatility in allowance prices. The account holds a specified number of allowances removed from the pool of allowances at the beginning of the program. Covered entities may purchase reserve allowances at specified prices during direct quarterly reserve sales. Covered entities can access the Reserve if prices are high or entities expect prices to be high in the future.

<u>Offsets</u>. Offset credits are another type of tradable compliance instrument. Offset credits represent an emission reduction or emission avoidance outside of the capped sectors (i.e., reductions in sectors not subject to the Cap-and-Trade Regulation). Covered entities can use ARB-issued offset credits to meet up to eight percent of the obligation for each compliance period. For example, if a covered entity has 100,000 metric tons of covered emissions they submit no fewer than 92,000 allowances.

Offset projects are quantified under regulatory protocols that are approved by the Board and must meet the AB 32 offset criteria of being real, additional, quantifiable, permanent, verifiable, and enforceable. ARB has approved offset protocols for four project areas: forestry, urban forestry, livestock digesters, and the destruction of ozone depleting substances. ARB accredits third-party verifiers to independently verify all offset project reports. Accredited third-party verifiers have extensive backgrounds in related areas, including appropriate field and auditing experience, as well as the scientific and engineering knowledge required for verification. Third-party verifiers must work through ARB accredited verification bodies and must complete ARB's training and pass a specialized test.

ARB can also approve voluntary offset registries that meet regulatory criteria to help administer the program. However, ARB does not delegate any of its oversight or enforcement authority to the verifiers or approved registries. ARB does not currently issue or accept offset credits that originate from projects located outside of the United States.

Electronic Compliance System. The Compliance Instrument Tracking System Service (CITSS) is a software program developed to hold and retire compliance instruments (ARB allowances or offset credits) and to record transactions of compliance instruments between account holders.

2. Recent Developments - 2012

The Board heard four public updates from staff and considered regulatory amendments at Board meetings in 2012. The presentations for the updates are available on ARB's web page at http://www.arb.ca.gov/cc/capandtrade/meetings/meetings.htm. In addition to further regulatory development, ARB activities included: computer systems development including CITSS and the Auction Platform; Cap-and-Trade Program registration; market oversight; preparation and administration of the first auction; offset program development; and legal activities. These activities are described in more detail below.

Registration. Regulated entities began to register under the Cap-and-Trade Program in January 2012.

Market Oversight. ARB put a priority on market oversight to ensure success in reducing emissions and the integrity of the California carbon market. In preparation for the first auction in November 2012, ARB conducted extensive security testing of systems. ARB also established a team focused on Program monitoring, and oversight. ARB monitors the auction during the three-hour bidding window and reviews submitted bids to determine if there are any indications of anti-competitive behavior. In addition to engaging in ongoing analysis and modeling, ARB is collaborating with several organizations including: the U.S. Commodity Futures Trading Commission; the Federal Electricity Regulatory Commission; the California ISO; and the Attorney General's Office, to anticipate, detect, and respond to market manipulation. The Regulation imposes holding limits and auction purchase limits to prevent participants from acquiring undue market power.

Auction. The Regulation's first auction was held on November 14, 2012. There were two types of allowances offered — 2013 vintage allowances consigned to auction by the electric utilities and 2015 vintage allowances offered by ARB. The $233 million raised by the sale of all the 2013 allowances was returned to those utilities to be used as directed by the California Public Utilities Commission[2] or their governing boards. The $55 million raised by the sale of 2015 vintage allowances was deposited into the State's Greenhouse Gas Reduction Fund, to be allocated in accordance with the FY 2012-13 State Budget. The auction results are available at: http://www.arb.ca.gov/cc/capandtrade/auction/november_2012/auction1_summary_statistics_2012q4nov.pdf.

Leakage. ARB continues to do additional work to address concerns raised by affected industries (including food processors) about the potential for leakage. ARB is coordinating with industry representatives and working with academics through new contracts. See discussion below on Cap-and-Trade contracts for more information.

Offsets. ARB continued the steps necessary to support carbon offsets, which reduce the costs of compliance with the Program and encourage investments in sustainable practices throughout the California economy. In 2012, ARB accredited 62 specially trained third-party offset verifiers to serve as partners in evaluating the quality of offset projects submitted for approval. Eleven verification bodies have also been certified.

In addition, ARB has formally approved the American Carbon Registry and the Climate Action Reserve as offset project registries to help evaluate compliance-grade carbon offsets under the Regulation.

ARB also released instructional guidance documents on the Cap-and-Trade Regulation including a section on offsets. ARB prepared this guidance to describe the regulatory requirements in a user-friendly format. Unlike the Regulation itself, this guidance is advisory and does not have the force of law. The offset guidance includes clarifying detail and examples where staff believes additional information would help covered entities successfully achieve the GHG emission reductions required by the Regulation (see http://www.arb.ca.gov/cc/capandtrade/guidance/chapter6.pdf).

Cap-and-Trade Litigation. On March 28, 2012, two environmental groups filed a lawsuit, *Citizens Climate Lobby and Our Children's Earth Foundation v. California Air Resources Board,* in San Francisco Superior Court to challenge ARB's regulations that would allow a regulated entity to use up to eight percent in offsets to comply with its emissions obligation per compliance period. In this filing, Plaintiffs asked the Court to find that the offset program violates the law by allowing a false accounting of progress in addressing climate change, thereby threatening the overarching integrity of the Cap-and-Trade Program. Plaintiffs allege that the benefits of the offset program, with its four adopted offset protocols, are reductions that would have occurred in the normal course of business, and are therefore not "additional" GHG reductions as required by AB 32. Plaintiffs requested a repeal of the four compliance offset protocols approved in December 2011, and a prohibition on using ARB compliance offsets in lieu of GHG allowances to comply with the Regulation.

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[2] In Decision D1212033 (Decision Adopting Cap-and-Trade Greenhouse Gas Allowance Revenue Allocation Methodology for the Investor-Owned Electric Utilities), the CPUC directed the utilities to distribute the auction proceeds to ratepayers.

The Court heard oral arguments on this matter on December 7, 2012. A decision on this matter is expected in the first quarter of 2013. ARB maintains that the four adopted offset protocols are designed to deliver compliance offset credits that meet the AB 32 offset criteria, and that offset projects will receive strict scrutiny before credits are issued to them. ARB believes that it has exercised its due diligence in developing the four compliance offset protocols and that offsets generated using the protocols constitute "additional" GHG emission reductions that would not have otherwise occurred in the normal course of business.

On November 13, 2012, the California Chamber of Commerce filed a lawsuit, *California Chamber of Commerce et al. v. California Air Resources Board et al.*, in Sacramento Superior Court to challenge ARB's authority to conduct an auction under the Cap-and-Trade Program. Alternatively, the California Chamber of Commerce alleges that if the court finds authority exists in AB 32 for the auction, then the court should find that the auction, and the sale of allowances by the State at auction, constitute an unconstitutional tax. The lawsuit asks the judge to issue a decision prohibiting ARB from conducting future auctions, and asks for judicial declarations that the auction provisions of the Regulation are invalid and unenforceable, and impose an unconstitutional tax. ARB maintains that AB 32 provided it with authority to develop a Cap-and-Trade Program, including an auction, and that the auction does not constitute a tax. The filing of briefs in this case will take place over the Spring of 2013, and a hearing on the merits of the petition is scheduled for May 31, 2013.

<u>Cap-and-Trade Contracts</u>. Academia and private contractors are helping ARB achieve the goals of AB 32 while minimizing the impact of Cap-and-Trade on California industry. Current contracting efforts are directed at: running the auctions and reserve sales, monitoring the carbon market, measuring and monitoring the potential for GHG emissions leakage, helping ARB develop emissions efficiency benchmarks in order to allocate allowances to minimize leakage, and monitoring the biological impacts of forest projects. Key contracts are discussed below.

Program Administration Contracts:

The following four program administration contracts were established by ARB to initiate California's Cap-and-Trade Program. As part of collaborating with other jurisdictions, these administrative support functions are being transitioned to WCI, Inc. WCI, Inc.'s approach to coordinating administrative support is to have each jurisdiction specify its administrative requirements, and then for WCI, Inc. to provide support that meets these specifications.

- ARB has contracted with an auction administrator, Markit North America, Inc. for services to support quarterly GHG allowance auctions and reserve sales.

- ARB has contracted with Deutsche Bank National Trust Company to act as the Financial Services Provider for Auction and Reserve sales (Financial Services Administrator).

- ARB has contracted with an independent market monitor, Monitoring Analytics, LLC., to monitor, detect, and report on issues relating to the operation of the GHG allowance auctions, reserve sales, and secondary markets. The market monitor will evaluate the GHG allowance auction and reserve sales, as well as GHG allowance holdings and market activity. The contractor will monitor the secondary market to identify any indications of anti-competitive behavior, as well as to understand market activity and trades. Market monitoring reports will be provided to ARB on a regular basis including after each auction and quarterly. ARB will review these reports and take action, as needed.

- Through a Clean Air Act Section 105 grant, ARB is continuing to receive technical expertise and in-kind assistance from the U.S. Environmental Protection Agency (U.S. EPA) to complete development of the Cap-and-Trade CITSS. Assistance is provided through U.S. EPA's contractor SRA International, Inc.

Coordinating administrative support through WCI, Inc. benefits California and the other jurisdictions. Coordinated support ensures that all cap-and-trade programs in the participating jurisdictions use the same highly secure infrastructure, including the allowance tracking system and auction platform. Coordinated support also ensures that analyses performed to support market monitoring in each jurisdiction is conducted consistently and effectively for the entire compliance instrument market across all the programs. Finally, coordinated support enables the programs to share the cost of developing and maintaining program infrastructure, thereby reducing the costs for each jurisdiction. These benefits are realized even if the jurisdictions' programs are not yet linked.

Other Cap-and-Trade Program Contracts:

- ARB entered into an agreement with the University of California Energy Institute at the University of California at Berkeley to obtain expert analysis and advice on cap-and-trade market design, operation, and monitoring. As part of this agreement, the Emissions Market Assessment Committee, (EMAC, formerly the Market Surveillance Committee), was formed and funded. EMAC has advised ARB on how a price cap and narrowing the difference between the auction floor price and prices for release from the Allowance Price Containment Reserve could reduce emissions market price volatility. On September 24, 2012, the EMAC held a public meeting in which the members presented recommendations and potential areas of concern regarding linking California's Cap-and-Trade Program with the Province of Québec's cap-and-trade program. EMAC also led a stakeholder discussion of an EMAC paper on the value of releasing market information to promote market stability and reduce the potential for market manipulation, both of which are key stakeholder concerns.

- In collaboration with economic researchers from Resources for the Future and University of California at Berkeley, ARB will continue leakage research efforts to establish a baseline for how industries have historically responded to energy price changes and to identify metrics to evaluate future leakage risk. Any changes in leakage risk determinations would require regulatory amendments, which would need to be in place before industrial allocation occurs in Fall 2014 for the second compliance period.

- ARB is in the process of initiating a study to analyze the ability of the agricultural sector, including food processors, to pass on regulatory costs to consumers, and recommend changes to the leakage risk determinations and allowance allocation approach, if needed, prior to allocation for the second compliance period.

- ARB and contractors are currently surveying several industries in order to collect data to establish new benchmarks or to modify existing benchmarks. ARB plans to include revised product-based benchmarks in the regulatory amendments presented to the Board in 2013.

- ARB has contracted with University of California at Davis to develop recommendations for a monitoring system for potential adverse biological impacts of U.S. Forest Protocol projects. Recommendations are expected in December 2013.

3. Upcoming Milestones - 2013

There are several 2013 milestones for the Cap-and-Trade Program. Below is a brief summary of some of the significant milestones anticipated in the first half of 2013. More information on staff's activities and upcoming public meetings related to the Cap-and-Trade Program can be found at:
http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm.

- Starting January 1, 2013, GHG emissions from covered entities will count towards their compliance obligation.

  In early 2013, ARB expects to transmit a package for the Governor to review the proposed linkage of California's Cap-and-Trade program with Québec's program. Under State law, the Governor has 45 days to make findings about whether Québec has adopted a GHG emission reduction program that is equivalent or stricter than California's program and that any linking failure will not impose significant liability on the State. If the Governor finds in the affirmative, the Board will consider the regulatory changes necessary to link the two programs at a noticed public hearing. These changes were initially released for public review in May 2012 as part of the 2012 package of amendments to the Regulation. In January, ARB will be releasing a 15-day package for public comment containing information that will be provided to the Governor. The 15-day package and all comments received will be provided to the Governor to make a determination.

- In early 2013, ARB will continue to work with local air districts to refine the procedures in the 2011 Adaptive Management Plan concerning air quality and data gathering for the evaluation of potential localized air quality impacts due to the Regulation.
  http://www.arb.ca.gov/cc/capandtrade/adaptive_management/plan.pdf

- On February 19, 2013, the second quarterly Cap-and-Trade auction will take place.

- On March 8, 2013, the first allowance price containment reserve sale will occur.

- In Spring 2013, ARB anticipates beginning the public process on development of new offset project protocols for: (1) avoided fugitive methane emissions from coal mine methane projects; and (2) avoided methane emissions from changes in rice cultivation practices.

- In Summer 2013, ARB expects to propose amendments to the Regulation for consideration by the Board. The proposed amendments will address several topics that are likely to include, but are not limited to:

  - A methodology to provide free allowances for transition assistance until legacy contracts for generators of electricity, which do not allow for the pass-through of carbon costs, expire.
  - A mechanism to deal with "But-For CHP" entities that are subject to the Regulation only because emissions from combined heat and power (CHP) operations put the entities over the 25,000 metric tons of GHG emissions threshold.
  - A methodology to provide allowances to new industrial sources not currently included in the Regulation, as well as upstream natural gas suppliers.
  - Updates to benchmarks and allocation assistance factors to provide more free allowances to existing sectors in the second compliance period to reduce the risk of leakage.
  - A methodology for providing compliance assistance to public universities.
  - Clarification of resource shuffling provisions.
  - A provision for additional price containment to address the risk of higher than anticipated future emissions, while maintaining environmental integrity.
  - A mechanism to exempt waste-to-energy facilities from the Cap-and-Trade Program for the first compliance period.
  - Further processes to ensure clarity in offset implementation.

B. Low Carbon Fuel Standard

1. Background

ARB approved the Low Carbon Fuel Standard Regulation (LCFS) in 2009 with requirements to reduce the carbon intensity (CI) of gasoline and diesel fuels by at least 10 percent by 2020. This standard sets declining annual targets between 2011 and

2020. The LCFS will reduce GHG emissions from the transportation sector in California by about 15 MMT in 2020. These reductions account for almost ten percent of the total GHG emission reductions needed to achieve the State's mandate of reducing GHG emissions to 1990 levels by 2020.

The LCFS regulation requires regulated parties to submit electronically to ARB all quarterly progress and annual compliance reports. To this end, ARB developed the LCFS Reporting Tool, a secure, interactive, web-based system, through which all regulated parties are required to report data on fuel volumes and CI. Through these reports, providers of transportation fuels must demonstrate that the mix of fuels they supply meets LCFS CI standards for each annual compliance period. Each fuel in the mix is assigned a CI value, based on the "life cycle" GHG emissions associated with the production, transportation, and use of fuels in motor vehicles. Each fuel's complete life cycle, from "well-to-wheels" (or from "seed-to-wheels" for biofuels made from crops), represents that fuel's "fuel pathway." To date, there are more than 170 individual fuel pathways that regulated parties can use to describe the GHG emissions associated with their fuels.

In December 2011, the Board approved amendments to the LCFS that addressed several aspects of the regulation, including: methodology for taking into account the CI of crude oils processed in California refineries, the allocation of electricity credits, clarification on LCFS credit trading, opt-in and opt-out provisions, and other clarifying language.

2. Recent Developments - 2012

ARB continues to implement and refine the LCFS Program, which has been moving forward as planned. In 2012, staff completed the Final Statement of Reasons for the 2011 amendments, and the Office of Administrative Law approved the amendments.

ARB is closely monitoring the status of regulated parties in the reporting tool. As of the third quarter of 2012, there are approximately 1.1 million "excess" credits in the system—that is, more total credits than deficits. This means that regulated parties are over-complying with the LCFS, generating additional LCFS credits that can be used for future compliance when the standard becomes more stringent. In addition to the banked credits, regulated parties have begun trading credits. Both of these developments are positive indicators that the LCFS is functioning as intended.

ARB is also continuing its collaboration with stakeholders to evaluate the CI for crude oils, and working with interested parties on technical assessments related to low-energy-use refining, pursuant to the Board's direction.

ARB is continuing to analyze and recommend for approval numerous lower CI fuel pathways for which fuel producers have applied, confirming that innovation is occurring in the production of these fuels. Furthermore, ARB is working with various universities to update the indirect land use change (iLUC) values for corn ethanol, sugarcane ethanol, and soy biodiesel, while also developing iLUC values for palm oil, canola oil, and sorghum. Recommendations on iLUC values will undergo independent academic review.

As directed by the Board and consistent with the 2011 Advisory Panel's suggestions, ARB is considering the methodology and technical requirements necessary for a thorough, updated economic analysis of the LCFS. We will work with the California Energy Commission to conduct that analysis.

Also of note, California is attracting significant investments in the development of advanced biofuels. In order for advanced biofuels to be available in sufficient quantities, investment in these fuels needs to occur. ARB has been monitoring investment in biofuels and has seen a slow, but steady, increase. This is true in both California and nationwide. Since 2006, a total of $2.3 billion dollars of venture capital has been invested in biofuel producers in California.[3] This comprises 47 percent of the nation’s total $4.9 billion venture capital investments in biofuels.

Despite these positive indicators, there is industry concern about compliance sometime after 2017 because the lower-carbon-intensity liquid biofuels preferred by the refiners to readily blend with conventional gasoline and diesel fuel are not being developed quickly in commercial quantities. Staff continues to believe that the availability of these advanced biofuels will grow sufficiently to meet demand. Liquid biofuels are just one of several paths that refiners can take to comply with the LCFS. They can also purchase LCFS credits in the marketplace from producers of lower-carbon-intensity fuels, such as electricity, natural gas, biogas, and hydrogen, or they can invest in the production of these fuels to generate their own LCFS credits.

<u>LCFS Litigation</u>. In December 2009 and early 2010, three lawsuits were filed against ARB over the LCFS—two in federal court and one in State court. The federal lawsuits were brought by trade associations of ethanol producers and refiners who claim that the LCFS is preempted under the Energy Independence and Security Act of 2007 and violates the Commerce Clause of the U.S. Constitution (e.g., by assigning corn ethanol from the Midwest a CI value above that of corn ethanol made in California). Plaintiffs claim that corn ethanol will eventually be excluded from the California market in favor of more advanced biofuels that have a lower CI value. By contrast, ARB showed that many corn ethanol producers from the Midwest have in fact registered with ARB with CI values that are well below gasoline and, indeed, even less than California corn ethanol. LCFS allows for a determination of individualized CI numbers for each facility, provided that certain criteria are met. In addition, the federal lawsuit claims California is impermissibly regulating, through the LCFS, interstate commerce beyond its borders by regulating aspects of a fuel’s lifecycle that occur outside of the State’s borders.

At this stage in the federal litigation, the lawsuit is before the Ninth Circuit Court of Appeals, which is considering ARB’s appeal of several adverse rulings and a preliminary injunction that were issued by the lower federal court in Fresno in late

[3] Data from PricewaterhouseCoopers/Data by Thomson Reuters, Cleantech, and Collaborative Economics.

December 2011. In April 2012, the Ninth Circuit granted ARB's request for a stay of the preliminary injunction, which allowed ARB to resume enforcement of the LCFS Regulation during the pendency of the lawsuit. On October 16, 2012, the Ninth Circuit considered oral arguments from the parties. A ruling from the Ninth Circuit is not expected until the first quarter of 2013 or later.

The case pending before the State court alleges that ARB did not fully comply with the Administrative Procedure Act and the California Environmental Quality Act when adopting the LCFS Regulation. The hearing on that case was held in August 2011. In November 2011, the State court ruled in favor of ARB on all 14 causes of action raised by the plaintiffs. The plaintiffs have since appealed the case to the Court of Appeal in Fresno, which has recently directed the parties to brief a specific legal issue regarding the exclusion from the rulemaking record of email communications from two ARB contractors. ARB's supplemental brief on this issue was submitted to the court in late November 2012.

<u>LCFS Contracts</u>. Because the LCFS is at the forefront of life cycle assessments—taking into account the GHG emissions related to the production, transport, and use of transportation fuels— it has required significant technical assistance from academia and private contractors. Currently, there are contracts that support LCFS implementation, most of this effort is directed at estimating iLUC for numerous alternative fuels.

In order to place these contracts in context, it is helpful to consider how iLUC occurs. An iLUC impact is initially triggered when an increase in the demand for a crop-based biofuel begins to drive up prices for the necessary feedstock crop. This price increase causes farmers to devote a larger proportion of their cultivated acreage to that feedstock crop. Supplies of the displaced food and feed commodities subsequently decline, leading to higher prices for those commodities. The lowest-cost way for many farmers to take advantage of these higher commodity prices is to bring non-agricultural lands into production. These land use conversions release the carbon sequestered in soils and vegetation. The resulting carbon emissions constitute the “indirect” land use change impact of increased biofuel production.

While there is general consensus that iLUC occurs, there is uncertainty regarding the size of the impact, which cannot be directly measured, but must be modeled. The model used to estimate iLUC has undergone numerous revisions, and there are many assumptions that must be made when considering the inputs to the model. Because of the complexity of the model and the uncertainties associated with iLUC, ARB has contracted with academic institutions, including the University of California at Berkeley, the University of California at Davis, Purdue University, and the University of Wisconsin, to assist with these analyses.

Other supporting contracts include one to estimate the CI of the crude oils processed in California refineries and another to support staff's assessments of direct GHG emissions from biofuel production facilities.

3. Upcoming Milestones – 2013

The carbon reduction requirements of the LCFS are modest in the early years of the Program to allow advanced fuels and vehicles to develop, mature, and enter the marketplace. For 2013, the compliance requirement is a 1.0 percent reduction in CI from the 2010 baseline. The compliance obligation is on an annual basis, although the regulated parties report quarterly to ARB. Because regulated parties are over-complying with the current standards—generating credits for later use—ARB expects the impact of the LCFS on gasoline and diesel prices at the pump to continue to be negligible.

In early January 2013, staff will provide a written update to the Board on LCFS implementation. More information on ARB activities and upcoming public meetings can be found at: http://www.arb.ca.gov/fuels/lcfs/lcfs.htm.

- In Spring 2013, the Executive Officer will hold a hearing to add fuel pathways and crude oil CIs to the LCFS.

  - New fuel pathways recognize production of lower-CI alternative fuels that rely on technical improvements and innovation.
  - Crude oil CIs are needed to monitor and estimate the overall crude slate being processed by California refineries.

- In the first half of 2013, ARB staff expects to hold rulemaking workshops on specifications for alternative diesel fuel blends, including biodiesel. These specifications are intended to ensure that increasing use of lower-carbon blends (like used cooking oil added to California diesel fuel) do not increase emissions of the nitrogen oxides that contribute to ozone and fine particle pollution.

- In the first half of 2013, ARB staff expects to hold rulemaking workshops on amendments to the LCFS Regulation for consideration by the Board in the Fall. These amendments will address several elements, including:

  - Revisions to iLUC values to reflect new science.
  - Addition of electricity credits from electrified mass transit and off-road mobile sources.
  - Recognition of low-energy-use refineries.
  - Consideration of a LCFS flexible compliance mechanism that could be triggered if there should be a substantial shortfall in the availability of LCFS credits toward the end of this decade when the CI requirements become more rigorous.

C. Advanced Clean Cars

1. Background

Recognizing the necessity for the transportation sector to reduce emissions to achieve the long-term climate goals, and the need for a comprehensive approach to further reduce criteria and GHG emissions from light-duty vehicles beyond 2016, ARB developed the Advanced Clean Cars Program. This recent Program closely aligns the Low Emission Vehicle, Zero Emission Vehicle (ZEV), and greenhouse gas light duty vehicle standards to lay the foundation for the next generation of ultra-clean vehicles. The Advanced Clean Cars Program includes more stringent GHG emission standards, tighter criteria pollutant standards, and increased ZEV production requirements from 2017-2025 in passenger cars and trucks.

The more stringent GHG emission standards were developed through a joint effort with the U.S Environmental Protection Agency (U.S. EPA) and the National Traffic Highway Safety Administration (NHTSA) that evaluated available and emerging GHG emission reduction technologies for light-duty vehicles. These requirements will reduce new car carbon dioxide emissions by about 36 percent and new truck carbon dioxide emissions by about 32 percent from model year 2016 through 2025.

The ZEV mandate will continue as a distinct but complementary program in California and the ten states that have also adopted it. The mandate is a critical element toward meeting the 2050 goal established by Executive Order B-16-2012.

2. Recent Developments - 2012

Rulemaking. In January 2012, ARB approved the final Advanced Clean Cars Program through rulemaking. The ZEV Program was also amended as part of that rulemaking, increasing the zero emission vehicle requirements over time to about 15 percent of new car sales in 2025. The ZEV Program focuses attention on commercialization of battery electric vehicles, hydrogen fuel cell electric vehicles, and plug-in hybrid electric vehicles.

In October 2012, U.S. EPA finalized similar GHG emission standards while NHTSA finalized similar fuel economy standards. Subsequently, in November 2012 the Board approved amendments to the Advanced Clean Cars regulations that allowed vehicle manufacturers to demonstrate compliance with ARB regulations based on compliance with the federal standards providing a path for vehicle manufacturers to meet a single set of national GHG emission standards through the 2025 model year.

Federal Waiver. On December 27, 2012, U.S. EPA approved ARB’s request for a waiver under the Clean Air Act, giving California the green light on its Advanced Clean Cars package of regulations.

Hydrogen Infrastructure. As part of the Advanced Clean Cars Program, ARB has been pursuing strategies to ensure that hydrogen fueling infrastructure is available for hydrogen fuel cell vehicles as these vehicles reach early commercial volumes. To ensure hydrogen fueling infrastructure is in place for the market launch of fuel cell vehicles, ARB amended the Clean Fuels Outlet Regulation in January 2012. The Clean Fuels Outlet regulation requires fuel providers to build hydrogen stations once automakers project at least 10,000 fuel cell vehicles will be in the marketplace within a given air basin or 20,000 fuel cell vehicles are projected to be in the marketplace statewide. In December 2012, ARB withdrew the Clean Fuels Outlet rulemaking package from the Office of Administrative Law to pursue legislation that would re-authorize various clean air fees and create a dedicated source of funding for achieving a hydrogen fueling network sufficient to provide convenient fueling for vehicle owners, which would effectively achieve the goal of the Clean Fuels Outlet regulation. ARB plans to reintroduce the Clean Fuels Outlet rulemaking package as a contingency measure in case the legislation fails.

3. Upcoming Milestones - 2013

ARB has committed to conduct a mid-term review of the Advanced Clean Cars Program. The review of the GHG component will be conducted jointly with U.S. EPA and NHTSA by calendar year 2018 to assess the appropriateness of the model year 2022 through 2025 GHG emission standards and ensure that updated assessments of technology, capability, and costs continue to support the feasibility and cost-effectiveness of the future standards. All three agencies have begun work toward this review, primarily in the form of contracts for continued vehicle technology reviews and assessments. Similarly, ARB's review of the ZEV mandate will evaluate the Program by 2018 to determine whether the future targets remain achievable.

More information on ARB activities and upcoming public meetings can be found at: http://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/consumer_acc.htm

Clean Cars Contracts. ARB is pursuing several contracts as part of its FY 2012-13 Research Plan to support these reviews and overall implementation of the Advanced Clean Cars Program. The ARB FY 2013-2014 Research Plan is currently under development and may result in additional projects in these areas. Key contracts under development include:

- New Car Buyers' Intentions Towards Zero-Emission Vehicles. The contractor will survey and interview households who buy any new vehicle on their awareness, knowledge, and attitudes towards ZEVs to support growth of the ZEV market.

- Advanced Plug-in Electric Vehicle Travel and Charging Behavior. The contractor will place instruments in various plug-in electric vehicles to collect real-world data on usage and charging behavior which influence emission benefits.

- Technical Analysis of Vehicle Load-Reduction Potential for Advanced Clean Cars. The contractor will evaluate the impact of combining today's best-in-class technologies for aerodynamics, rolling resistance, and mass reduction towards the GHG targets (and implications for ZEV technology).

D. Other Regulations -- Landfill Methane

1. Background

On June 25, 2009, the Board approved a regulation that reduces emissions of methane from municipal solid waste (MSW) landfills. The MSW Methane Regulation (MSW Regulation) is a Discrete Early Action measure, as described in AB 32. The MSW Regulation, which became effective in June 2010, requires owners and operators of certain uncontrolled MSW landfills to install gas collection and control systems. It also requires owners of landfills with existing and newly installed gas collection and control systems to operate them in an optimal manner.

ARB originally estimated that there would be a reduction of about 0.4 MMT of carbon dioxide equivalent as a result of bringing 14 uncontrolled MSW landfills into compliance with the Regulation by 2020. The implementation and enforcement of this measure for the remaining estimated 204 affected MSW landfills (including those with gas collections systems already installed) is expected to result in an additional estimated emission reduction of 1.1 MMT of carbon dioxide equivalent in 2020. ARB is working with the California Department of Resources Recycling and Recovery to further refine the estimated emission reductions from the measure and is considering recently published studies.

1. Recent Developments - 2012

March 15, 2012 was the annual compliance date for the MSW Regulation. Landfills subject to the MSW Regulation submitted the required facility annual reports and the majority of landfills were in compliance.

To date, of the 14 uncontrolled landfills that may require controls, three have submitted design plans to have gas collection and control systems installed, two have requested to conduct surface demonstration tests to prove that a gas collection and control device would not be required, four have stated that they already have controls installed, and five have taken no action. In addition, 18 landfills with existing gas collection and control systems have submitted plans to modify their systems to meet the requirements of the measure. As ARB obtains further information, additional landfills may be required to install controls.

The MSW Regulation allows the local air districts to voluntarily enter into a memorandum of understanding (MOU) with ARB to implement and enforce it and to assess fees to cover their costs. ARB developed the MOU template in consultation with representatives from the California Air Pollution Control Officers Association. Upon signing the MOU, primary enforcement authority is transferred to the local air district. ARB retains its right to enforce the MSW Regulation, if necessary.

Having local air districts participate in the enforcement process capitalizes on their expertise (many of them regulate other types of emissions from the landfills), takes advantage of their physical location closer to the sources, and reduces the cost of implementing the MSW Regulation. This is an example of the partnership that ARB and the local air districts are working to expand on to achieve the goals of AB 32.

To date, 17 districts have signed the MOU. ARB continues to work with the remaining local air districts to encourage their participation.

2. Upcoming Milestones - 2013

During 2013, ARB expects to increase enforcement activities with inspections, audits, and compliance assistance training. More information on ARB activities and any upcoming public meetings can be found at:
http://www.arb.ca.gov/cc/landfills/landfills.htm.

- In 2013, ARB will conduct compliance inspections and audits of approximately 65 MSW landfills, and implement and enforce the MSW Regulation for landfills not covered by an MOU with a local air district.

- In 2013, ARB anticipates providing training to the local air districts that have signed the MOU to assist them in implementing and enforcing the Regulation. In addition, ARB is planning to extend a modified version of this training to landfill owners and operators.

- In 2013, through work on the 2013 Update to the AB 32 Scoping Plan, ARB will continue to coordinate with the California Department of Resources Recycling and Recovery on improving the quantification of this Regulation's emission reductions. This process may help to identify additional opportunities for securing GHG reductions from the waste sector through regulations and or incentives.

II. ARB ACTIVITIES TO SUPPORT AB 32

This section focuses on major AB 32 support activities identified in the supplemental budget language: the 2013 Update to the AB 32 Scoping Plan, coordination with entities outside California, implementation of SB 375 sustainable communities' plans, and the use of Cap-and-Trade auction proceeds. Also included is information on the development of the Sustainable Freight Strategy, which would provide significant climate benefits.

A. Scoping Plan

1. Background

AB 32 requires ARB to take the lead, in close coordination with other State agencies, to prepare and adopt a Scoping Plan that describes how the State will reduce statewide GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by the Board in December 2008, and contained a range of GHG emission reduction actions that could be taken. These include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade program, and an AB 32 program implementation fee to fund the program.

2. Recent Developments – 2012

AB 32 requires that the Scoping Plan be updated every five years. ARB began efforts to update the Scoping Plan in 2012 and will be moving this effort into high gear in early 2013. Staff updated the Board at its December 6, 2012 meeting on plans for 2013. The presentation can be viewed at:
http://www.arb.ca.gov/board/books/2012/120612/12-9-5pres.pdf.

ARB expects that the 2013 Update to the AB 32 Scoping Plan will: summarize the scientific advancements concerning the understanding of climate change and its impacts, highlight California's accomplishments to date (including State, regional and local climate initiatives), quantify progress toward meeting the 2020 GHG emissions goal, examine the economic impacts of actions taken to support that goal, identify opportunities to pursue additional measures as appropriate (such as uncovered sectors or short-lived climate pollutants), and lay the foundation for the research and policy work needed to map the path to the post-2020 goals.

3. Upcoming Milestones - 2013

The development of the 2013 Scoping Plan Update will involve extensive ARB staff work within three spheres – analysis internal to ARB, coordination with other State agencies, and consultation with other stakeholders in government, industry, community/environmental groups, and academia. The breadth of the effort will require significant ARB staff resources, drawing from staff and management who deal with issue areas such as: climate policy and regulation, energy, industrial sources, vehicles, freight transport, fuels, waste, water, agriculture, research, emissions, economics, environmental analysis, federal planning, sustainable communities, and incentives.

Under the auspices of the Climate Action Team, led by Secretary for Environmental Protection Matthew Rodriquez, ARB and other State agencies will collaborate to develop a process for identifying and exploiting opportunities for securing post-2020 GHG reductions in five focus areas:

- Transportation (including fuels, infrastructure and land use)
- Energy generation (including transmission infrastructure and efficiency)
- Waste
- Water
- Agriculture

ARB will also be asking major air districts and transportation agencies to partner on the public process for a "regional overlay" to the Scoping Plan to illustrate how climate change policy is unfolding throughout California's diverse population and landscape. Regional public forums will be held throughout the State.

- In early 2013, ARB plans to hold initial public workshops to discuss preliminary concepts for updating the Scoping Plan.

- In Spring 2013, regional public forums, co-hosted by air and transportation agencies, will be held in several areas of the State to provide a local/regional perspective on both progress and future direction for California's climate program.

- In Summer 2013, ARB expects to release a preliminary draft of the 2013 Update to the AB 32 Scoping Plan for public review and comment. This process will support Board consideration of the proposed 2013 Update in Fall 2013.

More information on ARB activities and upcoming public meetings on the Scoping Plan can be found at: http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

B. Coordination with Other Entities Outside of California

AB 32 requires ARB to "consult with other states, the federal government, and other nations to identify the most effective strategies and methods to reduce greenhouse gases, manage greenhouse gas control programs, and to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs."

The focus of ARB's efforts has been on the partner jurisdictions in the Western Climate Initiative that are the most promising candidates for the development of a regional program which will enhance each jurisdiction's individual efforts. Additional attention has been given to developing the administrative support activities managed by the Western Climate Initiative, Inc. ARB worked with WCI partners including Québec on cap-and-trade program design recommendations for a regional program. ARB also consulted with the government of Québec on its cap-and-trade program to help facilitate a more effective GHG reduction program through possible linkage with California's Program. ARB continues to have bi-weekly calls with the Western Climate Initiative on regional coordination.

ARB works closely with other entities at the local, state, regional, national, and international levels to ensure that the rigorous standards established by California are understood and potentially implemented by other jurisdictions. Where other states and nations are developing or implementing their own GHG reduction programs, ARB looks to coordinate so that the program designs complement California's efforts to the maximum extent feasible. For example, ARB provided insight and advice to the Australian government on its design of a cap-and-trade program.

1. Western Climate Initiative (WCI)

The Western Climate Initiative (WCI) is a collaboration of independent jurisdictions working together to identify, evaluate, and implement emissions trading policies to tackle climate change at a regional level. WCI was originally established by five states and grew to eleven states and provinces including: Washington, Oregon, Montana, Utah, New Mexico, Arizona, California, British Columbia, Ontario, Manitoba, and Québec. California participated in the WCI as part of the effort to carry out the requirements of AB 32. Five jurisdictions are active in WCI, and developing cap-and-trade programs. These jurisdictions are California, British Columbia, Manitoba, Ontario, and Québec.

Following extensive consultation with stakeholders, the WCI jurisdictions released comprehensive recommendations for designing and implementing an emissions trading program. As a result of California's coordination efforts, the WCI recommendations are consistent with the design of the ARB Cap-and-Trade Program. This consistency will help facilitate opportunities for linking California's Program with other jurisdictions in the future.

Further information on the activities of WCI can be found at: www.westernclimateinitiative.org.

2. Western Climate Initiative, Inc. (WCI, Inc.)

Throughout the WCI collaboration, the WCI jurisdictions have discussed the concept of having regionally coordinated administrative support to the jurisdictions' emissions trading programs. In November 2011, the WCI jurisdictions created the Western Climate Initiative, Incorporated (WCI, Inc.) to fulfill this administrative role.

WCI, Inc. is a non-profit corporation that focuses solely on administrative support, and is separate from WCI. WCI, Inc. coordinates administrative services to cap-and-trade programs developed and implemented by states and provinces. The Board of Directors for WCI, Inc. includes officials from the provinces of Québec and British Columbia, and the State of California. The services provided by WCI, Inc. can be expanded to support jurisdictions that join in the future.

The coordinated administrative support from WCI, Inc. benefits California and the other programs.

- Coordinated support ensures that all the linked programs use the same highly secure program infrastructure, including the allowance tracking system and auction platform.

- Coordinated support ensures that analyses performed to support market monitoring in each jurisdiction is conducted consistently and effectively for the entire compliance instrument market across all the linked programs.

- Coordinated support enables the linked programs to share the cost of developing and maintaining program infrastructure, thereby reducing the costs for each jurisdiction.

WCI, Inc.'s approach to coordinating administrative support is to have each jurisdiction specify its administrative requirements, and then for WCI, Inc. to provide support that meets these specifications. Currently, British Columbia, California, and Québec participate in WCI, Inc. California and Québec are currently implementing allowance trading programs.

Most of the administrative support provided by WCI, Inc. is highly technical or specialized and has been developed through the use of contractors. WCI, Inc. is:

- Coordinating the development and administration of the CITSS compliance system;

- Coordinating the development and administration of an allowance auction platform; and

- Coordinating the performance of analyses to support market monitoring performed by each jurisdiction of allowance auctions and allowance and offset certificate trading.

Whereas WCI has focused on collaboration on emissions trading policies, WCI, Inc. is solely administrative in nature. All policymaking and regulatory authority for each jurisdiction's program is retained by each jurisdiction. According to the WCI, Inc. bylaws, its administrative activities must "…conform to the requirements of State and Provincial programs…" The requirements are defined by the participating jurisdictions, such that WCI, Inc. must execute its administrative role in conformance with the requirements established by ARB and the other jurisdictions.

Section 4 of this report provides the semi-annual update to the Legislature on the activities of WCI, Inc. Please see this section for further information.

3. Other Federal and State Governments

ARB coordinates with entities at the state, federal, and international level that have or are developing program elements similar to ours to ensure that important provisions are as consistent as possible, where appropriate. This coordination ensures that the State's and stakeholders' investment in developing California regulations facilitates future broadening of policies to other jurisdictions and strengthens California's ability to compete globally.

ARB works closely with federal agencies including: U.S. EPA, the U.S. Department of State, the U.S. Agency for International Development, the Commodity Futures Trading Commission, and the Federal Energy Regulatory Commission on climate change issues.

The Mandatory Reporting Regulation for GHG emissions is modeled on, and periodically updated to maintain consistency with, U.S. EPA's GHG reporting rule. In 2013, ARB will continue to work with U.S. EPA on further consolidating reporting systems to both reduce regulatory burden on reporting entities and increase data accuracy and integrity. The CITSS compliance system for California's Cap-and-Trade Regulation was built in cooperation with U.S. EPA on the framework used in other cap-and-trade systems, including the federal Acid Rain Program and the Northeast states' Regional Greenhouse Gas Initiative. The industrial emissions benchmarking methodology used in California's Cap-and-Trade Program was developed in coordination with partners in other U.S. states, Canadian provinces, and the European Union. In 2013, ARB will be pursuing agreements with the Commodity Futures Trading Commission and Federal Energy Regulatory Commission to coordinate and strengthen carbon and related energy market monitoring, oversight, and enforcement.

U.S. EPA and ARB routinely coordinate on advanced transportation and fuels, including the relationship between the federal Renewable Fuels Standard and the California Low Carbon Fuel Standard. ARB's work with U.S. EPA and its federal partners was instrumental to the success of the Advanced Clean Cars Program. In addition to GHG standards for vehicles, U.S. EPA has begun regulation of GHG emissions from stationary sources, and ARB has been in regular coordination to ensure that proposed rules build on, and do not conflict with, AB 32 programs.

ARB has also been working with other states and provincial governments on low carbon fuels issues to share insights gained from developing and implementing the Low Carbon Fuel Standard. In 2012, staff worked closely with Oregon and British Columbia on sharing ARB's web-based, secure LCFS Reporting Tool for their related programs. Regulated parties use the Reporting Tool to report the volumes and carbon intensities of the transportation fuels that they have introduced into the California fuels market; therefore, it is used for both reporting and compliance purposes. Work continues with these governments regarding the technical details of sharing the Reporting Tool, including security risks, program maintenance, and update capabilities.

ARB has also been engaging in discussions with other governmental agencies outside of California to share information and experiences about the design of programs aimed at reducing emissions from deforestation and forest degradation (REDD), and to begin evaluating whether and how such REDD programs could potentially be included in California's Cap-and-Trade Regulation in the future. ARB does not currently accept any offset credits from outside of the United States, and any future inclusion would require new rulemaking.

C. SB 375 – Sustainable Communities Plans

1. Background

SB 375 (Steinberg, Chapter 728, Statutes of 2008), also known as the Sustainable Communities and Climate Protection Act, reduces GHG emissions from passenger vehicles through improved regional transportation and land use planning. SB 375 directs regions to integrate development patterns and transportation networks in a way that achieves passenger vehicle greenhouse gas reductions while addressing housing needs and other regional planning objectives.

ARB is required to set regional GHG emission reduction targets for passenger vehicles for 2020 and 2035 for the State's federally-designated Metropolitan Planning Organizations (MPO). Each MPO is then required to adopt and submit to ARB a sustainable communities strategy (SCS) that uses land use and transportation strategies to reduce the region's passenger vehicle GHG emissions. ARB's statutory responsibility under SB 375 is to then accept or reject an MPO's determination that its SCS would, if implemented, meet the targets. An MPO must develop an alternative planning strategy if its SCS fails to meet ARB targets.

In 2010, ARB set the regional GHG emissions reduction targets required under SB 375. In the four largest regions of the State, the Board-approved targets (See Table 1-1) are expected to achieve per capita GHG emission reductions of seven to eight percent by 2020, and between 13 and 16 percent in 2035, compared to 2005 levels. Achieving these targets means statewide GHG reductions of over 3 MMT in 2020 and 15 MMT in 2035. The regions include Southern California, the Bay Area, San Diego, and the Sacramento Metropolitan Area.

Under the law, ARB has specific statutory responsibility to determine whether the SCS, if implemented, would achieve the GHG emission targets. In July 2011, ARB staff released to the public a methodology that details how ARB will evaluate MPO SCSs in order to fulfill its responsibility under the law. ARB's methodology can be found at http://www.arb.ca.gov/cc/sb375/scs_review_methodology.pdf.

Table 1-1: ARB Greenhouse Gas Emission Reduction Targets for Major Regions under SB 375

Metropolitan Planning Organization (MPO) Region	**Targets ***	
	2020	**2035**
Southern California Association of Governments (SCAG)	-8	-13
Metropolitan Transportation Commission (MTC)	-7	-15
San Diego Association of Governments (SANDAG)	-7	-13
Sacramento Area Council of Governments (SACOG)	-7	-16
8 San Joaquin Valley Councils of Governments	-5	-10
Tahoe Metropolitan Planning Organization	-7	-5
Shasta Regional Transportation Agency	0	0
Butte County Association of Governments	+1	+1
San Luis Obispo Council of Governments	-8	-8
Santa Barbara County Association of Governments	0	0
Association of Monterey Bay Area Governments	0	-5

* Targets are expressed as percent change in per capita GHG emissions relative to 2005.

2. Recent Developments – 2012

MPOs are now in the process of developing and adopting their SCSs as part of their next Regional Transportation Plan updates. Of the major MPOs, San Diego's SCS was adopted by the San Diego Association of Governments in October 2011, followed by the Southern California Association of Governments and the Sacramento Area Council of Governments in 2012. Based on staff's evaluation, ARB's Executive Officer accepted these three SCSs through Executive Orders on behalf of the Board. Staff presented status updates to the Board in 2012 on the development of these plans.

Sustainable Communities Contracts. ARB is providing funding for several research efforts that are contributing critical data and information that will help strengthen the technical foundation of SB 375 and identify important data gaps and research needs. One set of contracts with University of California researchers is focused on identifying the impacts of key transportation and land use policies on vehicle use and greenhouse gas emissions based on the existing scientific literature. The results of the first literature review on these issues may be found on ARB's website at http://arb.ca.gov/cc/sb375/policies/policies.htm. A second contract that will expand on the findings of the first is currently underway.

Another set of contracts is focused on the modeling tools used by regional governments to quantify the impacts of different land use and transportation strategies on regional travel characteristics. One recently concluded contract with the University of California at Davis, focused on the modeling tools in the San Joaquin Valley, and included an educational training component on traditional 4-step travel demand models. A second contract with Smart Mobility, Inc. is currently underway and will provide comprehensive review of various state-of-the-practice activity-based and land use models that are either currently in use or under development in California.

In addition, ARB is providing funding for several research projects on land use and transportation planning, including the economic benefits and costs of smart growth strategies, effects of complete streets on travel behavior, quantifying the effects of local government action on vehicles miles travelled, the role of land use planning in reducing residential energy consumption and GHG emissions, and modeling household vehicle and transportation choice and usage. More details on these research projects as well as information on completed and future research may be found on ARB's website at http://www.arb.ca.gov/research/sustainable/landuse.htm .

3. Upcoming Milestones - 2013

As each additional metropolitan planning organization adopts its SCS, ARB staff will evaluate the plan to determine whether it, if implemented, would achieve the GHG emission targets. ARB will periodically report to the Board on these actions. More information on staff's activities and upcoming meetings can be found at: http://www.arb.ca.gov/cc/sb375/sb375.htm.

- In January 2013, the Board will hear an update in Bakersfield on the San Joaquin Valley's SB 375 status when additional information about the region's improved modeling and data will be available.

- In Spring 2013, the Bay Area's Metropolitan Transportation Commission is scheduled to adopt its SCS, and staff will present an update to the Board.

D. Cap-and-Trade Auction Proceeds

1. Background

A portion of the allowances required for compliance with the Cap-and-Trade Regulation will be sold at quarterly auctions and reserve sales. The Legislature and Governor will appropriate the State's portion of these auction proceeds (not the proceeds from allowance consigned to auction by the utilities) to State agencies to invest in projects that support the goals of AB 32. Strategic investment of proceeds will further AB 32 implementation, including support of long-term, transformative efforts to improve public health and develop a clean energy economy.

2. Recent Developments - 2012

In 2012, the Legislature passed and Governor Brown signed into law three bills—AB 1532 (Pérez, Chapter 807), SB 535 (De León, Chapter 830), and SB 1018 (Budget and Fiscal Review Committee, Chapter 39)—that establish the Greenhouse Gas Reduction Fund to receive auction proceeds and to provide the framework for how the auction proceeds will be administered. ARB is responsible for the fiscal management of the Greenhouse Gas Reduction Fund. This legislation establishes the broad categories of GHG emission reducing projects that may be funded, including investments in:

- Clean and efficient energy;
- Low-carbon transportation;
- Natural resource conservation and management and solid waste diversion; and,
- Sustainable infrastructure and strategic planning.

In addition to reducing GHG emissions in California, the law establishes the following goals for this funding, where applicable and feasible:

- Maximize economic, environmental, and public health benefits;
- Create jobs;
- Complement efforts to improve air quality;
- Invest in projects that benefit disadvantaged communities;
- Provide opportunities for businesses, public agencies, nonprofits, and others to participate in efforts to reduce GHG emissions; and,
- Lessen the impacts and effects of climate change.

At least 25 percent of program funding be directed to projects that provide benefits to disadvantaged communities and at least ten percent of program funding be spent on projects located in disadvantaged communities. Cal/EPA is responsible for identifying the disadvantaged communities for investment opportunities.

The law also establishes a two-step process for allocating funding to State agencies, with the Department of Finance (Finance) as the lead agency.

- *Three-Year Investment Plan:* Finance, in consultation with ARB and other State agencies, is required to develop and submit to the Legislature a three-year investment plan identifying proposed investments of auction proceeds. The first such plan is due to the Legislature with the Revised FY 2103-14 State Budget in May 2013.

- *Annual Budget Appropriations:* Funding will be appropriated to State agencies by the Legislature and Governor through the annual Budget Act, consistent with the three-year investment plan.

3. Upcoming Milestones - 2013

The first investment plan is due in May 2013. Additional dates are shown below.

- In February 2013, ARB staff anticipates holding public workshops in Northern, Central, and Southern California for the Department of Finance and State agencies to discuss concepts for the first investment plan.

- In April, 2013, ARB staff expects that the Board will hold a public hearing to elicit testimony on a draft investment plan.

- May 14, 2013, the Department of Finance is scheduled to submit the proposed investment plan as part of the Revised Budget for FY 2013-14.

4. Greenhouse Gas Reduction Fund

A new Greenhouse Gas Reduction Fund was created as a special fund in the State Treasury. ARB is responsible for the fiscal management of the Fund, with expenditures authorized by the Legislature and the Governor through the State Budget. Table 1-2 shows the proceeds deposited from the November 2012 auction (from the sale of State-owned 2015 vintage allowances) and the current balance.

Table 1-2: Greenhouse Gas Reduction Fund (as of December 31, 2012)	
Cap-and-Trade auction funds deposited to date	$55,760,000
Current balance	$55,760,000

E. <u>Sustainable Freight Strategy</u>

1. Background

The trucks, locomotives, ships, harbor craft, aircraft, cargo handling equipment, and transport refrigeration units that carry and move freight in California are significant sources of air pollution. Freight transport equipment and associated facilities like ports, railyards, airports, freeways, distribution centers, and border crossings contribute over ten percent (and growing) of the GHG emissions in the State, as well as a significant portion of the black carbon emissions that also contribute to climate change. The diesel engines that power these freight sources are responsible for about two-thirds of the diesel soot that increases the health risk in nearby communities, and nearly half of all nitrogen oxide emissions that form regional ozone and fine particles in California.

ARB has adopted a series of regulations to reduce the diesel pollution and health risk near freight facilities over the last decade. U.S. EPA and other federal agencies have promulgated national emission standards and supported international agreements for cleaner ships, ship fuels, and aircraft. The State's largest ports have developed their own plans to cut air pollution. The railroads have implemented voluntary emission reduction agreements to bring the cleanest locomotives to California. Businesses and government have made substantial investments in lower-emission technology and fuels. The combined impact is dramatic – a 50 percent or greater reduction in diesel soot from California's largest ports and railyards in just five years (2005-2010).

Despite this progress, California will need to transform the freight transport system to further reduce the localized health risk around freight facilities, meet State and federal air quality standards, and achieve the long-term climate goals. The cancer risk to residents living near major freight hubs will remain elevated without further action. The State Implementation Plan relies on future advanced technology measures that will depend on our ability to transition the current freight system to one with zero or near-zero emissions over the long-term. In addition, the 2008 Scoping Plan includes a measure for more efficient freight transport to cut GHG emissions.

2. Recent Developments – 2012

In 2012, ARB redirected existing staff to form the Sustainable Freight Section, which is responsible for developing a sustainable freight strategy for California. Outreach began with freight industry representatives; local, State and federal government agencies; and community and environmental advocates to discuss the need for transformation and to seek input on a collaborative process. The California Department of Transportation began similar activities, with a focus on infrastructure, to support development of a Freight Mobility Plan and meet new federal directives for freight planning. The Southern California Association of Governments adopted a 2012 Regional Transportation Plan that reflects many of the objectives and near term steps to support a zero/near-zero emission freight system. ARB is pursuing opportunities to coordinate or integrate these efforts.

A broad coalition of interests is needed to develop a California vision for a sustainable freight transport system, define the system changes (logistics, infrastructure, equipment) needed to implement the vision, secure support and public/private funding, and build/deploy the system. This approach offers the potential to meet the State's air quality, energy, and economic needs for a clean freight system that supports a competitive logistics industry and the associated jobs.

3. Upcoming Milestones - 2013

Several events in Spring 2013 will support this effort, including:

- A public symposium on zero/near-zero emission freight technology in conjunction with the South Coast Air Quality Management District that is hosting the event and other air agency partners.

- A smaller ARB policy symposium for government, industry, community, environmental, and academic leaders to begin the coalition building and visioning process.

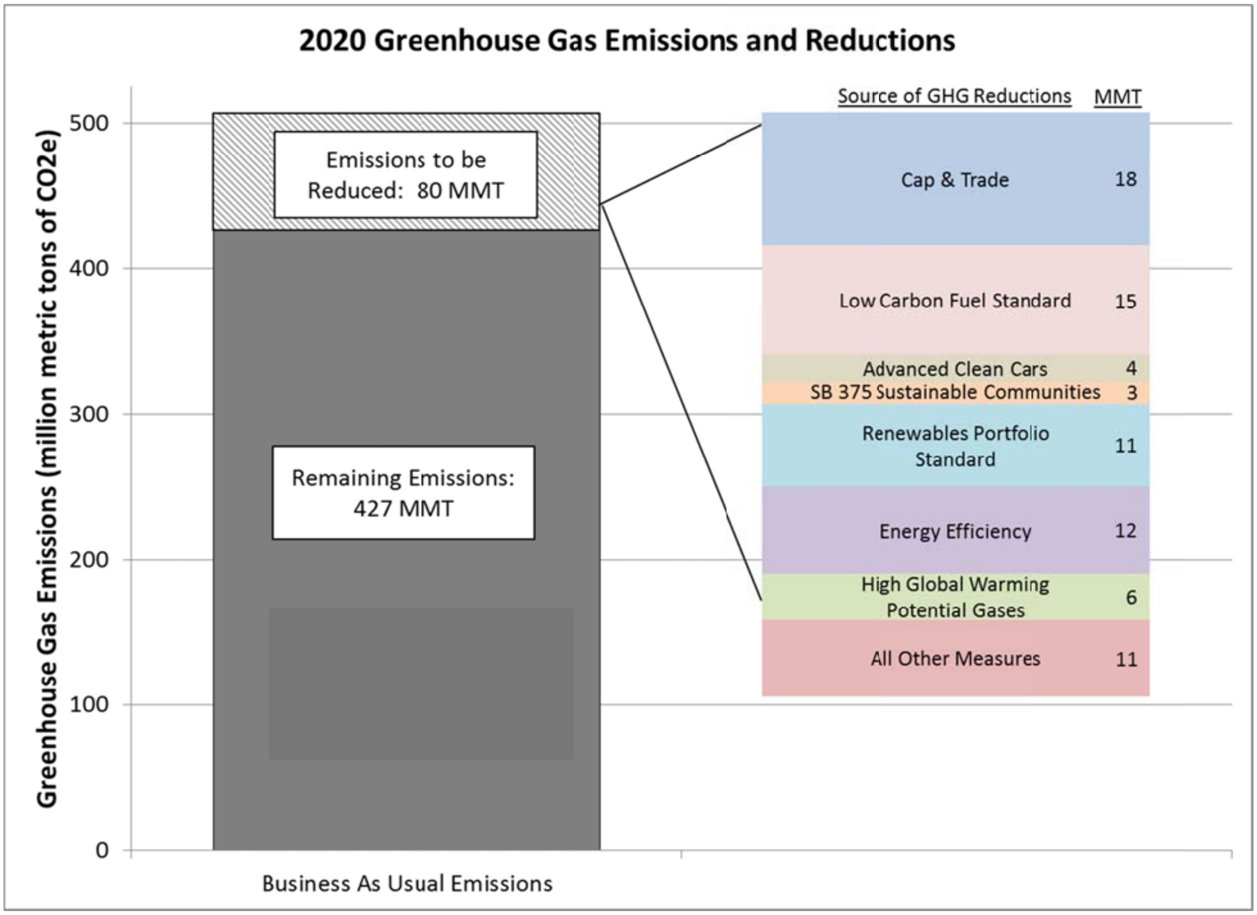
Later in 2013, staff anticipates presenting concepts for development of a sustainable freight strategy to the Board. Based on Board direction, staff will pursue the next steps. This activity will be reflected in the 2013 Update to the Scoping Plan, as well as subsequent State Implementation Plan revisions.

III. GREENHOUSE GAS EMISSIONS AND REDUCTIONS

ARB currently estimates that GHG emissions in 2020 would be 507 MMT of carbon dioxide equivalents (CO_2E) in a "business as usual" case without the State's actions to reduce GHG. The AB 32 target is to return to 1990 emission levels by 2020, which ARB has identified as 427 MMT of CO_2E.

To meet the target, the climate program must cut 80 MMT of CO_2E in 2020. California is on track to achieve this AB 32 goal. Figure 1 below shows the regulations and programs contributing to this progress. Please note that the reductions shown are for 2020; programs like Advanced Clean Cars and SB 375 Sustainable Communities will generate increasingly greater reductions in later years.

Figure 1

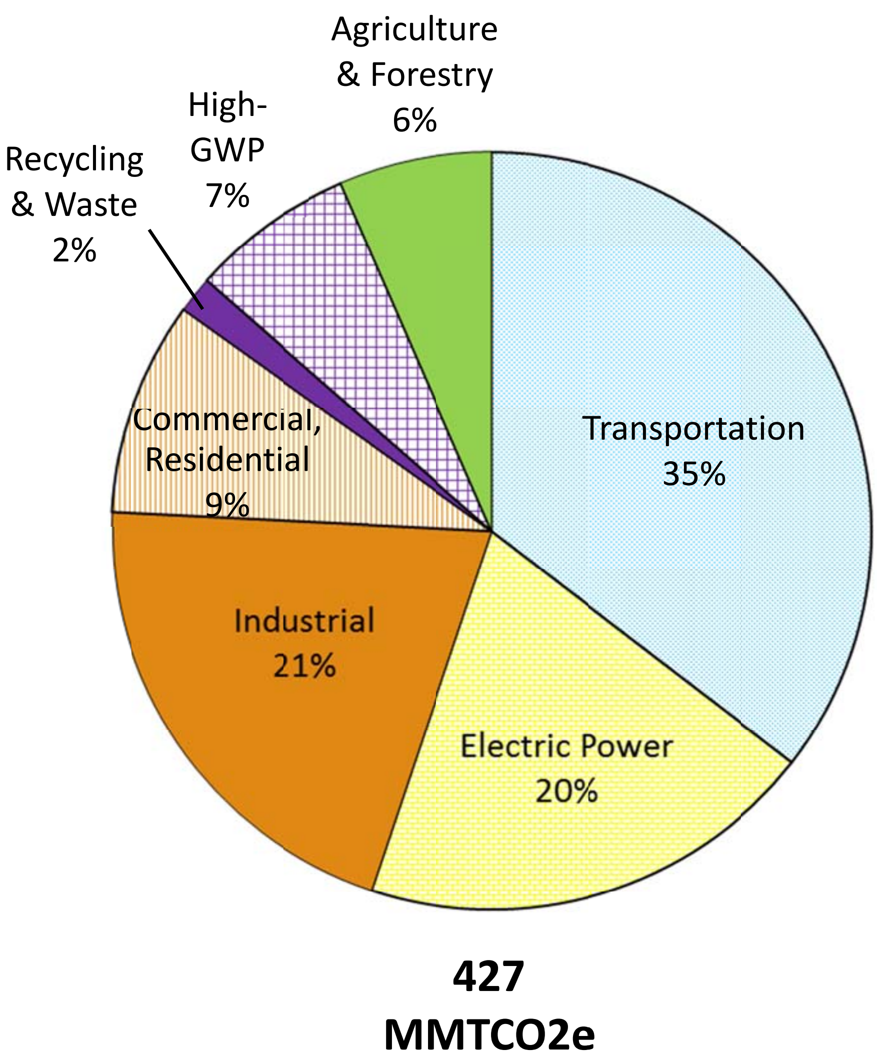


The transportation sector is the largest source of GHG emissions and the largest contributor to the reductions through the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, the Advanced Clean Cars Regulations, and the SB 375 Sustainable Communities' Strategies. Cleaner, more efficient energy is a vital part of the solution, through requirements for generation of electricity by renewable sources and improved efficiency at industrial operations, businesses, homes and government facilities. Regulations that limit emissions of high global warming potential (GWP) gases, like sulfur hexafluoride, also contribute significant benefits.

The ARB regulations and programs providing the greatest GHG reductions align with where ARB is putting its resources (funded primarily by the AB 32 Cost of Implementation Fee). The Cap-and-Trade and Low Carbon Fuel Standard Programs are the two single largest contributors to meeting the 2020 emission reduction goal. As shown in Sections 2 and 3 on ARB's resources to implement AB 32, those two programs account for nearly half of ARB's climate resources in FY 2011-12 and over half in FY 2012-13.

Figure 2 shows how the 2020 emissions are likely to be spread across the sectors after compliance with the AB 32 target. The 2013 Update to the Scoping Plan will focus on key areas with potential for further emission reductions after 2020. These include transportation, energy, waste, water, and agriculture.

Figure 2
2020 Greenhouse Gas Emissions By Sector
With Adopted Regulations and Programs



SECTION 2:

ANNUAL AB 32 FISCAL REPORT

(Fiscal Year 2011-12: July 2011-June 2012)

This report is required annually by the Supplemental Report of the 2012-13 Budget[4] to quantify the major revenues and expenses for ARB to implement the AB 32 program for the prior fiscal year. This report focuses on Fiscal Year (FY) 2011-12. The report format follows the Budget language, from funding received (Cost of Implementation Fee and Cap-and-Trade auction proceeds), followed by ARB expenses for the AB 32 program as a whole and breakdowns by specified major program areas, the total Cap-and-Trade allowance auction funds and prices, and concluding with the activities of the Emissions Market Assessment Committee.

I. FY 2011-12 FUNDS RECEIVED AND EXPENDED

This element of the report covers the FY 2011-12 funds received related to AB 32 implementation, as well as the FY 2011-12 funds expended by ARB to support activities that provide climate benefits.

Structure and Funding for Regulatory Activities. The resources estimated in this report are those used to support all activities that provide a climate benefit, whether as the primary objective, or as a co-benefit. In each year, ARB's resources to support the climate program equal or exceed the amount budgeted exclusively for AB 32 activities that are funded by the AB 32 Cost of Implementation Fee. ARB relies on other funding sources; the specific source is related to the activity. There are two reasons for this.

First, ARB has several measures and program areas that were originally designed to achieve other air quality goals and rely on different funding sources, but nonetheless provide a climate co-benefit by simultaneously reducing GHGs. Although the GHG

[4] Each year, beginning January 10, 2013, CARB shall provide the Legislature an AB 32 fiscal report. This annual report is to be retrospective and is intended to quantify the major revenue and CARB expenses for the AB 32 program for the prior fiscal year. The scope of the annual fiscal report should include: the AB 32 cost of implementation fee revenue, loans repaid, and overall AB 32 program expenses (staff, operations, and contracts) for the prior fiscal year; the total cap-and-trade auction funds; a summary of CARB AB 32 expenditures; the balance for the prior fiscal year; and allowance auction prices in order to assess trends. The annual fiscal report should include an update on activities and findings of the Market Surveillance Committee, as well as track and detail all expenses and revenues, including the following categories: all AB 32 costs, all cap-and-trade costs, low-carbon fuel standards, Renewable Portfolio Standards, Green Building strategy, and Landfill methane capture.

emission reductions associated with these other measures are counted towards achieving the AB 32 target and considered as part of the climate program, those activities may not necessarily be fully funded by the AB 32 Cost of Implementation Fee. For example, the ships-at-berth rule was initiated to reduce the community health risk from ship pollution, but the rule also provides substantial GHG co-benefits associated with using shore-based electrical power rather than onboard ship fuel when the ships are in port.

Second, ARB's regulatory program has grown and evolved to address the agency's responsibilities under State and federal law to improve air quality at the local, regional, and global levels. ARB adopts, implements, and enforces regulations focused on meeting several different objectives:

- Reducing criteria pollutants (like ozone and fine particulate matter) to meet health-based air quality standards in each region;
- Reducing the localized health risk from air toxics (like benzene, hexavalent chromium or diesel particulate matter); and
- Reducing the greenhouses gases that contribute to global climate change.

Although the statutory foundation for each of these regulatory programs is distinct, to the extent feasible, ARB looks to develop regulations that meet two or more of these objectives. This approach enables ARB to use its resources most efficiently and benefits the industry by providing a public process that results in a consolidated set of requirements.

A. AB 32 Cost of Implementation Fee for FY 2011-12

Table 2-1 displays the Cross-Cut of the State Budget for FY 2011-12, which shows the budgetary authority for State agencies that use the AB 32 Cost of Implementation Fee revenue.

Table 2-1: AB 32 Cost of Implementation Fee Appropriations (FY 2011-12)

Department	Positions	Funding
Secretary for Environmental Protection	4	$586,000
Department of Housing and Community Development	1	$98,000
Department of Resources Recycling and Recovery	6	$501,000
Department of Water Resources	3	$315,000
Air Resources Board	155	$32,932,000
State Water Resources Control Board	2	$535,000
Department of Public Health	0	$323,000
Total	**173**	**$35,290,000**

Source: FY 2011-12 State Budget Cross-Cut. All dollars rounded to the nearest thousand.

The funds to support the AB 32 programs at multiple agencies, plus the funds needed for loan repayment, establish the total required revenue for the AB 32 Cost of Implementation Fee for FY 2011-12. Table 2-2 shows the required revenue, adjusting for over-collection in the prior year, along with updated information on the revenue actually collected through 2012. The fee revenue collected typically runs slightly below the total required revenue.

Table 2-2: Total AB 32 Cost of Implementation Fee Expenses and Revenue (FY 2011-12)	
Total Department Appropriations	$35,290,000
Loan Repayment	$26,900,000
Over-Collection of Fees from FY 2010-11*	($1,500,000)
Total Required Revenue	$60,690,000
Fee Revenue Collected for FY 2011-12	**$60,514,000**

Source: FY 2011-12 State Budget Cross-cut, with additional data on fees collected. All dollars rounded to the nearest thousand.
* For FY 2010-11, errors in the emissions reporting by facilities led to ARB over-billing by $1.5 million. The reporting errors were subsequently corrected. ARB accounted for the $1.5 million over-collection by reducing the billing amount for the subsequent year (FY 2011-12) and reducing the agency's budget authority.

B. Overall ARB FY 2011-12 Resources to Implement AB 32

The FY 2011-12 State Budget approved ARB to use up to $32,932,000 from the AB 32 Cost of Implementation Fee to support ARB climate change programs. As shown in Table 2-3, ARB's actual FY 2011-12 resources to support climate change activities and implement AB 32 totaled $34,743,000. ARB also relied on $1,811,000 in funding from other sources for activities that provide a climate co-benefit.

Table 2-3: Overall ARB FY 2011-12 Resources to Support AB 32 (Actual)

Category	Funding
Personnel (employee pay plus benefits)	$18,182,000
Operations (overhead, equipment, travel, training, etc.)	$5,742,000
Contracts	$10,819,000
Total	**$34,743,000**

Source: CALSTARS (the State accounting system) and additional ARB fiscal records following the close of the fiscal year. All dollars rounded to the nearest thousand.

C. Program-Specific ARB FY 2011-12 Resources to Implement AB 32

1. Data Sources and Methodology

Historically, ARB has tracked AB 32 programs and activities to implement AB 32 in totality, not at the level of individual regulations. To comply with all mandates (State laws, regulations, and policies on fiscal programs), ARB uses the CALSTARS system, which is the accounting system required by the State.

In response to requests by the Legislature to see more detailed information regarding the costs to implement AB 32, ARB has committed to manually track and report on future AB 32 expenditures for personnel and operations, plus contracts, for the major elements of the climate program. ARB will use these data for future reports to the Legislature.

Without such data available for FY 2011-12, ARB staff used a hybrid approach to develop the breakdown by major program area that the Legislature requested for this report using the Zero Based Budget provided to the Legislature in May 2011. In the Zero Based Budget, ARB estimated the positions by classification that would be needed to support each of several major AB 32 activities in the fiscal year. The operations costs utilized a standard average cost per position. This is the same methodology used to populate the fiscal detail found within Budget Change Proposals presented to the Legislature for consideration.

We then used ARB records for total personnel and operations expenses for FY 2011-12 (after the close of that fiscal year), which showed expenditures to support climate change activities equaled the Zero Based Budget estimate, plus $740,000. We considered that amount to be part of “Other AB 32 Activities.” For contract expenses, ARB records were used for individual AB 32-related contracts supported either fully or partially by FY 2011-12 funds.

2. *Retrospective Resources by Program Area*

Table 2-4 shows ARB's estimate of the FY 2011-12 resources used to support programs with climate benefits at ARB.

Table 2-4: ARB Expenditure of FY 2011-12 Funds for Specific Program Activities that Support AB 32			
AB 32 Program Area	**Personnel & Operations Expenses**	**FY Funds Obligated for Contracts**	**Total by Program Area**
Cap-and-Trade	$6,209,000	$5,772,000	$11,981,000
Low Carbon Fuel Standard	$5,079,000	$1,644,000	$6,723,000
Cost of Implementation Fee Administration	$824,000	$0	$824,000
Scoping Plan	$1,238,000	$0	$1,238,000
Other AB 32 Activities	$10,574,000	$3,403,000	$13,977,000
Total	**$23,924,000**	**$10,819,000**	**$34,743,000**

Source: ARB's projected Zero Based Budget for FY 2011-12 provided to the Legislature in May 2011, with updates from ARB fiscal records on actual expenditures for program activities. All dollars rounded to the nearest thousand.

II. CAP-AND-TRADE ALLOWANCE AUCTION

The Cap-and-Trade Regulation's first auction was held on November 14, 2012. There were two types of allowances offered — 2013 vintage allowances consigned to auction by the electric utilities and 2015 vintage allowances offered by ARB. The $233,342,000 raised by the sale of all the 2013 allowances was returned to those utilities to be used as directed by the California Public Utilities Commission[5] or their governing boards. The $55,760,000 raised by the sale of 2015 vintage allowances was deposited into the State's Greenhouse Gas Reduction Fund, to be allocated in accordance with the FY 2012-13 State Budget. The auction results are summarized below and available at: http://www.arb.ca.gov/cc/capandtrade/auction/november_2012/auction1_summary_statistics_2012q4nov.pdf.

[5] In Decision D1212033 (Decision Adopting Cap-and-Trade Greenhouse Gas Allowance Revenue Allocation Methodology for the Investor-Owned Electric Utilities), the California Public Utilities Commission directed the utilities to distribute the auction proceeds to ratepayers.

Table 2-5: Statistics from Cap-and-Trade Allowance Auctions to Date	
2013 Vintage Allowances: Number offered: 23,126,100 Number sold: 23,126,100 Settlement Price: $10.09 per allowance	2015 Vintage Allowances: Number offered: 39,450,00 Number sold: 5,576,000 Settlement Price: $10 per allowance

III. EMISSIONS MARKET ASSESSMENT COMMITTEE

The Emissions Market Assessment Committee, (EMAC, formerly the Market Surveillance Committee), has advised ARB regulatory staff on issues related to the performance and integrity of the emissions market. On September 24, 2012 EMAC held a public meeting in which the members discussed four issue areas: (1) how a price cap and narrowing the difference between the auction reserve price and Allowance Price Containment Reserve price could reduce emissions market price volatility, (2) potential areas of concern regarding linkage with Québec, (3) the value of releasing market information to promote market stability and reduce the potential for market manipulation, and (4) 'resource shuffling' in the electricity sector.

EMAC will continue to work with ARB to evaluate market rules and perform economic analysis of current or potential future market conditions using simulation models. EMAC, in conjunction with ARB staff, will hold periodic public meetings to discuss model or other analysis results.

For more information on the activities and meetings of the EMAC, please see: http://www.arb.ca.gov/cc/capandtrade/emissionsmarketassessment/emissionsmarketassessment.htm.

SECTION 3:

ANNUAL REPORTS ON AB 32 RESOURCES

(July 2011-June 2012 and July 2012-June 2013)

Item 3900-001-0001 Air Resources Board Supplemental Report of the 2012-13 Budget[6] requires a quantification and detailing of ARB's resources to implement AB 32 – prospectively and retrospectively. This prospective report covers the current Fiscal Year 2012-13. This retrospective report focuses on Fiscal Year 2011-12 and therefore includes the same material as previously presented in Section 2: Annual AB 32 Fiscal Report. The format for each report follows the elements of the Budget directive, focusing on quantifying the resources to support four key programs: Cap-and-Trade, Low Carbon Fuel Standard, AB 32 Cost of Implementation Fee, and the AB 32 Scoping Plan. The reports also identify the combined resources to support other AB 32-related activities.

Structure and Funding for Regulatory Activities. The resources estimated in this report are those used to support activities that provide a climate benefit, whether as the primary objective, or as a co-benefit. In each year, ARB's resources to support the climate program equal or exceed the amount budgeted exclusively for AB 32 activities that are funded by the AB 32 Cost of Implementation Fee. ARB relies on other funding sources; the specific source is related to the activity. There are two reasons.

First, ARB has several measures and program areas that were originally designed to achieve other air quality goals and rely on different funding sources, but nonetheless provide a climate co-benefit by simultaneously reducing GHGs. Although the GHG emission reductions associated with these other measures are counted towards achieving the AB 32 target and are considered part of the climate program, those activities may not necessarily be fully funded by the AB 32 Cost of Implementation Fee. For example, the ships-at-berth rule was initiated to reduce the community health risk from ship pollution, but the rule also provides substantial GHG co-benefits associated with using shore-based electrical power rather than onboard ship fuel when the ships are in port.

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[6] In addition, CARB shall provide two resource reports each year to the Legislature that quantify the CARB AB 32 staffing and operations expenses, as well as CARB contracts, by major AB 32 program area. First, CARB shall provide a prospective resource report with anticipated expenses each year by January 10. Second, CARB shall provide a retrospective resource report each year on or before January 10. The scope of the resources reports is to include the CARB resources (staffing, operations, and contracts) that were used to support major AB 32 program areas (cap-and-trade, low carbon fuel standard, cost of implementation fee, and the update to the AB 32 Scoping Plan). In addition, CARB is to provide an estimate of the combined resources for the other climate change-related activities (implementation of adopted regulations and coordination with other agencies).

Second, ARB's regulatory program has grown and evolved to address the agency's responsibilities under State and federal law to improve air quality at the local, regional, and global levels. ARB adopts, implements, enforces regulations focused on meeting several different objectives:

- Reducing criteria pollutants (like ozone and fine particulate matter) to meet health-based air quality standards in each region;
- Reducing the localized health risk from air toxics (like benzene, hexavalent chromium or diesel particulate matter); and
- Reducing the greenhouses gases that contribute to global climate change.

Although the statutory foundation for each of these regulatory programs is distinct, to the extent feasible, ARB looks to develop regulations that meet two or more of these objectives. This approach enables ARB to use its resources most efficiently and benefits the industry by providing a public process that results in a consolidated set of requirements.

I. AB 32 PROSPECTIVE RESOURCE REPORT FOR FY 2012-13

The FY 2012-13 State Budget approved ARB to use up to $33,291,000 from the AB 32 Cost of Implementation Fee to support AB 32 climate change programs. ARB also expects to rely on other sources of funding for activities that provide a climate co-benefit. The estimates for FY 2012-13 that follow in this section reflect only the funding available from the AB 32 Cost of Implementation Fee.

A. AB 32 Cost of Implementation Fee for FY 2012-13

Table 3-1 below displays the Cross-Cut of the State Budget for FY 2012-13, which shows the budgetary authority for agencies that use the AB 32 Cost of Implementation Fee revenue.

Table 3-1: AB 32 Cost of Implementation Fee Appropriations (FY 2012-13)

Department	Positions	Funding
Secretary for Environmental Protection	4	$586,000
Department of Housing and Community Development	1	$115,000
Department of Resources Recycling and Recovery	6	$496,000
Department of Forestry and Fire Protection	1	$290,000
Department of Water Resources	3	$316,000
Air Resources Board	158	$33,291,000
State Water Resources Control Board	2	$555,000
Department of Public Health	0	$348,000
Total	**175**	**$35,997,000**

Source: Cross-Cut for the FY 2012-13 State Budget. All dollars rounded to the nearest thousand.

The funds to support the AB 32 programs at multiple agencies, plus the funds needed for loan repayment, establish the total required revenue for the AB 32 Cost of Implementation Fee for FY 2012-13. Table 3-2 shows the required revenue, along with updated information on the revenue actually collected through 2012. The fee revenue collected typically runs slightly below the total required revenue.

Table 3-2: Total AB 32 Cost of Implementation Fee Expenses and Revenue (FY 2012-13)	
Total Department Appropriations	$35,997,000
Loan Repayment	$26,355,000
Total Required Revenue	$62,352,000
Fee Revenue Collected for FY 2012-13	**$62,204,000**

Source: Cross-Cut for the FY 2012-13 State Budget, with additional data for interest on loans and revenue collected. All dollars rounded to the nearest thousand.

B. Overall ARB FY 2012-13 Resources to Implement AB 32

Table 3-3 shows the estimated ARB resources to support AB 32 that will be funded by the FY 2012-13 Cost of Implementation Fee. As of November 2012, ARB had expended $12,368,000 in FY 2012-13 funds to support AB 32-related activities. As noted above, ARB also expects to rely on other sources of funding for activities that provide a climate co-benefit.

Table 3-3: Overall ARB FY 2012-13 Resources to Implement AB 32 Based on Cost of Implementation Fee Funding (Projected)	
Category	**Funding**
Personnel (employee pay plus benefits)	$18,460,000
Operations (overhead, equipment, travel, training, etc.)	$5,830,000
Contracts Budgeted	$9,000,000
Total	**$33,290,000**

Source: Internal ARB allocation of funds from AB 32 Cost of Implementation Fee. All dollars rounded to the nearest thousand.

C. Program-Specific ARB FY 2012-13 Resources to Implement AB 32

Table 3-4 provides a breakdown by major program area of FY 2012-13 resource estimates for personnel, operations, and contract dollars that will be paid for by the FY 2012-13 Cost of Implementation Fee. Approved Budget Change Proposals provide an annual allocation of $9,000,000 for AB 32-related contracts. The contract dollar amounts allocated show only the FY2012-13 funds obligated via executed contracts. Additional contracts are in development. Section 1 of this report, the Program Update, provides a discussion of existing and planned contracts for major program areas.

Table 3-4: Program-Specific ARB FY 2012-13 Resources to Support AB 32 Based on Cost of Implementation Fee Funding (Projected)				
AB 32 Program Area	**Estimated Personnel Expenses**	**Estimated Operations Expenses**	**Contract Dollars Allocated** (as of Dec 2012)	**Estimated Total by Program Area**
Cap-and-Trade	$7,015,000	$2,214,000	$608,000	$9,837,000
Low Carbon Fuel Standard	$4,302,000	$1,358,000	$0	$5,660,000
Cost of Implementation Fee Administration	$621,000	$196,000	$0	$817,000
Scoping Plan	$3,108,000	$981,000	$0	$4,089,000
Other AB 32 Activities	$3,415,000	$1,080,000	$972,000	$5,467,000
Not Yet Obligated			$7,420,000	$7,420,000
Total	**$18,461,000**	**$5,829,000**	**$9,000,000**	$33,290,000

Source: ARB program staff estimates of total positions needed to meet FY 2012-13 objectives for each specific program area, including administration and legal support, combined with fiscal records for expected position costs. Total operations expenses were distributed to each program area by applying the ratio of staff expenses to total expenses. All dollars rounded to the nearest thousand.

II. AB 32 RETROSPECTIVE RESOURCE REPORT FOR FY 2011-12

Note: the text in this part duplicates the text in Section 2: Annual AB 32 Fiscal Report in its entirety.

A. AB 32 Cost of Implementation Fee for FY 2011-12

Table 3-5 displays the Cross-Cut of the State Budget for FY 2011-12 which shows the budgetary authority for State agencies to use the AB 32 Cost of Implementation Fee revenue.

Table 3-5: AB 32 Cost of Implementation Fee Appropriations (FY 2011-12)		
Department	**Positions**	**Funding**
Secretary for Environmental Protection	4	$586,000
Department of Housing and Community Development	1	$98,000
Department of Resources Recycling and Recovery	6	$501,000
Department of Water Resources	3	$315,000
Air Resources Board	155	$32,932,000
State Water Resources Control Board	2	$535,000
Department of Public Health	0	$323,000
Total	**173**	**$35,290,000**

Source: FY 2011-12 State Budget Cross-Cut. All dollars rounded to the nearest thousand.

The funds to support the AB 32 programs at multiple agencies, plus the funds needed for loan repayment, establish the total required revenue for the AB 32 Cost of Implementation Fee for FY 2011-12. Table 3-6 shows the required revenue, adjusting for over-collection in the prior year, along with updated information on the revenue actually collected through 2012. The fee revenue collected typically runs slightly below the total required revenue.

Table 3-6: Total AB 32 Cost of Implementation Fee Expenses and Revenue (FY 2011-12)	
Total Department Appropriations	$35,290,000
Loan Repayment	$26,900,000
Over-Collection of Fees from FY 2010-11*	($1,500,000)
Total Required Revenue	$60,690,000
Fee Revenue Collected for FY 2011-12	**$60,514,000**

Source: FY 2011-12 State Budget Cross-cut, with additional data on fees collected. All dollars rounded to the nearest thousand.
* For FY 2010-11, errors in the emissions reporting by facilities led to ARB over-billing by $1.5 million. The reporting errors were subsequently corrected. ARB accounted for the $1.5 million over-collection by reducing the billing for the subsequent year and reducing the agency's budget authority.

B. Overall ARB FY 2011-12 Resources to Implement AB 32

The FY 2011-12 State Budget approved ARB to use up to $32,932,000 to from the AB 32 Cost of Implementation Fee to support climate change programs. As shown in Table 3-7, ARB's actual FY 2011-12 resources to support climate change activities and implement AB 32 totaled $34,743,000. ARB also relied on $1,811,000 in funding from other sources for activities that provide a climate co-benefit.

Table 3-7: Overall ARB FY 2011-12 Resources to Support AB 32 (Actual)

Category	Funding
Personnel (employee pay plus benefits)	$18,182,000
Operations (overhead, equipment, travel, training, etc.)	$5,742,000
Contracts	$10,819,000
Total	**$34,743,000**

Source: CALSTARS (the State accounting system) and additional ARB fiscal records following the close of the fiscal year. All dollars rounded to the nearest thousand.

C. Program-Specific ARB FY 2011-12 Resources to Implement AB 32

1. Data Sources and Methodology

Historically, ARB has tracked AB 32 programs and activities to implement AB 32 in totality, not at the level of individual regulations. To comply with all mandates (state laws, regulations, and policies on fiscal programs), ARB uses the CALSTARS system, which is the accounting system required by the State.

In response to requests by the Legislature to see more detailed information regarding the costs to implement AB 32, ARB has committed to manually track and report on future AB 32 expenditures for personnel and operations, plus contracts, for the major elements of the climate program. ARB will use these data for future reports to the Legislature.

Without such data available for FY 2011-12, ARB staff used a hybrid approach to develop the breakdown by major program area that the Legislature requested for this report using the Zero Based Budget provided to the Legislature in May 2011. In the Zero Based Budget, ARB estimated the positions by classification that would be needed to support each of several major AB 32 activities in the fiscal year. The operations costs utilized a standard average cost per position. This is the same methodology used to populate the fiscal detail found within Budget Change Proposals presented to the Legislature for consideration.

We then used ARB records for total personnel and operations expenses for FY 2011-12 (after the close of that fiscal year), which showed expenditures to support climate change activities equaled the Zero Based Budget estimate, plus $740,000. We considered that amount to be part of “Other AB 32 Activities.” For contract expenses, ARB records were used for individual AB 32-related contracts supported either fully or partially by FY 2011-12 funds.

2. *Retrospective Resources by Program Area*

Table 3-8 shows ARB's estimate of the FY 2011-12 resources used to support programs with climate benefits at ARB.

Table 3-8: ARB Expenditure of FY 2011-12 Funds for Specific Program Activities that Support AB 32

AB 32 Program Area	Personnel & Operations Expenses	FY Funds Obligated for Contracts	Total by Program Area
Cap-and-Trade	$6,209,000	$5,772,000	$11,981,000
Low Carbon Fuel Standard	$5,079,000	$1,644,000	$6,723,000
Cost of Implementation Fee Administration	$824,000	$0	$824,000
Scoping Plan	$1,238,000	$0	$1,238,000
Other AB 32 Activities	$10,574,000	$3,403,000	$13,977,000
Total	**$23,924,000**	**$10,819,000**	**$34,743,000**

Source: ARB's projected Zero Based Budget for FY 2011-12 provided to the Legislature in May 2011, with updates from ARB fiscal records on actual expenditures for program activities. All dollars rounded to the nearest thousand.

SECTION 4:

SEMI-ANNUAL UPDATE ON WESTERN CLIMATE INITIATIVE, INC. ACTIVITIES

(July – December 2012)

This report is required by the provisions of Senate Bill 1018 (Statutes of 2012)[7], which require advance notice of any Air Resources Board (ARB) payments to the Western Climate Initiative, Incorporated (WCI, Inc.) over $150,000 and semi-annual updates on the actions proposed by WCI, Inc. that affect California government or entities.

I. BACKGROUND

WCI, Inc. is a non-profit corporation that focuses solely on administrative support, and is separate from WCI. WCI, Inc. was formed in 2011 to coordinate administrative services to cap-and-trade programs developed and implemented by states and provinces. The Board of Directors for WCI, Inc. includes officials from the provinces of Québec and British Columbia, and the State of California. The services provided by WCI, Inc. can be expanded to support jurisdictions that join in the future.

The coordinated administrative support from WCI, Inc. benefits California and the other programs.

- Coordinated support ensures that all the linked programs use the same highly secure computer program infrastructure, including the allowance tracking system and auction platform.

- Coordinated support ensures that analyses performed to support market monitoring in each jurisdiction are conducted consistently and effectively for the entire compliance instrument market across all the linked programs.

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[7] Government Code, Section 12894(c) "The State Air Resources Board shall provide notice to the Joint Legislative Budget Committee, consistent with that required for Department of Finance augmentation or reduction authorization pursuant to subdivision (e) of Section 28.00 of the annual Budget Act, of any funds over one hundred fifty thousand dollars ($150,000) provided to the Western Climate Initiative, Incorporated, or its derivatives or subcontractors no later than 30 days prior to the transfer or expenditure of funds."
Government Code, Section 12894(d) "The Chairperson of the State Air Resources Board and the Secretary for Environmental Protection, as the California voting representatives on the Western Climate Initiative, Incorporated, shall report every six months to the Joint Legislative Budget Committee on any actions proposed by the Western Climate Initiative, Incorporated, that affect California state government or entities located within the state."

- Coordinated support enables the linked programs to share the cost of developing and maintaining program infrastructure, thereby reducing the costs for each jurisdiction.

WCI, Inc.'s approach to coordinating administrative support is to have each jurisdiction specify its administrative requirements, and then for WCI, Inc. to provide support that meets these specifications. Currently, British Columbia, California, and Québec participate in WCI, Inc. California and Québec are currently implementing allowance trading programs.

Most of the administrative support provided by WCI, Inc. is highly technical or specialized and has been developed through the use of contractors. WCI, Inc. is:

- Coordinating the development and administration of the Cap-and-Trade Compliance Instrument Tracking System Service (CITSS);

- Coordinating the development and administration of an allowance auction platform; and

- Coordinating the performance of analyses to support market monitoring performed by each jurisdiction of allowance auctions and allowance and offset certificate trading.

Whereas WCI has focused on collaboration on emissions trading policies, WCI, Inc. is solely administrative in nature. All policymaking and regulatory authority for each jurisdiction's program is retained by each jurisdiction. According to the WCI, Inc. bylaws, its administrative activities must "…conform to the requirements of State and Provincial programs…" The requirements are defined by the participating jurisdictions, such that WCI, Inc. must execute its administrative role in conformance with the requirements established by ARB and the other jurisdictions.

II. UPDATE

A. Introduction

This report describes the activities of WCI, Inc. since the last report to the Joint Legislative Budget Committee (JLBC) in July 2012, and presents the organization's anticipated activities in 2013.

Highlights of recent activities include revisions to the bylaws to conform to the requirements of SB 1018; the naming of directors from California; entering into a funding agreement with the Province of Québec; and entering into contracts for administrative support services.

As was previously reported to the JLBC in September, the WCI, Inc. Executive Director stepped down in August, and an interim Executive Director was selected. No changes have been made to the payments from ARB to WCI, Inc., which have continued as described to the JLBC in the July 2012 report.

WCI, Inc. anticipates adding additional staff and contractors in recognition of increased administrative activities in 2013, consistent with the WCI, Inc. budget for 2013. Additionally, the Board of Directors plans to adopt an Open Meeting Policy to further enhance the openness and transparency of WCI, Inc. operations. The Board may also reexamine the bylaws and consider changes to define more precisely the scope of activities anticipated to be performed by the organization.

B. Corporate Governance

WCI, Inc. is governed by a Board of Directors according to WCI, Inc. bylaws and the policies adopted by the Board. The bylaws and policies are posted on the WCI, Inc. website: http://www.wci-inc.org/documents.php. Table 4-1 lists the policies that have been adopted by the Board.

Table 4-1: WCI, Inc. Corporate Policies (as of December 31, 2012)
Audit Committee Charter (Adopted November 3, 2011)
Ethical Guidelines and Conflict of Interest Policy (Adopted November 3, 2011)
Funds Management Policy (Adopted June 13, 2012, Revised October 30, 2012)
Procurement Policy (Adopted January 12, 2012)
Retention of Business Records Policy (Adopted November 3, 2011)
Whistleblower Protection Policy (Adopted November 3, 2011)

The Province of Québec named Charles Larochelle to replace Robert Noel deTilly as a Director from Québec. Mr. Larochelle is the Assistant Deputy Minister at the Québec Ministry of Environment.

Following enactment of SB 1018 by California, revised bylaws were developed to conform to the statutory requirements for the Directors from California. The revised bylaws were adopted at the December 11, 2012, annual meeting of the Board of Directors. Under the new bylaws, and in conformance with the California statute, the following are the Directors from California:

- Secretary for Environmental Protection, Matthew Rodriquez
- Chairman of the Air Resources Board, Mary Nichols
- Assembly Member Nancy Skinner, appointed by the Speaker of the Assembly (non-voting director)
- Mr. Kip Lipper, appointed by the Senate Rules Committee (non-voting director).

As provided for in the bylaws, the Board of Directors selected officers at the annual meeting:

- Chair, Matthew Rodriquez (California)
- Vice Chair, Charles Larochelle, (Québec)
- Treasurer, Mary Nichols (California)
- Secretary, Tim Lesiuk (British Columbia).

Also at the annual meeting, the membership of each of the three standing committees of the Board was determined, including:

- Executive Committee: Matthew Rodriquez (California), Charles Larochelle (Québec), Mary Nichols (California), Tim Lesiuk (British Columbia) and Jean-Yves Benoit (Québec).
- Audit Committee: Matthew Rodriquez (California), Charles Larochelle (Québec), and Tim Lesiuk (British Columbia).
- Finance Committee: Mary Nichols (California), Jean-Yves Benoit (Québec), James Mack (British Columbia), and Nancy Skinner (California).

To further enhance the openness and transparency of WCI, Inc., and in recognition of the legislative findings in SB 1018 that WCI, Inc. should operate transparently, a draft Open Meeting Policy was presented and discussed at the December 11, 2012, annual Board meeting. As stated in the draft, the purpose of the policy is to ensure that the operations of WCI, Inc. are conducted in a transparent and open manner commensurate with the prudent stewardship of the public funds provided to WCI, Inc. by the participating jurisdictions and funding entities.

Among other provisions, the draft Open Meeting Policy provides for public notice and participation in all meetings of the WCI, Inc. Board of Directors and Executive Committee, including those held by conference call. The draft policy also specifies that all formal actions taken by the Board of Directors and Executive Committee shall be taken in a properly-noticed open meeting or properly-noticed Executive Session. Pending additional review and comment, the Open Meeting Policy will be considered for adoption at the next regular meeting of the Board of Directors.

At the December 11, 2012, annual Board meeting, the Board agreed to hold regular meetings of the Board quarterly in 2013 (dates to be determined). Special meetings of the Board may also be called as needed to address specific issues. As noted above, the Board may reexamine the bylaws and bring changes for Board consideration to define more precisely the scope of activities anticipated to be performed by the organization. No other corporate governance activities have been proposed for 2013 at this time.

C. Staffing and Operations

On August 2, 2012, Anita Burke stepped down from her position as Executive Director of WCI, Inc. for personal reasons. To ensure that WCI, Inc. continued developing its administrative capabilities, the WCI, Inc. Board of Directors selected Patrick Cummins as the Executive Director on an interim basis, effective September 1, 2012.

Mr. Cummins had previously worked with the states and provinces participating in the Western Climate Initiative. He is currently on assignment to WCI, Inc. from the Western Governors' Association. Mr. Cummins' position as interim Executive Director runs through February 28, 2013. The WCI, Inc. Board will make a decision on a permanent Executive Director before March 1, 2013. The JLBC was notified of these events in a letter dated September 10, 2012.

Since taking his position as interim Executive Director, Mr. Cummins has continued the development of the WCI, Inc. staff and operating capabilities. Activities include:

- Project Managers: WCI, Inc. hired two part-time project managers to oversee Compliance Instrument Tracking System Service (CITSS) and auction platform development and implementation activities.
- Business Services: WCI, Inc. brought on support for day-to-day business operations, including business manager support, including the services of an accountant.
- Insurance and Banking: WCI, Inc. completed the arrangements to provide for insurance coverage and banking services.
- Office: WCI, Inc. has rented an office in Sacramento.

During this period, WCI, Inc. also continued to use the services of corporate counsel on legal matters.

A staffing plan was presented at the annual Board meeting in December. Recognizing the increase in activities planned for the 2013, the staffing plan adds an Assistant Executive Director (to be located in Québec) and replaces the two part-time project managers with two full-time project managers. This staffing is driven by the planned administrative activities, and is consistent with the WCI, Inc. budget for 2013 that was originally approved by the Board in November 2011 and posted to the WCI, Inc. website (see: http://www.wci-inc.org/documents.php).

The Audit Committee has contracted with an auditor, according to the requirements in the Audit Committee Charter. The auditor will provide services in 2013, including assisting with tax filings and auditing the corporate financial statement.

D. Delivery Capability

The purpose of WCI, Inc. is to provide administrative and technical support for the implementation of state and provincial greenhouse gas allowance trading programs. Administrative support will be provided to the jurisdictions regardless of whether they are linked. These administrative activities include:

- Coordinating the development and administration of the Cap-and-Trade Compliance Instrument Tracking System Service (CITSS);
- Coordinating the development and administration of an allowance auction platform; and
- Coordinating the performance of analyses to support market monitoring performed by each jurisdiction of allowance auctions and allowance and offset certificate trading.

At the June 2012 WCI, Inc. Board meeting, the Board provided direction to WCI, Inc. staff to procure the services needed to fulfill these purposes, including CITSS development, CITSS hosting, auction platform development, and analysis to support market monitoring. The procurement requirements were described in the July 10, 2012 letter to the JLBC and in the Board meeting minutes for June, which are posted to the WCI, Inc. website.[8] The following progress has been made to continue to build WCI, Inc.'s delivery capability:

- CITSS Development: In May 2012 WCI, Inc. contracted with SRA International, Inc. to further develop CITSS and to provide hosting for its operation. At the December Board meeting the Board approved an amendment to the SRA contract to continue CITSS development through the end of 2013.
- CITSS Help Desk: In October 2012, WCI, Inc. contracted with ICF Incorporated, LLC for help desk services to respond to inquiries from CITSS users. These services were initiated in December 2012.
- Auction Platform: At the December Board meeting, the Board provided conditional approval to enter into a contract with Markit Group Limited for the continued development of the auction platform. Among other functionality, the auction platform will enable joint auctions to be held by California and Québec, but only in the event that the jurisdictions link their programs. California will only link its Cap-and-Trade program with Québec's program if the Governor finds that the programs are equivalent and ARB approves regulatory amendments to link the programs. Before

[8] June 2012 Board minutes are posted at: http://www.wci-inc.org/docs/WCI_Inc_BoardMinutes_June132012.pdf.

finalizing the contract, WCI, Inc. staff is finalizing invoicing terms and clarifying the cost estimates.

- Market Analysis: At the December Board meeting the Board approved a contract with Monitoring Analytics, LLC for analyses in support of market monitoring being conducted by California and Québec.

In addition to these four contracts, two additional contracts are anticipated in 2013: one for auction financial administration and one for continuation of CITSS hosting (following the end of the CITSS hosting portion of the SRA contract). Each of the WCI, Inc. contracts for administrative services in support of jurisdiction programs is posted to the WCI, Inc. website as it is finalized.[9]

E. Budget and Funding

The interim Executive Director presented a financial summary at the December 2012 Board meeting. Actual 2012 expenditures were compared to the 2012 budget, and forecast 2013 expenditures were compared to the 2013 budget (WCI, Inc. budgets are for calendar years). The comparisons showed that 2012 expenditures were well below the 2012 budget because WCI, Inc. did not engage staff until later in the year than planned, and did not enter into some contracts as quickly as planned. The anticipated expenditures in 2013 are in line with the 2013 budget, although with more recent information there have been revisions to particular categories. Overall, expenditures for the two years, 2012 and 2013, are anticipated to be below the total budgeted amount for the two years. The Board approved the revisions to the 2013 budget and directed WCI, Inc. staff to prepare a narrative description of the budget and to post the materials on the WCI, Inc. website when completed. WCI, Inc. staff has not yet completed these materials.

In December the Board also approved a funding agreement with the Province of Québec for $1.5 million. With this funding agreement, the total funding of WCI, Inc. includes (all US dollars):

- ARB agreement: $3,738,251
- First Québec agreement: $100,000
- Second Québec agreement: $1,548,749.

[9] The administrative support contracts posted to the WCI, Inc. website are available at: http://www.wci-inc.org/documents.php.

F. Planned Payments to WCI, Inc.

As reported to the JLBC in the July 10, 2012 letter to the Committee, ARB has entered into an agreement with WCI, Inc. to obtain access to administrative support that WCI, Inc. is developing. As shown in the agreement, ARB's share of the WCI, Inc. budget is approximately $3.7 million over two years. The agreement is available at: http://www.arb.ca.gov/cc/capandtrade/wci/agreement.pdf. The benefits of participating in WCI, Inc. include reduced administrative costs through cost sharing with other jurisdictions and enhanced security and effectiveness of program infrastructure across programs, including the tracking system, auction operation, and market monitoring.

The anticipated payments from ARB to WCI, Inc. remain unchanged from the amounts reported in the July 10, 2012 letter. Under the terms of the agreement between ARB and WCI, Inc., ARB will make quarterly payments to WCI, Inc. over a two-year period in the total amount of $3,738,251. For 2012, the payment in the first quarter was $800,000, and the payments for the following three quarters were $268,346 each. For 2013, the first quarter payment will be $1,000,000 and the remaining three payments will be $377,737 for two quarters and $377,739 for the final quarter.

WCI, Inc. uses the funds from its agreements with ARB and Québec to pay its operating costs and contractors. Individual payments by WCI, Inc. do not typically exceed $150,000. However, over time the sum of all the individual payments made to an entity (such as a contractor) may exceed $150,000. Each of the contracts for administrative services in support of jurisdiction programs (regardless of whether the programs are linked or not) includes its total potential contract value. As mentioned above, each contract is posted to the WCI, Inc. website as it is finalized. For each of the contracts with SRA International, Inc., Markit Group Limited, Monitoring Analytics, LLC, and ICF Incorporated, LLC, the total payments over time on that contract are expected to exceed $150,000.