

Semi-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

July 2013

*Fulfills the Requirements of:
Supplemental Report of the 2012 Budget Act (Item 3900-001-0001 Air Resources Board)
Senate Bill 1018 (Chapter 39, Statutes of 2012)*

California Environmental Protection Agency

 **Air Resources Board**

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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 greenhouse gas (GHG) emissions. AB 32 set a goal for California to reduce GHG emissions 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 planned to achieve the target.

AB 32 also highlights the need to continue GHG 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 GHG emissions 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. These requirements include:

- (1) Semi-annual AB 32 update on key climate programs, including recent developments and upcoming milestones;
- (2) Annual AB 32 fiscal report for the prior fiscal year summarizing fees and proceeds coming in, and expenditures going out; and
- (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 JLBC on the Western Climate Initiative, Incorporated (WCI, Inc.):

- (4) 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.

Annual Report. In January of this year, ARB last reported on the four items listed above. The Annual Report may be downloaded from the ARB's website, <http://www.arb.ca.gov/cc/jlbcreports/jlbcreports.htm>.

Semi-Annual Report Content. This document provides the required semi-annual updates to items 1 and 4 above in two sections. Section 1 includes the semi-annual update to ARB's AB 32 Program and Section 2 includes the semi-annual report on actions proposed by WCI, Inc. 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 (CalEPA) details the activities of each agency and department to reduce GHG emissions. The Report Card, though posted and dated January 2013, reflects information from 2011 and 2012. The projections of future GHG emissions are current as of October 2012 when State agencies are required to submit their information to CalEPA, and the report of actual GHG reductions are current as of 2011, the last year of available data. 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 2013-December 2013)

This report is required semi-annually by the Supplemental Report of the 2012-13 Budget¹ 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. The upcoming milestones focus on the second half of 2013. The report format follows the Budget directive, beginning with major regulatory measures, followed by supporting programs, then a discussion of the 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 preparing the 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.

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 discuss 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. The Regulation provides a firm declining limit, or cap, on 85 percent of California's GHG emissions. Beginning on January 1, 2013, the cap includes GHG emissions from electricity and large industrial sources. Beginning on January 1, 2015, GHG emissions from transportation fuels, and residential and commercial burning of natural gas and propane will be included in the cap. Reductions from these large sources will help California achieve the AB 32 target of reducing GHG emissions to 1990 levels by 2020. The cap is designed to continue those reductions thereafter, thus maintaining GHG emissions at 1990 levels. 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 AB 32 emission reduction target.

Compliance. To comply with the Regulation, entities subject to the Regulation (facilities that emit 25,000 tons or more of carbon dioxide equivalent (CO₂e) per year), 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 CO₂e 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 Regulation 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 GHG emissions 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). 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 this analysis informed the allocation of additional allowances to reduce compliance costs and maintain industry production 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.

Offsets. Offset credits are another type of tradable compliance instrument. Offset credits represent GHG emission reduction or avoidance from activities 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 their compliance 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 and no more than 8,000 ARB-certified offset credits in order to meet their compliance obligation.

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. Offset project registries provide general offset project guidance, reporting and other support for verification activities; as well as issue voluntary offset credits and list voluntary offset projects. 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 regarding compliance instruments (e.g. purchases, trades between account holders).

2. Recent Developments – January through June 2013

Starting January 1, 2013, GHG emissions from covered entities count towards their compliance obligation. ARB activities to support the Cap-and-Trade Program during the first half of 2013 included: development of guidance documents, registration in CITSS, preparation and administration of the auctions, market monitoring and oversight, offset program development, legal activities, and managing on-going contracts. These activities are described in more detail below.

Guidance Documents. ARB completed instructional guidance documents on the Cap-and-Trade Regulation 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 guidance documents are available on ARB's web page at: <http://www.arb.ca.gov/cc/capandtrade/guidance/guidance.htm>.

Registration. All entities must register with ARB to create an account in CITSS which holds allowances. They must disclose, under penalty of perjury, the following information: name and the basis for qualifying for registration, any direct or indirect associations with other registered entities, and all registered entities for whose benefit compliance instruments are held. In January 2012, covered entities began to register for the Cap-and-Trade Program using the CITSS. Registration is ongoing.

Auction. Current and future vintage allowances are sold in separate auctions held on the same day at the same time. The Regulation's first auction was held on

November 14, 2012. Only for the 2012 current auction, ARB offered 2013 vintage allowances that were consigned by utilities; no state-owned allowances were offered. However, state-owned 2015 future vintage allowances were offered for sale at the advance auction. Subsequent auctions took place on February 19 and May 16, 2013 where current and future vintage allowances were offered. Prior to the certification of each auction, ARB staff and the Market Monitor carefully evaluated the auction, and determined that the auction process and procedures complied with the requirements of the Cap-and-Trade Regulation. Current vintage auctions offer current year allowances from the State and those consigned by electric distribution utilities (utilities). Advance auctions offer only state-owned allowances from the budget three years subsequent to the current calendar year.

The funds raised by the sale of allowances consigned by utilities are to be returned back to ratepayers in accordance with rules set by California Public Utilities Commission² (CPUC) or their governing boards. The remaining funds received for the sale of state-owned allowances are deposited into the State's Greenhouse Gas Reduction Fund, to be allocated in accordance with the State Budget. In sum, about \$257 million was raised by the sale of State-owned allowances at the first three auctions. Those proceeds were deposited into the Greenhouse Gas Reduction Fund. More information on Cap-and-Trade auction proceeds is provided in Section D of this report. Detailed results from the auctions are available at: <http://www.arb.ca.gov/cc/capandtrade/auction/auction.htm>.

Reserve Sale. No covered entities or opt-in entities had indicated an intent to bid by the bid guarantee deadlines for the first two reserve sales. Therefore, the March and June 2013 reserve sales were cancelled.

Market Oversight. ARB continues to put a priority on market oversight to ensure success in reducing emissions and the integrity of the California carbon market. ARB also established a team focused on monitoring and oversight. ARB monitors the auctions 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.

Leakage. ARB continues to do additional work to address concerns raised by affected industries 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.

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.

Offsets. ARB continues the steps necessary to support carbon offsets, which reduce the costs of compliance with the Regulation, and encourage investments in sustainable practices throughout the Nation's economy. To date, ARB has: (1) accredited 68 specially trained third-party offset verifiers, and certified fifteen verification bodies to serve as partners in evaluating the quality of offset projects submitted for approval; (2) formally approved the American Carbon Registry and the Climate Action Reserve as offset project registries that help evaluate compliance-grade carbon offset projects under the Regulation; (3) listed 44 early action projects and nine compliance projects (listing signifies these projects are moving toward potential issuance of ARB compliance offset credits); and (4) audited 100% of the first compliance offset protocol verifications to date. At this time ARB only issues compliance offset credits for verified offset projects developed using the four approved offset protocols and located within the continental United States. ARB generates compliance credits for those projects that comply with the full requirements set forth in the Regulation and applicable offset protocol. To date, there have been no ARB compliance offset credits issued. ARB will continue to audit a large percentage of verifications to assure verification activities are conducted accurately and according to the Regulation.

Linkage. Prior to linking California's Cap-and-Trade Program with that of Québec or any other jurisdiction, SB 1018, Chapter 39, Statutes of 2012 (Government Code section 12894), required ARB to submit its linkage proposal to the Governor, and for the Governor to evaluate whether the proposal met four specified criteria. Seeking advice from the State Attorney General, the Governor responded on April 8, 2013 and made the four findings required by SB 1018. These findings include: (1) that the requirements for offsets in Québec's program, are equivalent to or stricter than those required by California's program; (2) California is able to enforce the requirements of its Regulation against any entity that is subject to the Regulation and against any entity located within Québec if it is also subject to the Regulation under statute to the extent that this is permissible constitutionally; (3) the proposed linkage provides for enforcement of applicable laws by California or Québec that are equivalent to or stricter than those of the California program; and (4) the proposed linkage does not impose any significant liability on California agencies for any failure associated with the linkage.

The Board voted in April 2013 to approve amendments to the Regulation to link with Québec, which became effective in June 2013. It should be noted that under the approved amendments, the program will not link with Québec until January 1, 2014. Per the Governor's direction, ARB will be providing a linkage implementation status report to the Governor and CalEPA on November 1, 2013. The report will include progress towards implementing linkage with Québec by January 1, 2014 and the identification of any impediments to implementing linkage.

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 offsets to comply with up to eight percent of 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 alleged 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 issued offsets in lieu of allowances to comply with the Regulation.

The Court heard oral arguments on this matter on December 7, 2012. On January 25, 2013, the judge issued a Statement of Decision. The Statement of Decision found that the approach taken by ARB in adopting the protocols did not exceed ARB's authority granted by AB 32. The court found that ARB's protocols are not "arbitrary and capricious," that ARB's standards-based approach is within ARB's legislatively delegated rulemaking authority, and that using such an approach was supported by the administrative record. Petitioners have appealed this ruling in the Court of Appeal, 1st Appellate District in San Francisco, which is likely to hear the case in early 2014.

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. A hearing on the merits of the petition is scheduled for August 28, 2013.

On April 16, 2013, Morningstar Packing Company filed a similar suit to the California Chamber of Commerce case noted above, *Morningstar Packing Company et al. v. California Air Resources Board et al.* The primary difference between this case and the California Chamber of Commerce case is that Morningstar adds claims that AB 1532 (Pérez, Chapter 807), SB 535 (De León, Chapter 830), and SB 1018 (Budget and Fiscal Review Committee, Chapter 39) pursuant to the provisions of Proposition 26, cannot act to save the auction provisions of the Cap-and-Trade Program from tax challenges because these bills were not passed with a super-majority vote. Morningstar asserts that to the extent these 2012 bills (AB 1532, SB 535, and SB 1018) were designed to authorize, ratify, or otherwise adopt the auction provisions of the Cap-and-Trade Regulation, these bills would be considered unconstitutional taxes under Proposition 26. ARB filed an answer to the petition on May 29, 2013, denying the claims in the

petition. This case has been deemed “related” to the California Chamber of Commerce case and is on the same briefing and hearing schedule.

Cap and Trade Contracts. 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: conducting 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 on-going contracts are discussed in recent developments, and contracts in development are discussed in the upcoming milestones sections below.

Cap-and-Trade Program Administration Contracts:

As part of collaborating with other jurisdictions, administrative support functions for the Cap-and-Trade Program 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. 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 are 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. The following four program administration contracts were established by ARB to initiate California’s Cap-and-Trade Program; the work will be transitioned to WCI, Inc. administered contracts in the future.

- 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 evaluates the GHG allowance auction and reserve sales, as well as GHG allowance holdings and market activity. The contractor monitors the secondary market to identify any indications of anti-competitive behavior, as well as to understand market activity and trades. Market monitoring reports are provided to ARB on a regular basis, including quarterly after each auction. ARB reviews these reports and takes any necessary action.

- 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.

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 allowance 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. EMAC continues to assist ARB staff in analysis of program design and in developing strategies for market surveillance.
- 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 for the second compliance period in Fall of 2014.
- ARB initiated a study with the University of California 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 in Fall of 2014.
- 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 offset projects. Recommendations are expected in December 2013.

3. Upcoming Milestones – July through December 2013

Below is a brief summary of some of the upcoming milestones ARB is working to achieve during the second 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>.

- ARB is developing a contract with Lawrence Berkeley National Laboratory to conduct a scoping study on existing carbon capture and storage quantification methodologies appropriate for California's specific geology and hydrology. The goal is to move towards development of a Monitoring, Verification and Accounting method that is appropriate for incorporation into the Cap-and-Trade and Low Carbon Fuel Standard programs. Deliverables are expected starting the end of 2013.
- ARB is finalizing an agreement with the Government of Quebec that defines how Québec and California will coordinate the operation of their respective cap-and-trade programs once the two programs are linked. A draft of the agreement was released publicly in February 2013 as part of ARB's request that the Governor review the proposed link with Québec, as required under SB 1018, Chapter 39, Statutes of 2012 (Government Code section 12894). The agreement does not modify any existing laws or regulations and is not a regulatory action. Linking enables allowances to be traded between the two programs and allows for auctions to be held jointly. As discussed above, the California and Québec programs will link no sooner than January 1, 2014, and per the Governor's direction, ARB will be providing a linkage implementation status report to the Governor and CalEPA on November 1, 2013.
- On November 1, 2013, ARB will provide a report to CalEPA and the Governor on any impediments to implementing linkage with Québec, which is scheduled to take place on January 1, 2014.
- ARB continues 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. More information on the Adaptive Management Plan can be found at: http://www.arb.ca.gov/cc/capandtrade/adaptive_management/plan.pdf.
- In Fall 2013, ARB expects to propose amendments to the Regulation to include new offset project protocols for: (1) avoided fugitive methane emissions from mine methane projects; and (2) avoided methane emissions from changes in rice cultivation practices.

- In Fall 2013, ARB expects to propose amendments to the Regulation for consideration by the Board. Initial details on proposed amendments are found here: <http://www.arb.ca.gov/cc/capandtrade/2013summary.pdf>. The proposed amendments will address several topics that likely include, but are not limited to³:
 - A provision to extend 100 percent transition assistance through 2017 in light of not yet completed research on trade exposure to ensure regulatory certainty while studies are completed.
 - A methodology to provide transition assistance to generators of electricity and useful thermal output who have legacy contracts that do not allow for the pass-through of carbon costs.
 - A mechanism to address "But-For CHP" entities that are subject to the Regulation only because GHG emissions from combined heat and power (CHP) operations put these entities over the 25,000 metric tons of GHG emissions threshold during the first compliance period.
 - A methodology to provide allowances to new industrial sources not currently included in the Regulation, as well as upstream natural gas suppliers.
 - Reducing leakage risk by updating benchmarks and allocation assistance factors that will provide additional free allowances to existing sectors during the second compliance period.
 - 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.
 - A continued military exemption by dropping sunset date.

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 19 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 electronically submit all quarterly progress and annual compliance reports to ARB. To this end, ARB developed the LCFS Reporting Tool, a secure, interactive, web-based system, through which all

³ Subsequent to preparation of this report, ARB posted the draft regulatory amendments language at: <http://www.arb.ca.gov/cc/capandtrade/ctlinkqc.pdf>.

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. In 2012, staff completed the Final Statement of Reasons for the 2011 amendments, and the Office of Administrative Law (OAL) approved the amendments.

Pursuant to the Board’s direction, ARB continues to collaborate with stakeholders on evaluating CI for crude oils, and other technical assessments related to low-energy-use refining. Also, ARB continues to analyze and recommend for approval, numerous lower CI fuel pathways for which fuel producers have applied - confirming that innovations are occurring in the fuel sector. 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 in investment. 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 production in California⁴; this represents 47 percent of the nation’s total \$4.9 billion venture capital investments in biofuels.

As directed by the Board, in conjunction with the California Energy Commission, ARB is considering the methodology and technical requirements necessary for a thorough, updated economic analysis of the LCFS. 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 of the end of 2012, there are approximately 1.3 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 banking credits, regulated parties have begun trading credits. Both of these developments are positive indicators that the LCFS is functioning as intended.

⁴ Data from PricewaterhouseCoopers/Data by Thomson Reuters, Cleantech, and Collaborative Economics.

Despite these positive indicators, the petroleum refining industry is concerned about compliance with the LCFS in future years when the standard becomes more stringent. That is because they believe lower-CI liquid biofuels they prefer to blend with conventional gasoline and diesel fuel are not being developed quickly enough in commercial quantities and will not be available. Staff continues to believe that the availability of these advanced biofuels will grow sufficiently to meet demand. Additionally, 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-CI 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.

2. *Recent Developments – January through June 2013*

In the first half of 2013, ARB staff held rulemaking workshops on specifications for alternative diesel fuel blends, including biodiesel, which have the potential to generate credits under the LCFS. These specifications provide guidance needed to ensure that alternative diesel fuels are beneficial from an environmental impact perspective, in addition to providing clarity requested by the industry. More information on ARB activities and upcoming public meetings can be found at:

<http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>.

LCFS Litigation. 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 federal Energy Independence and Security Act (EISA) of 2007 and violates the dormant Commerce Clause of the U.S. Constitution (either because the LCFS impermissibly regulates activities beyond California's borders or because it discriminates against out-of-state corn ethanol by assigning corn ethanol from the Midwest a CI value higher than 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. The LCFS program allows for a determination of individualized CI numbers for each facility, provided that certain criteria are met.

In August 2011, a State court case alleged that ARB did not fully comply with the Administrative Procedure Act and the California Environmental Quality Act when adopting the LCFS Regulation. 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. The appellate court directed the parties to prepare a supplemental brief regarding email communications from two ARB contractors that were excluded

from the rulemaking record. In November 2012, ARB's supplemental brief was supplied to the appellate court⁵.

In December 2011, the lower court ruled on the dormant Commerce Clause claims but did not reach the federal EISA preemption issue. 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. 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 the preliminary injunction that were issued by the lower federal court in Fresno in December 2011. There is no set timeframe by which the Ninth Circuit Court of Appeals is required to issue a ruling; however, ARB expects a ruling sometime in 2013.

LCFS Contracts. 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 motivates 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 higher commodity prices is to bring non-agricultural lands into production. Converting open-space to agriculture releases carbon sequestered in soils and vegetation. This land use conversion causes an “indirect” impact by contributing to increasing carbon dioxide emissions.

While there is general consensus that iLUC occurs, there is uncertainty regarding the size of the impact, which is modeled because it cannot be directly measured. 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,

⁵After preparation of this report, the Court of Appeal (5th District, Fresno) issued its opinion in the State lawsuit, on July 15, 2013, holding that the LCFS would remain in effect and that the ARB can continue to implement and enforce the LCFS while ARB corrects certain aspects of the procedures by which the LCFS was originally adopted. Accordingly, ARB staff is continuing to implement and enforce the LCFS while preparing for the Board's consideration in 2014 a consolidated regulation package that responds to the Court's decision and contains additional amendments that staff considers important for the continued success of the LCFS program. Meanwhile, the 2013 LCFS standards, which represent a 1.0 percent decrease in carbon intensity from the 2010 baseline values for gasoline and diesel, will remain in effect through 2014.

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 – July through December 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.

ARB staff is continuing to improve the iLUC values based on new science and is developing a consolidated regulatory package for Board consideration in 2014 (please see footnote 5 on the prior page).

C. Advanced Clean Cars

1. Background

ARB developed the Advanced Clean Cars Program to reduce emissions from the transportation sector that achieve California's long-term climate goals, and to provide a comprehensive approach to further reduce criteria and GHG emissions from light-duty vehicles beyond 2016. This recent Program closely aligns the Low Emission Vehicle, Zero Emission Vehicle (ZEV), and GHG light duty vehicle standards to lay the foundation for the next generation of ultra-clean vehicles. Specifically, 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. This suite of regulations furthers California's progress towards near- and long-term climate goals, as well as aiding attainment of ambient air quality standards under the State Implementation Plan (SIP). More information on the Advanced Clean Cars program can be accessed at ARB's website, http://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/consumer_acc.htm

Zero Emission Vehicles. In January 2012, ARB approved the Advanced Clean Cars Program through rulemaking. The ZEV Program was 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. 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 GHG emission goal established by Executive Order B-16-2012 which states a target for 80 percent less than 1990 levels from the transportation sector.

Clean Fuels Outlet. As part of the Advanced Clean Cars Program, ARB has been pursuing strategies to ensure that 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 that at a minimum, 10,000 fuel cell vehicles will be in the marketplace within a given air basin, or that 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 OAL 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.

GHG Light-Duty Vehicle Standards. More stringent GHG emission standards were developed through a joint effort with the U.S. EPA and the National Highway Traffic 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 during the model years 2016 through 2025. 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. 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.

2. Recent Developments – January through June 2013

On February 5, 2013, ARB reintroduced the Clean Fuels Outlet rulemaking package to be considered on September 26 if the legislation [SB 11 (Pavley, 2013) and AB 8 (Perea, 2013)] to reauthorize clean air incentive programs and provide funding for hydrogen fueling infrastructure fails.

ARB is pursuing several contracts to support overall implementation of the Advanced Clean Cars Program and 2018 review of the ZEV Program. The contracts include:

- ARB has contracted with University of California at Davis (UC Davis) to conduct research on the ZEV market. The objective is to capture statewide data on consumer attitudes, barriers, and motivators toward purchasing ZEV. The purpose is to identify the factors that influence new-vehicle purchase decisions and the areas where additional policies, incentives, or outreach could be implemented to facilitate greater adoption rates of cleaner cars.
- ARB has contracted with UC Davis to conduct research on household-level plug-in electric vehicles usage and charging behavior in order to quantify emission benefits. The project is called, "Advanced Plug-in Electric Vehicle Travel and Charging Behavior."
- ARB has selected University of California at Los Angeles to evaluate trends in the emerging ZEV market relative to policy and market factors. The project is called, "Examining Factors That Influence ZEV Sales in California."

3. Upcoming Milestones – July through December 2013

ARB staff will present an update on the Advanced Clean Cars Program to the Board in October 2013.

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 landfills. The landfill methane control measure is a discrete early action measure. The Landfill Regulation, which became effective in June 2010, requires owners and operators of certain uncontrolled municipal solid waste (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.

The Landfill Regulation allows the local air districts to voluntarily enter into a memorandum of understanding (MOU) with ARB to implement and enforce the regulation, 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 Landfill 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 Landfill Regulation. This is an example of a partnership between ARB and the local air districts, working to achieve the goals of AB 32.

2. Recent Developments – January through June 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>.

- To date, 18 districts have signed the MOU. ARB continues to work with the remaining local air districts to encourage their participation in the MOU.

3. Upcoming Milestones – July through December 2013

- In 2013, through work on the 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 emission reductions attributable to this Regulation. This process may help to identify additional opportunities for securing GHG reductions from the waste sector through regulations and/or incentives.
- Starting in August 2013, ARB plans to conduct annual compliance inspections and audits of about 65 MSW landfills to implement and enforce the Landfill Regulation for those landfills not covered by an MOU.
- In Fall, ARB plans to provide 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.

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 will drive further actions to provide significant benefits for climate, regional air quality and localized health risk reduction.

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 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 – January through June 2013

AB 32 requires that the Scoping Plan be updated every five years. ARB began efforts to update the Scoping Plan in 2012. Staff updated the Board on the plans for the 2013 update, at the December 6, 2012 Board meeting. The presentation can be viewed at:

<http://www.arb.ca.gov/board/books/2012/120612/12-9-5pres.pdf>. Staff continues to work on the update's development. The Scoping Plan Update will be presented to the Board at the November 2013 Board Hearing.

On June 13, 2013, ARB held an initial kick-off for the public workshops in Sacramento. The initial workshop discussed the State's efforts to date, an overview of each focus area, and the process for updating the Scoping Plan. On June 26, 2013, ARB held a Southern California Regional Workshop to inform the Update, which focused on linking climate and air quality improvements.

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 post-2020 climate goals. The Intergovernmental Panel on Climate Change has indicated that to stabilize the climate, GHG emissions have to be reduced by around 80 percent from 1990 levels. On June 1, 2005, Governor Arnold Schwarzenegger issued Executive Order S-3-05 that sets a goal to reduce GHG emissions by 80 percent below 1990 levels by 2050. Other post-2020 GHG emission reduction goals specific to the transportation sector include Governor Brown's Executive Order B-16-2012 which states a target for 80 percent less than 1990 levels.

The development of the 2013 Scoping Plan Update has involved 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, natural resources, research, emissions, economics, environmental analysis, federal planning, sustainable communities, and incentives.

ARB also reconvened the Environmental Justice Advisory Committee (EJAC) to advise ARB in the development of the 2013 Scoping Plan Update. AB 32 directed ARB to convene an EJAC of at least three members by July 1, 2007, to advise ARB in developing the Scoping Plan and any other pertinent matter in implementing the bill. ARB first convened an EJAC in January 2007, to provide advice on the development of the 2008 Scoping Plan.

From January 22, 2013 through March 1, 2013, staff solicited nominations to reconvene the EJAC to advise the Board during development of the 2013 Scoping Plan Update. Two former EJAC members, plus ten new candidates were appointed by the Board at the March 21, 2013, Board hearing. The first EJAC meeting was held on

June 18, 2013. The Board approved the addition of a 13th member on June 27, 2013.

Under the auspices of the Climate Action Team, led by Secretary for Environmental Protection Matthew Rodriguez, ARB and other State agencies are collaborating to develop a process for identifying and exploring opportunities for securing post-2020 GHG reductions in six focus areas:

- Transportation (including fuels, land use, and associated infrastructure)
- Energy
- Waste
- Water
- Agriculture
- Natural and Working Lands

3. Upcoming Milestones – July through December 2013

- On July 18, ARB and the San Joaquin Valley Air District will host a regional workshop that will focus on the connection between public health and climate change, such as reducing co-pollutants.
- On July 30, ARB and the Bay Area Air District, will host a Bay Area Regional Workshop focused on climate.
- In Fall 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 discussion of a second draft in late 2013.
- ARB also expects to hold additional EJAC meetings to seek recommendations from the EJAC as documentation related to the 2013 Scoping Plan Update is released.

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 (WCI) that are the most promising candidates for the development of a regional cap-and-trade 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. (WCI, 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 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 the design of its cap-and-trade program. The following are formal agreements related to climate change activities:

- On April 10, 2013, Governor Brown and the Ministry of Environmental Protection Zhou Shengxian of the People's Republic of China, signed an agreement to enhance cooperation on ways to reduce air pollution. Also on that date, Cal EPA Secretary Matthew Rodriguez along with Beijing Municipal Environmental Protection Bureau Li Xiaohua signed a MOU to enhance cooperation on ways to reduce air pollution and other environmental protection efforts. For more information please see the Governor's website at: <http://www.gov.ca.gov/news.php?id=17989>.
- On April 11, 2013 Governor Brown opened the California-China Office of Trade and Investment in Shanghai. The privately-funded office (made possible by the passage of AB 2012, Pérez, Chapter 294, Statutes of 2012) will be staffed and operated by the Bay Area Council, a public interest group representing more than 250 of the largest employers in the San Francisco-Silicon Valley-Oakland-Bay Area region.
- On April 14, 2013, Governor Brown visited California's Chinese sister-state, Jiangsu, and signed a MOU to partner on climate change, technology, education and tourism with the province's top government official, Party Secretary Luo Zhijun.
- On April 15, 2013 Governor Brown signed an MOU with China's Guangdong province Governor Zhu Xiaodan that formalizes cooperation on trade and investment, science and technology, environmental conservation, education, tourism and culture. Also on that date, CalEPA Secretary Matthew Rodriguez along with his counterpart, Guangdong Development and Reform Commission Director-General Li Chunhong, signed an agreement to advance collaboration on climate change, namely low carbon development between the two regions. For more information on the Governor's website at: <http://www.gov.ca.gov/news.php?id=17999>.

- On June 18, 2013, Mary Nichols, Chairman of the ARB, signed a MOU with Anliang Xu, Director General of the Shenzhen Development and Reform Commission, to enhance cooperation on GHG emission trading systems and low carbon technologies. More information on the MOU can be found on the ARB website at: http://www.arb.ca.gov/newsrel/2013/shenzhen_and_ca_mou.pdf.

1. *Western Climate Initiative*

The WCI is a collaboration of independent jurisdictions working together to identify, evaluate, and implement 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 currently active in WCI: 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.*

Throughout the WCI collaboration, the WCI jurisdictions have discussed the concept of having regionally coordinated administrative support for the jurisdictions' emissions trading programs. In November 2011, the WCI jurisdictions created 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 2 of this report provides the semi-annual update to the Legislature on the activities of WCI, Inc. Please see that 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 California's 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 California's LCFS. 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 California's LCFS. To facilitate the use of consistent methodologies, staff continues to work closely with Oregon and British Columbia on ARB's web-based LCFS Reporting Tool. 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 making elements of the Reporting Tool available, including security, program maintenance, and update capabilities. ARB

expects to provide the Reporting Tool to British Columbia and Oregon once the software licensing agreements are executed.

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 GHG 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 most heavily populated 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.

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. Staff presented status updates to the Board in 2012 on the development of these plans. Based on staff's evaluation, ARB's Executive Officer accepted these three SCSs through Executive Orders on behalf of the Board.

2. Recent Developments – January through June 2013

The remaining MPOs are now in the process of developing and adopting their SCSs as part of their next Regional Transportation Plan updates. In the first half of 2013, staff provided updates to the Board on the San Joaquin Valley's SB 375 implementation status, as well as on its evaluation of both the Butte and Tahoe regions' SCSs. In June 2013, the Board heard an update on the Bay Area's SCS, which the Metropolitan Transportation Commission is expected to adopt in July.

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 GHG 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 vehicle 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 – July through December 2013*

As each additional MPO adopts a SCS, ARB staff will evaluate the plan to determine whether the SCS, 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 Fall 2013, staff will update the Board on the adoption and evaluation of Santa Barbara's SCS.

D. Cap-and-Trade Auction Proceeds

1. *Background*

A portion of the allowances required for compliance with the Cap-and-Trade Regulation are sold at quarterly auctions and reserve sales. The auctioned allowances are a mix of State-owned allowances and allowances consigned to auction by electric utilities. The Legislature and Governor will approve the expenditure of the State's portion of these auction proceeds (except for the proceeds from allowances consigned to auction by the utilities) 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 and environmental health and develop a clean energy economy.

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 established the GHG Reduction Fund to receive the State's portion of the auction proceeds and provided the framework for how those auction proceeds will be allocated. This legislation established 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 implementing legislation established 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 is to be directed to projects that provide benefits to disadvantaged communities and at least ten percent of program funding must be spent on projects located in disadvantaged communities. CalEPA is required to identify these communities for investment purposes.

The GHG 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 first three auctions (from the sale of State-owned allowances) and the current balance.

Table 1-2: Greenhouse Gas Reduction Fund (as of June 5, 2013)	
November 2012 Cap-and-Trade auction.	\$55,760,000
February 2013 Cap-and-Trade auction.	\$83,923,548
May 2013 Cap-and-Trade auction.	\$117,580,484
Current balance	\$257,264,032

The Cap-and-Trade Regulation requires that utilities use their allocated allowances exclusively for the benefit of their retail ratepayers as consistent with the goals of AB 32. This requirement applies to both allocated allowances, and to any proceeds generated from the monetization of any allocated allowances. To complement ARB's Regulation, the CPUC decision D1212033 (passed pursuant to SB 1018) further directed the investor-owned utilities (IOUs) to return the proceeds generated from the sale of their allocated allowances to their ratepayers.

For the first three auctions, the IOUs have received a total of \$502,128,062 from the sale of allocated allowances and publicly-owned utilities have received a total of \$37,093,164 from the sale of allocated allowances.

2. *Recent Developments – January through June 2013*

The implementing legislation established a two-step process for allocating funding, with the Department of Finance (Finance) as the lead agency. The two-step process involves developing an investment plan and appropriating the funds through the annual Budget Act, in accordance with the investment plan.

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.

- In February 2013, the State held public workshops to solicit public input during the development of the first three-year investment plan.
- On April 16, 2013, Finance and ARB released the Draft Cap-and-Trade Auction Proceeds Investment Plan for public comment.
- To meet the direction of SB 535, CalEPA identified disadvantaged communities for investment based on a tool called the California Communities Environmental Health Screening Tool (CalEnviroScreen) developed by CalEPA and the Office of Environmental Health Hazard Assessment (OEHHA). More information on CalEnviroScreen can be found here <http://oehha.ca.gov/ej/ces042313.html>.
- On April 24, 2013, OEHHA released the final maps and ZIP codes for the initial communities identified as disadvantaged.
- On April 25, 2013, ARB conducted a public hearing to solicit testimony on the Draft Cap-and-Trade Auction Proceeds Investment Plan.
- On May 20, 2013, Finance transmitted the final approved 3-year Investment Plan for Cap-and-Trade Auction Proceeds to the Legislature. The Plan identified GHG emission reduction goals and priority programs for investment of proceeds to support achievement of the State's goals.

Annual Budget Appropriations: Funding will be appropriated by the Legislature and Governor through the annual 2013 Budget Act, consistent with the three-year investment plan.

- In January 2013, the Proposed State Budget for Fiscal Year (FY) 2013-14 included a discussion of Administration priorities for investment, emphasizing investments in the transportation and energy sectors from which large reductions

in GHG emissions are possible. In addition, the Administration noted other opportunities for sustainable agriculture practices (including the development of bioenergy), forest management and urban forestry, and the diversion of organic waste to bioenergy and composting.

- The Revised State Budget for FY 2013-14 proposed a one-time loan of \$500 million from the GHG Reduction Fund to the General Fund. This loan includes the auction proceeds from Fiscal Years 2012-13 and 2013-14. The Legislature approved the loan and adopted it in the 2013 Budget Act. As outlined in the 3 Year Investment Plan, the loan will fill a short-term need and the monies are expected to be repaid with interest. It is assumed that proceeds from the sale of allowances from subsequent auctions will be available for legislative appropriation starting with next fiscal year (FY 2014-15).

3. *Upcoming Milestones – July through December 2013*

The next quarterly Cap-and-Trade auction is scheduled to take place on August 16 and the fourth quarter auction is scheduled to take place on November 19, 2013.

E. Sustainable Freight Strategy

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. In

2015, ARB will be submitting an Ozone SIP to the U.S. EPA as required by the Clean Air Act and in response to the recent reduction in the health-based air quality standard for ozone. ARB's 2012 *Vision for Clean Air: A Framework for Air Quality and Climate Planning* showed that meeting ozone health-based standards and climate goals will require similar transformative emission reductions strategies. The success of the SIP will depend on a successful transition of the current California 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.

In 2012, ARB formed 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.

2. Recent Developments – January through June 2013

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 aligns with and supports a competitive logistics industry and the associated jobs.

Two main events were held to support this effort:

1. A public symposium was held on April 10-11 to discuss the transition to zero/near-zero emission freight technology. The South Coast Air Quality Management District hosted the event in conjunction with ARB and other air agency partners.
2. The 2013 Haagen Smit Symposium held on May 13-15, included a wide variety of leaders from government, industry, community and environmental organizations, and academia. The Symposium focused on developing a broad-based coalition supportive of a future sustainable freight transport system.

3. Upcoming Milestones – July through December 2013

Building on the discussions from the symposia, staff will continue the collaborative effort to develop a sustainable freight strategy. This activity will be reflected in the 2013 Update to the Scoping Plan, as well as subsequent SIP revisions to attain federal ambient air quality standards.

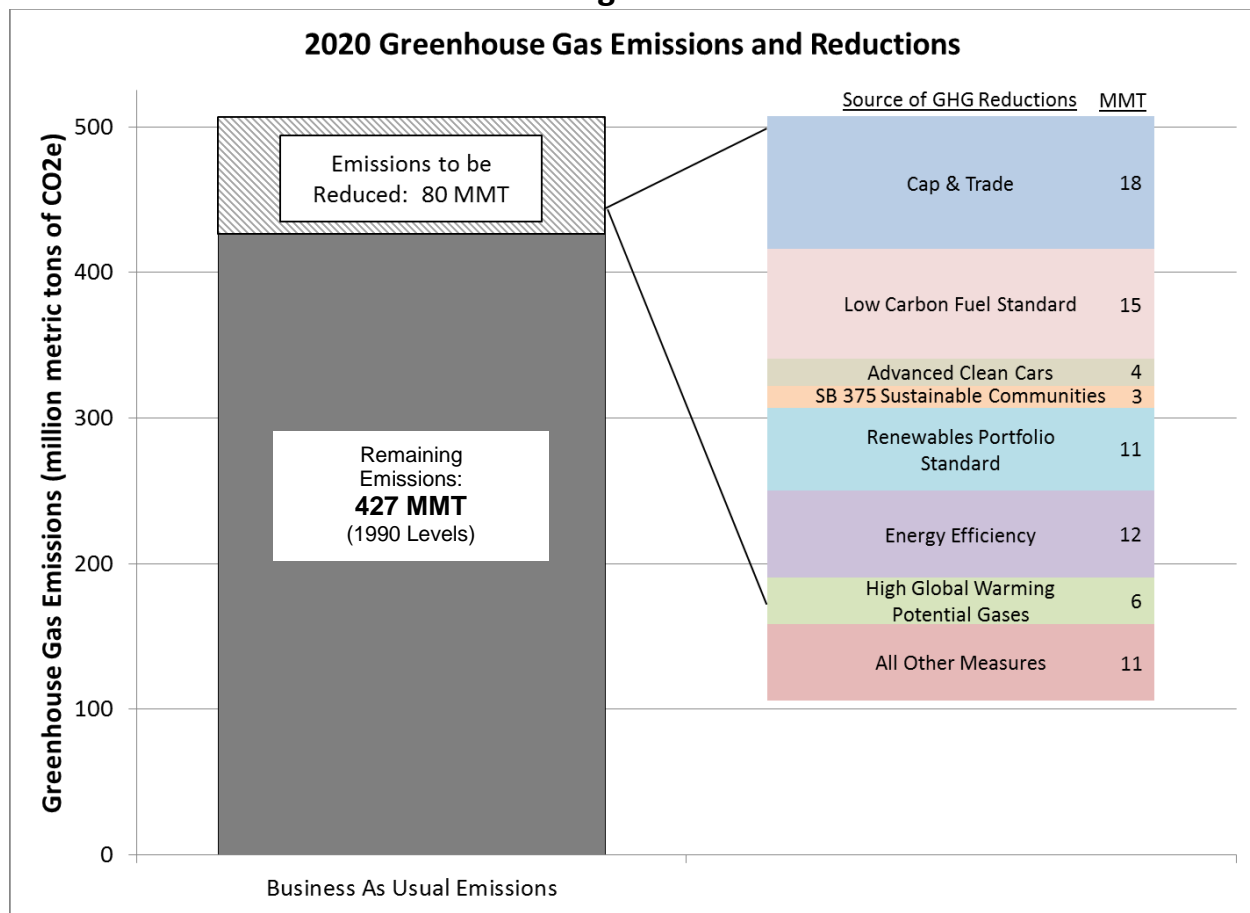
- At the October 2013 Board meeting, ARB staff will seek input on concepts for the Sustainable Freight Strategy document and public process.

III. GREENHOUSE GAS EMISSIONS AND REDUCTIONS

ARB currently estimates that GHG emissions in 2020 would be 507 MMT of CO₂e in a “business as usual” case without the State’s actions to reduce GHGs. The AB 32 target is to return to 1990 emission levels by 2020, which ARB has identified as 427 MMT of CO₂e (see Figure 1).

To meet the target, the climate program must cut 80 MMT of CO₂e by 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.

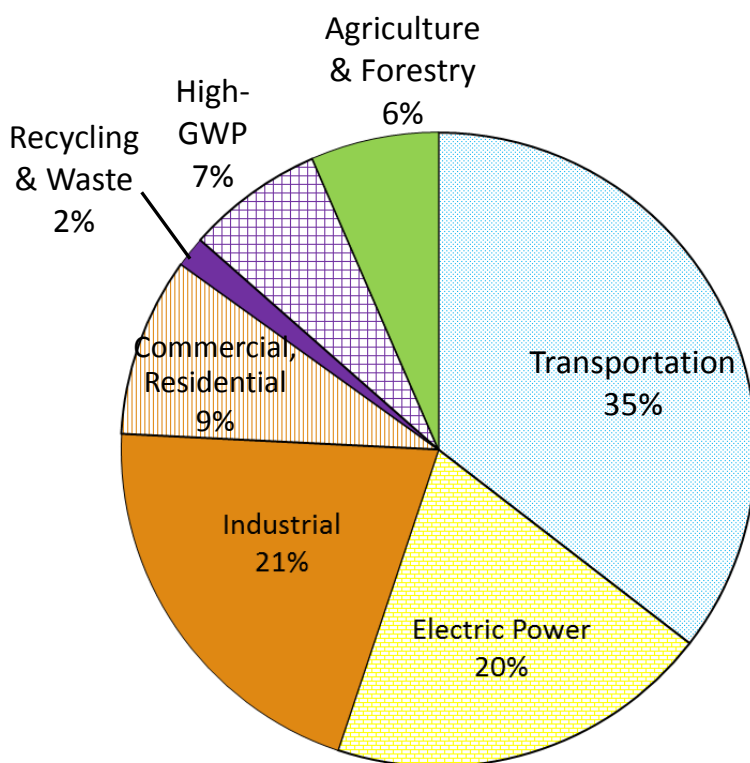
Figure 1



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 GWP gases, like sulfur hexafluoride, also contribute significant benefits.

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, agriculture, forestry and natural resources.

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



427
MMTCO₂e

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 the LCFS Programs are the two single largest contributors to meeting the 2020 emission reduction target. As reported in the January 2013 “Annual Report to the Joint Legislative Budget Committee on Assembly Bill 32” those two programs account for nearly half of ARB’s climate resources in both FY 2011-12 and in FY 2012-13.

SECTION 2

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

(January – December 2013)

This report is required by the provisions of Senate Bill 1018 (Chapter 39, Statutes of 2012)⁶, which requires 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.

⁶ 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 JLBC in January 2013, and presents WCI, Inc.'s anticipated activities in the remainder of 2013.

Highlights of recent activities include:

- Bylaws were revised to further clarify that the exclusive purpose of the organization is to provide administrative and technical support;
- An Open Meeting Policy was adopted; contracts for administrative support services were amended; and

- An independent audit of its 2012 financial statements was performed. The auditor did not find any significant or relevant issues regarding WCI, Inc. oversight of the financial reporting process.

As was previously reported to the JLBC in September 2012 and January 2013, the previous Executive Director of WCI, Inc. stepped down in August 2012, and Patrick Cummins was selected as interim Executive Director. In March 2013, Mr. Cummins was retained as the Executive Director.

WCI, Inc. anticipates adding additional staff and contractors in recognition of increased administrative activities in 2013, consistent with the WCI, Inc. budget for 2013.

WCI, Inc. budget may be accessed at: http://wci-inc.org/docs/2013-05-08_WCI_Inc_Revised_2013_Budget.pdf.

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>. The bylaws governing WCI, Inc. were revised and adopted at the Board's May 8, 2013 meeting to clarify the purpose of WCI, Inc. and to emphasize the intent to conduct its activities in a transparent and open manner. Table 2-1 lists the policies that have been adopted by the Board.

Table 2-1: WCI, Inc. Corporate Policies (as of June 30, 2013)
Open Meeting Policy (Adopted May 8, 2013)
Accounting Policies and Procedures (Adopted May 8, 2013)
Employee Handbook (Adopted April 15, 2013)
Funds Management Policy (Adopted October 30, 2012)
Procurement Policy (Adopted January 12, 2012)
Audit Committee Charter (Adopted November 3, 2011)
Ethical Guidelines and Conflict of Interest Policy (Adopted November 3, 2011)
Retention of Business Records Policy (Adopted November 3, 2011)
Whistleblower Protection Policy (Adopted November 3, 2011)

Three policies were adopted since this January:

- The *Open Meeting Policy* ensures that the operations of WCI, Inc. are conducted in a transparent and open manner. The Open Meeting Policy was designed to be consistent with the general policies of the Bagley-Keene Open Meeting Act, affording the public the greatest possible access, consistent with the other duties of the organization.
- The *Accounting Policies and Procedures* define the operational and administrative procedures for the input, processing, output and distribution of financial data and reports and related internal controls. These policies and procedures enable management and the Board of Directors to evaluate

WCI, Inc.'s financial status on a monthly and annual basis, and ensure that finances are managed accurately, efficiently, and transparently.

- The *Employee Handbook* contains information about the employment policies and practices of the organization. The Directors from California remain unchanged since the January 2013 report to the JLBC:

- Secretary for Environmental Protection, Matthew Rodriguez
- 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).

The Board officers also remain unchanged since the last report:

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

On May 8, 2013, the Province of Québec named a non-voting member to the Board, Mr. Alain Houde, Québec Government Representative. The remainder of the directors from Québec and British Columbia remain unchanged.

C. Staffing and Operations

On March 22, 2013, WCI, Inc. announced that Patrick Cummins had been retained as the Executive Director. Mr. Cummins had served in this role on an interim basis since September 1, 2012.

No other staff changes have been made since the January 2013 report to the JLBC. WCI, Inc. staffing includes the following.

- Project Managers: WCI, Inc. has two part-time project managers to oversee contracts related to the CITSS, the auction platform, and market analysis.
- Business Services: WCI, Inc. uses a contractor to support day-to-day business operations and has engaged the services of an accountant.
- Insurance and Banking: WCI, Inc. has retained insurance coverage and banking services.
- Office: WCI, Inc. has an office in Sacramento.
- WCI, Inc. has contracted for the services of a corporate counsel.

The Audit Committee contracted with an auditor (Crowe Horwath LLP), according to the requirements in the Audit Committee Charter. On April 25, 2013 the independent auditor submitted a letter to the Audit Committee of WCI, Inc. stating that it did not find any significant or relevant issues regarding WCI, Inc.'s oversight of the financial

reporting process. This letter can be downloaded from the WCI, Inc. website, http://www.wci-inc.org/docs/4a_Inc_Audit_Report_SAS114_and_Representation_Letter_2012.pdf. Tax filings can also be downloaded from the WCI, Inc.'s website, <http://www.wci-inc.org/documents.php>.

D. Delivery Capability

WCI, Inc. has entered into the following contracts to provide support to state and provincial GHG allowance trading programs:

- **CITSS Development:** In May 2012, WCI, Inc. contracted with SRA International, Inc. to further develop CITSS and to provide the web hosting for its operation. At its December meeting the Board approved an amendment to the SRA contract to continue CITSS development through the end of 2013. The amended maximum agreement amount is \$1,637,804 for the period May 2012 through December 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. The maximum agreement amount is \$361,126 for the period October 2012 through September 2015.
- **Auction Platform:** In January 2013, WCI, Inc. contracted with Markit Group Limited for the continued development of the auction platform. In May 2013, WCI, Inc. amended the contract to update the schedule, activities, and budget to reflect the actions taken by ARB to link the California program with the Québec program. The amended agreement amount is \$723,341 and covers the period January 2013 through May 2014.
- **Market Analysis:** In January 2013, WCI, Inc. contracted with Monitoring Analytics, LLC for analyses in support of market monitoring being conducted by California and Québec. In May 2013, WCI, Inc. amended the contract to update the schedule, activities, and budget to reflect the actions taken by ARB to link the California program with the Québec program. The amended agreement amount is \$249,350 for the period January 2013 through January 2014.

In addition to these four contracts, one additional contract is anticipated in 2013, for auction financial administration, which includes evaluation of bid guarantees and conduct of settlement. Although an additional contract for continuation of CITSS web hosting was previously anticipated in 2013, that contract is now not anticipated to be needed until 2014. As some of these contracts are in effect through late 2013 or early 2014, in the second half of 2013, WCI, Inc. will likely consider options to ensure the continuation of support to jurisdictions after the contract period ends. Each of the

WCI, Inc. contracts for administrative services in support of jurisdiction programs is posted to the WCI, Inc. website as it is finalized⁷.

E. Budget and Funding

In December 2012, the Board approved 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. The narrative description was presented to the Board in May 2013 and approved at that time.

The total funding of WCI, Inc. remains unchanged since the January 2013 report to the JLBC and includes (all US dollars):

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

F. Planned Payments to WCI, Inc.

As shown in the agreement, ARB's share of the WCI, Inc. budget is approximately \$3.7 million over two years (2012 and 2013). ARB's agreement with WCI, Inc. can be accessed at: <http://www.arb.ca.gov/cc/capandtrade/wci/agreement.pdf>.

The anticipated payments from ARB to WCI, Inc. remain unchanged from the amounts reported previously to the JLBC. 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, as shown in the following table:

Table 2-2: Past and Planned Payments from ARB to WCI, Inc.		
Payment	Payment Date	Amount
2012 Q1 Payment	7/1/2012	\$800,000
2012 Q2 Payment	8/30/2012	\$268,346
2012 Q3 Payment	1/17/2013	\$268,346
2012 Q4 Payment	2/6/2013	\$268,346
2013 Q1 Payment	5/28/2013	\$1,000,000
2013 Q2 Payment	Invoiced July 2, 2013	\$377,737
2013 Q3 Payment	To be invoiced: October 2013	\$377,737
2013 Q4 Payment	To be invoiced: January 2014	\$377,739
Total		\$3,738,251

⁷ The administrative support contracts posted to the WCI, Inc. website are available at: <http://www.wci-inc.org/documents.php>.

During the remainder of 2013, WCI, Inc. will develop a budget for future years. ARB will consider continuing to access administrative support from WCI, Inc. and the funding to WCI, Inc. that will be needed to maintain that access. A revised funding agreement between ARB and WCI, Inc. will likely be considered.