

Zero Based Budget Report – Narrative AB 32 Activities for Budget Year 2011-2012

1.0 Introduction

Under Senate Bill 855 (Chap. 718, Statutes of 2010), the Governor is required to submit a *Zero-Based Budget Report* (Report) to the Legislature “for the 2011–12 fiscal year for all State agency programs that implement, or directly further the goals of, the California Global Warming Solutions Act of 2006... using a zero-based budget methodology.” This report includes “the overall size of these programs and expenditures, the manner in which funds are being allocated and prioritized for particular programs and functions, and the manner in which the proposed expenditures will further the goals and objectives of AB 32.” This report describes the currently planned activities that all agencies with funding to implement AB 32 may undertake in fiscal year (FY) 2011-2012.

Agencies with legislatively approved appropriations for activities to implement AB 32 receive funding for their AB 32 implementation activities from the AB 32 Cost of Implementation fee. The attached spreadsheet details the specific program areas and detailed justification of the resources required to meet AB 32 goals. Note that the spreadsheet represents person-years of workload, and not the number of staff working on activities to further the goals of AB 32. These estimates do not include the “distributed” administrative costs of previously existing managers and executives who are now also implementing AB 32 as a part of their responsibilities.

The Brown Administration fully supports the goals and objectives of AB 32. The Administration recognizes that changes in policy direction may occur as the administration continues to review applicable programs and regulations. Any policy changes are unlikely to affect the overall resource allocations but may require limited shifts in some specific program areas. The administration is committed to advising the Legislature of any change in policy direction that will have a significant impact on the resource estimates that accompany this report.

1.1 AB 32: The California Global Warming Solutions Act of 2006

AB 32 (Núñez, Chapter 488, Statutes of 2006) marked a major commitment by the State of California to reduce greenhouse gas (GHG) emissions through the development and implementation of a comprehensive statewide program. As required by AB 32, California’s program is designed to provide multiple benefits, including cost-effective GHG emission reductions; environmental and economic co-benefits; and benefits of investment in innovative low-carbon and clean energy technologies. The economy-wide emissions limit set by AB 32 necessitates a suite of measures which may evolve over the life of the program.

California’s comprehensive program to reduce GHG emissions under AB 32 is closely integrated with a number of existing State policy priorities. These include policies to increase energy efficiency in homes, buildings, appliances, and vehicles; policies to meet State energy needs with more renewable energy; policies to promote more sustainable transportation and land use planning; and policies to reduce the State’s dependence on petroleum.

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Program Area (Total Positions & Resources)	Planning and Policy Development (7 Positions, \$1,489,000)	
Legal Authority	Health and Safety Code Sections 38501(f), 38560, 38570, and 38591.	
Program Justification		<p>The Air Resources Board (ARB) implements the major initiatives for reducing greenhouse gas (GHG) emissions pursuant to Assembly Bill 32 (AB 32). In AB 32, the Legislature directs ARB to coordinate with state agencies, as well as consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing the statute. The goal of implementing the statute is to reduce greenhouse gas emissions to 1990 levels by 2020 - a reduction of approximately 30 percent. To follow the direction of the Legislature and to meet the goals of the statute, extensive planning and coordination activities are necessary. The primary planning document to outline how goals will be achieved is the Scoping Plan. ARB's planning and policy development components include the over-arching planning of activities within ARB, as well as coordinating with other state agencies, regional organizations, and the federal government. Coordination of programs with the many entities and programs outside of ARB, requires substantial staff time from program specialists and managers. As required under AB32, ARB has coordinates its programs with Western Climate Initiative (WCI) partners and others in North America and throughout the world, in order to augment the California's GHG emission reduction programs. Economy-wide emission reductions programs, such as cap-and-trade, are examples of programs which require this type of coordination, but other significant programs such as those involving vehicles, fuels and electricity benefit from work with other states and regions. Additionally, ARB will begin work on the next iteration of the Scoping Plan in 2012.</p>
Assistant Division Chief (1)		<p>The Assistant Division Chief position would oversee ARB's climate change activities, providing coordination among ARB divisions, the Legislature, Governor's Office, and outside stakeholders. Specific Duties would include: 1) Providing policy recommendations to the Division Chief, Executive Office, and ARB Chairman's Office. 2) Coordination and collaboration with ARB's criteria pollutant and toxics programs, other government agencies, and external stakeholders. 3) Coordinating ARB budgetary and legislative efforts on AB 32. 4) Participating in coordination efforts with other state and regional greenhouse gas reduction programs 5) Providing management direction to the Air Resources Supervisor I and technical staff responsible for evaluating technologies and economic assessments. 6) Providing management direction to Air Resources Supervisor II and technical staff.</p>
Air Resources Supervisor II (0.5)		<p>The Air Resources Supervisor II position would oversee the overall climate change planning and policy development activities. Specific Duties would include: 1) Providing policy recommendations to the Assistant Division Chief (as appropriate), Division Chief, Executive Office, and ARB Chairman's Office. 2) Coordinating with the Western Climate Initiative and U.S. Environmental Protection Agency (U.S. EPA) on regional and national climate change policy. 3) Working with ARB divisions and other state agencies, and stakeholders to ensure that climate policy is consistent with and in support of other state priorities (criteria pollutants, air toxics, water, etc.). 4) Initiating planning and stakeholder outreach for the 2013 Scoping Plan revision. 5) Providing management direction to the Air Resources Supervisor I and technical staff.</p>

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Resources Supervisor I (0.5)		The Air Resources Supervisor I position would manage day-to-day climate change planning and policy development activities. Specific Duties would include: 1) Providing climate change policy recommendations to the Air Resources Supervisor II. 2) Working with ARB divisions, other state agencies, and stakeholders to ensure that climate policy is consistent with and in support of other state priorities (criteria pollutants, air toxics, water, etc.). 3) Beginning in calendar year 2012, initiating internal planning and stakeholder outreach for 2013 Scoping Plan revision. 4) Providing management direction to technical staff.
Air Pollution Specialist (2)		The Air Pollution Specialist positions provide industry and regulatory expertise needed for climate change planning and policy development activities. Specific Duties would include: 1) Evaluating and recommending climate change policies based on emerging inventory and emission reduction information. 2) Coordinating with regional and federal partners on climate change policy. 3) Initiating planning stages of Scoping Plan revision.
Associate Governmental Program Analyst (1)		The Associate Governmental Analyst position would oversee administrative, personnel, and contracting duties for the climate change program.
Staff Services Analyst (1)		The Staff Services Analyst position would provide support for rulemaking activities including compilation of official rulemaking records, coordinating stakeholder responses, preparation of final statements of reasons, and preparation of documents for litigation.
Executive Assistant (1)		The Executive Assistant position would provide administrative support for the Assistant Division Chief and other Executive Officers working on climate change.
	\$500	The implementation of AB 32 requires contract services to support environmental and economic analyses for AB 32 adopted and proposed programs.
Program Area (Total Positions & Resources)	Greenhouse Gas Emissions Inventory and Mandatory Reporting (17 Positions, \$2,644,000)	
Legal Authority	Health and Safety Code Sections 38501(f), 38510, 38530, 38550, 38560, and 38570.	
Program Justification		The Air Resources Board implements the Greenhouse Gas Emission Inventory and Mandatory Reporting components of AB 32. Mandatory greenhouse gas emissions reporting is required under Health and Safety Code section 38530. In fiscal year 2011-2012, approximately 600 large industrial facilities will submit their greenhouse gas emissions data to ARB. This data is verified by ARB-accredited 3rd party verifiers. In addition, ARB will continue to update the statewide greenhouse gas inventory to reflect the latest technical and economic data. This work is critical to understanding progress toward meeting the 2020 goal, and also serves as the underpinning of emission reduction measures. ARB will also finalize modifications to the Mandatory Reporting Regulation, continue training and oversight of the third-party verifiers of the emissions data, and monitor and enforce compliance with the reporting regulation.
Air Resources Supervisor I (1)		The Air Resources Supervisor I (ARS I) position would manage the day-to-day activities involved in the implementation of the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (MRR). Specific Duties would include: 1) Managing the regulatory process for amendments to the MRR to support reporting for the Cap-and-Trade Regulation and align reporting requirements with U.S. EPA, including 15-day changes and completion of a final statement of reasons. 2) Implementing current MRR reporting programs. Early in the fiscal year, the workload for this position would focus on the regulatory amendment process and then transition to implementation of the amended regulation at the end of 2011. 3) Providing management direction to technical staff.

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Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Resources Supervisor I (1)		The Air Resources Supervisor I (ARS I) position would manage the day-to-day activities of staff responsible for statewide GHG emission inventory and forecasting methods, development of GHG inventory updates, and manage staff who act as inventory liaison for GHG planning activities.
Air Resources Supervisor I (1)		The Air Resources Supervisor I (ARS I) position would manage the day-to-day activities of staff who implement the Verification Program. Data reported under the Mandatory Reporting Regulation is verified by ARB-accredited 3rd party verifiers. The staff are responsible for oversight and audit responsibilities for greenhouse gas reporting, verifier training and accreditation, verification audit and oversight.
Air Pollution Specialist (3)		The Air Pollution Specialist positions would provide the industry and regulatory expertise necessary for implementation of the MRR. Specific Duties would include: 1) Completing the regulatory process for amendments to the MRR to support reporting for the cap-and-trade regulation and align reporting requirements with U.S. EPA, including 15-day changes and completion of a final statement of reasons. 2) Implementing the MRR reporting and verification requirements. These resources would transition to implementation of the amended regulation at the end of 2011. Additionally, these positions would focus on implementing current MRR reporting and verification requirements and oversight of the reporting verification and audit program.
Air Resources Engineer (2)		The Air Resources Engineer positions would provide the technical engineering expertise necessary for implementation of the MRR. Specific Duties would include: 1) Completing the regulatory process for amendments to the MRR to support reporting for the Cap-and-Trade Regulation and align reporting requirements with U.S. EPA, including 15-day changes and completion of a final statement of reasons. 2) Implementing the MRR reporting and verification requirements. These resources would transition to implementation of the amended regulation at the end of 2011. Additionally, these positions would focus on implementing current MRR reporting and verification requirements and oversight of the reporting verification and audit program.
Air Pollution Specialist (2)		The Air Pollution Specialist positions would provide the industry and regulatory expertise needed to maintain the statewide greenhouse gas inventory. Specific Duties would include: 1) Updating inventory of statewide greenhouse gas emissions to reflect new technical and economic data. 2) Supporting development of GHG emission reduction measures.
Air Resources Engineers (2)		The Air Resources Engineer positions would provide the technical engineering expertise needed to maintain the statewide greenhouse gas inventory. Specific Duties would include: 1) Updating inventory of statewide greenhouse gas emissions to reflect new technical and economic data. 2) Supporting development of GHG emission reduction measures.
Air Pollution Specialist (5)		The Air Pollution Specialist positions would focus on implementation of the Verification Program. Specific Duties would include: 1) Conducting verifier training and accreditation. 2) Auditing and overseeing third-party verifications.
Program Area (Total Positions & Resources)	Adopt, Implement, and Enforce Greenhouse Gas Reduction Measures (105.5 PYs, \$22,804,000)	
Legal Authority	Health and Safety Code Sections 38501(f), 38560, 38570, 38580, and 38591.	

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Program Justification		AB 32 directs the Air Resources Board to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions from sources or categories of sources. ARB has met every statutory requirement under AB 32 to adopt greenhouse gas reduction measures to achieve the 1990 emission goal by 2020. As ARB looks to the future, the priorities for the 2011-2012 fiscal year and subsequent years will be to develop business processes to implement, enforce, and measure the success of greenhouse gas emission reduction measures. As this program area is extensive, it is divided into subsections below to provide greater detail on each greenhouse gas emission reduction measure.
Sub-Program Area (Total Positions & Resources)	Completing Economy-wide Greenhouse Gas Mitigation Regulation (8 Positions, \$1,263,000)	
Legal Authority	Health and Safety Code Sections 38501(f), 38560, 38570, and 38580.	
Program Justification		In December 2010, the Air Resources Board endorsed an economy-wide Cap-and Trade Regulation. The Cap-and-Trade Regulation covers major sources of GHG emissions in the state such as refineries and power plants, industrial facilities, and transportation fuels. Completing the rule-making process will require personnel and related resources in FY 2011-2012. Toward the end of 2011, these resources will transition to implementation, which will begin in 2012. ARB is currently revising the Scoping Plan alternatives analysis, including potential alternatives to the cap-and-trade program. Should ARB chose a different approach, it will apply these resources to the design of any program(s) that may replace the currently envisioned Cap-and-Trade approach.
Air Resources Supervisor II (0.5)		The Air Resources Supervisor II position would oversee the overall efforts to complete the Cap-and-Trade Regulation. Specific Duties would include: 1) Providing policy recommendations to the Assistant Division Chief (as appropriate), Division Chief, and Executive Office. 2) Coordinating activities with other states, regions and the federal government 3) Completing the Cap-and-Trade Regulation regulatory process including 15-day changes and the completion of the final statement of reasons through October 2011. 4) Providing management direction to Air Resources Supervisor I and technical staff. These resources would transition to implementation of the regulation at the end of 2011.
Air Resources Supervisor I (1)		The Air Resources Supervisor I position would manage the day-to-day efforts needed to complete the Cap-and-Trade Regulation. Specific Duties would include: 1) Coordinating staff-level regional planning activities. 2) Reviewing and approving documents to complete the Cap-and-Trade Regulation regulatory process including 15-day changes and the completion of the final statement of reasons. 3) Providing management direction to technical staff. These resources would transition to implementation of the regulation at the end of 2011.
Air Resources Engineers (3.5)		The Air Resources Engineer positions would provide technical engineering expertise needed to complete an economy-wide program, with a current focus on the endorsed Cap-and-Trade regulation. Specific Duties would include: 1) Analyzing emissions reporting and industrial output data to determine initial benchmarks for the industrial sectors. 2) Analyzing methods to allocate allowances that each covered entity will receive; developing frameworks to monitor leakage and competitiveness issues. 3) Monitoring potential adjustments required due to implementation of complementary policies. 4) Developing and recommending technical amendments to the regulation as necessary.

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Pollution Specialist (3)		The Air Pollution Specialist positions would provide industry and regulatory expertise needed to implement an economy-wide program, with a current focus on the endorsed Cap-and-Trade regulation. Specific Duties would include: 1) Developing an allocation auction platform. 2) Developing and implementing an offset program framework. 3) Developing and implementing a regulatory framework to support a program monitoring plan. 4) Conducting economic analysis.
Sub-Program Area (Total Positions & Resources)	Implementing Cap-and-Trade Regulation (24 Positions, \$7,698,000)	
Legal Authority	Health and Safety Code Sections 38501(f), 38560, 38570, and 38580.	
Program Justification		In December 2010, the Air Resources Board endorsed an economy-wide Cap-and Trade Regulation. The Cap-and-Trade Regulation covers major sources of GHG emissions in the state such as refineries and power plants, industrial facilities, and transportation fuels. The regulation contains a number of components which are fundamental to any economy-wide GHG emissions reduction program. These include mandatory emissions reporting, industry specific benchmarking, mechanisms for regulatory enforcement and understanding of compatibility to programs in other states and country which trade with California. Additionally, staff resources are planned to be allocated to Cap-and-Trade specific functions including market design and offset protocols, components of which may be utilized in any other economy-wide GHG emissions reduction program. The endorsed Cap-and-Trade Regulation includes four compliance offset protocols that must be finalized as part of the regulatory process. ARB will also continue to evaluate new types of protocols for possible future inclusion in the Cap-and-Trade Regulation. ARB will report on market readiness early in the fiscal year. ARB is currently revising the Scoping Plan alternatives analysis, including potential alternatives to the cap-and-trade program. Should ARB chose a different approach, it will apply these resources to obtain the emission reductions via that approach. Many of the specific activities planned under the Cap-and-Trade regulation will be required under any economy-wide regulatory program.
Air Resources Supervisor II (0.5)		The Air Resources Supervisor II position would oversee the overall efforts to implement the economy-wide emissions reduction program. Specific Duties would include: 1) Providing policy recommendations to the Assistant Division Chief (as appropriate), Division Chief, and Executive Office. 2) Coordinating activities with other states, regions and the federal government. 3) Developing a market tracking system. 4) Developing frameworks for offset programs and market oversight. 5) Reviewing the program monitoring plan. Providing management direction to the Air Resources Supervisor I and technical staff.
Air Resources Supervisor I (1)		The Air Resources Supervisor I position would manage the day-to-day efforts to implement the economy-wide emissions reduction program. Specific Duties would include: 1) Coordinating activities with other states, regions and the federal government.. 2) Coordinating with WCI and U.S. EPA on a market tracking system design and functionality. 3) Reviewing frameworks for offset programs and market oversight. 4) Developing a program monitoring plan. 5) Providing management direction to technical staff.

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Resources Engineer (6.5)		The Air Resources Engineer positions would provide technical engineering expertise needed to implement an economy-wide program, with a current focus on the endorsed Cap-and-Trade regulation. Specific Duties would include: 1) Annually analyzing emissions reporting and industrial output data to determine adjustments to benchmarks for the industrial sectors. 2) Calculating the allowances that each covered entity will receive; monitoring leakage and emerging competitiveness issues. 3) Analyzing trends in compliance response. 4) Assessing results of price signal policy. 5) Monitoring developments in implementation of complementary policies to ensure they work in the cap-and-trade framework. 6) Monitoring economic trends resulting from policy implementation. 7) Developing and recommending technical amendments to the regulation as necessary.
Air Pollution Specialist (4)		The Air Pollution Specialist positions would provide industry and regulatory expertise needed to implement an economy-wide program, with a current focus on the endorsed Cap-and-Trade regulation. Specific Duties would include: 1) Developing a market tracking system in coordination with U.S. EPA and WCI partners to manage market systems. 2) Developing an allocation auction platform. 3) Developing, executing, and managing financial services contracts to assist in trading of allowances.
Air Pollution Specialist (3)		The Air Pollution Specialist positions would provide industry and regulatory expertise needed to implement an economy-wide program, with a current focus on the endorsed Cap-and-Trade regulation. Specific Duties would include: 1) Analyzing market readiness. 2) Developing a market oversight framework. 3) Implementing market oversight procedures and programs.
Air Pollution Specialist (5)		The Air Pollution Specialist positions would provide industry and regulatory expertise needed to implement an economy-wide program, with a current focus on the endorsed Cap-and-Trade regulation.. Specific Duties would include: 1) Developing and implementing an offset program framework. 2) Developing and implementing a program monitoring plan. 3) Conducting economic analysis.
Air Pollution Specialist (4)		The Air Pollution Specialist positions would provide industry and regulatory expertise needed to implement an economy-wide program, with a current focus on the endorsed Cap-and-Trade regulation. Specific Duties would include: 1) Coordinating with other state and regional programs to integrate regional market tracking. 2) Providing business assistance.
	\$4,000,000	The implementation of the endorsed Cap-and-Trade Regulation will require contract services for the operation and maintenance of market tracking processes and related services including: 1) Development of market tracking processes. 2) Financial services planning and service operators. 3) Auction provider. 4) Market surveillance. 5) Market monitoring training. 6) Market tracking system security and risk analysis. 7) Offset registry processes management.
Sub-Program Area (Total Positions & Resources)	Developing and Implementing the Low Carbon Fuel Standard Regulation (27 Positions, \$5,058,000);	
Legal Authority	Health and Safety Code Sections 38501(f), 38560, 38570, and 38580.	

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Program Justification		Under the Low Carbon Fuel Standard (LCFS) regulation, The Air Resources Board set performance standards that fuel producers and importers must meet each year beginning in 2011. The standard reduces the carbon content of transportation fuels by 10 percent by 2020 while allowing industry flexibility in choosing compliance methods. In fiscal year 2011-2012, ARB will continue to implement the current regulation and propose regulatory amendments, as needed, to provide clarity and flexibility. There are numerous ongoing activities associated with the LCFS. For example, ARB convened an LCFS Advisory Panel and will need to consider their recommendations in potential future regulation amendments. Additionally, through workgroups addressing various aspects of the LCFS, such as high-carbon-intensity crude oils, sustainability, electricity opt-in, and reporting tool revisions, ARB will continue to provide more clarity and certainty to the regulated parties. ARB will also continue laboratory testing efforts to support the implementation of the LCFS.
Air Resources Supervisor II (1)		The Air Resources Supervisor II position would oversee the overall efforts to develop and implement the Low Carbon Fuel Standard. Specific duties would include: 1) Providing policy recommendations to the Assistant Division Chief (as appropriate), Division Chief, and Executive Office. 2) Representing ARB with affected industries, non-governmental organizations, other state agencies, academia, and other interested parties on LCFS-related matters. 3) Providing management direction to Air Resources Supervisor I and technical staff.
Air Resources Supervisor I (1)		The Air Resources Supervisor I position would manage the day-to-day efforts to develop and implement the Low Carbon Fuel Standard Regulation. Specific Duties would include: 1) Working with industry on implementation of the regulation. 2) Reviewing analyses of fuel pathways and vehicle efficiency analyses. 3) Reviewing fuel cycle analyses. 4) Providing management direction to technical staff.
Air Resources Supervisor I (1)		The Air Resources Supervisor I position would manage the day-to-day efforts to develop and implement the Low Carbon Fuel Standard Regulation. Specific Duties would include: 1) Working with industry on implementation of the regulation. 2) Conducting analysis related to the land-use change effects of certain biofuel feedstocks. 3) Proposing regulatory amendments based on the results of the land-use change analyses. 4) Working with a contractor to develop a tool to determine which market crudes in the world are high-carbon-intensity crude oils. 5) Providing management direction to technical staff.
Air Resources Supervisor I (1)		The Air Resources Supervisor I position would manage the day-to-day efforts to develop and implement the Low Carbon Fuel Standard Regulation. Specific Duties would include: 1) Coordinating with electric and natural gas producers. 2) Evaluating sustainability issues. 3) Registering biorefineries to list companies, their biofuels, and the carbon intensity values associated with those fuels. 4) Reviewing analyses and working with management on policy issues. 5) Overseeing vehicle and engine testing activities related to low carbon fuels and greenhouse gas emissions. 6) Providing management direction to technical staff.

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Resources Engineer (6)		The Air Resources Engineer positions would provide the technical engineering expertise needed for development of the LCFS. Specific Duties would include: 1) Working with industry on implementation of the regulation. 2) Conducting analysis of fuel pathways and vehicle efficiency analysis. 3) Updating fuel cycle analyses, evaluating new fuel pathways, working with oil refineries, and bio-refineries. 4) Coordinating with electric and natural gas producers, analyzing indirect emissions, and evaluating sustainability issues. 5) Updating the LCFS reporting tool. 6) Providing business assistance.
Air Pollution Specialist (7)		The Air Pollution Specialist positions would provide industry and regulatory expertise for development of the LCFS. Specific Duties would include: 1) Working with industry on implementation of regulation. 2) Processing biorefinery registration applications, updating the database, and posting the registration information. 3) Updating fuel cycle analyses, evaluating new fuel pathways, working with oil refineries, and bio-refineries. 4) Determining opt-in procedures for electricity and other low-carbon intensity fuels. 5) Developing credit tracking and trading procedures for regulated parties. 6) Coordinating with electric and natural gas producers, analyzing indirect emissions, and evaluating sustainability issues. 7) Providing business assistance. 8) Conducting analysis of fuel pathways and vehicle efficiency analysis. 9) Updating the LCFS reporting tool.
Air Pollution Specialist (5)		The Air Pollution Specialist positions would provide laboratory expertise for development of the LCFS. Specific Duties would include: 1) Laboratory testing of fuels to support LCFS regulatory proposals related to biodiesel. 2) Assessing E85 dispensing facility engineering and certification work.
Air Resources Engineer (2)		The Air Resources Engineer positions would evaluate greenhouse gas emissions from vehicles and equipment fueled with low carbon fuels. Specific Duties would include: 1) Evaluating evaporative emissions of various low carbon fuels. 2) Evaluating the emissions of high-GWP refrigerants (e.g., 134-A) from air conditioning systems. 3) Evaluating the exhaust and evaporative emissions from Off-Highway Recreational Vehicles (OHRV), Pleasure Craft, and Small Off-Road Engines (SOREs) fueled with various low carbon fuels.
Automotive Emissions Testing Supervisor (1)		The Automotive Emissions Testing Supervisor position would oversee, monitor, and review laboratory research test projects to evaluate new vehicle technologies and new fuels in coordination with Air Resources Engineers.
Automotive Emissions Testing III (1)		The Automotive Emissions Testing III position would conduct laboratory research test projects to evaluate new vehicle technologies and new fuels in coordination with Air Resources Engineers.
Office Technician/Office Assistant (1)		The Office Technician/Office Assistant positions would provide general support for climate change activities within the Low Carbon Fuel Standard sub-program area.
	\$1,000	Contract funds are required to support the extramural complementary research for the LCFS related to fuel cycle analysis, land-use change effects, and additional functionality to the LCFS reporting tool.
Sub-Program Area (Total Positions & Resources)	Developing and Implementing the Advanced Clean Car Regulation (3 Positions, \$473,000)	
Legal Authority	Health and Safety Code Sections 38501(f), 38560, 38570, and 38580.	

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Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Program Justification		The Air Resources Board's Advanced Clean Car rulemaking combines efforts to limit traditional tailpipe emissions with GHG reduction measures. ARB is working with the U.S. Environmental Protection Agency (U.S. EPA) and the U.S. Department of Transportation (U.S. DOT) on coordinated state and federal regulations to reduce GHG emissions from new passenger vehicles by requiring that each model year between 2017 and 2025 meet increasingly stringent fleet average GHG levels based on the size of the vehicles. The Advanced Clean Cars regulation is a major regulatory effort that will draw upon ARB's technological, research, laboratory, and regulatory expertise. The regulation is scheduled for consideration in October 2011, and final rulemaking will take place during the remainder of the fiscal year.
Air Resources Engineer (2)		The Air Resources Engineer positions would provide technical engineering expertise for development of the Advanced Clean Cars Regulation. Specific Duties would include: 1) Evaluating the technological development of methods to reduce greenhouse gas emissions from vehicles. 2) Conducting cost studies to evaluate the cost-benefit of potential compliance pathways. 3) Developing regulatory proposals and conducting stakeholder outreach to solicit industry and public input. 4) Finalizing the regulation. 5) Working with industry stakeholders to ensure smooth implementation of the regulation. 6) Coordinating development of greenhouse gas requirements with the federal government.
Air Resources Engineer (1)		The Air Resources Engineer positions would provide technical engineering expertise for development of the Advanced Clean Car Regulation. Specific Duties would include: 1) Developing regulatory requirements for low-GWP refrigerant and low-leak system standards beginning in 2017 as part of the Advanced Clean Car program. 2) Developing additional strategies to address mobile air conditioning service emissions.
Sub-Program Area (Total Positions & Resources)	Implementing the Renewable Energy Standard. Supporting development of CHP and Energy Efficiency Programs. (2 positions, \$315,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560.	
Program Justification		Electricity generation is a significant source of greenhouse gas emissions, comprising about 25 percent of the emission inventory. ARB coordinates with the California Energy Commission (CEC), the California Public Utilities Commission (CPUC) and the California Independent System Operator on programs that address greenhouse gas emissions from conventional generation, renewable generation, combined heat and power, distributed generation, and energy efficiency programs. ARB will continue to evaluate the GHG and criteria pollutant and toxic air pollutant impacts of the energy system to ensure that AB 32, public health, and environmental justice considerations are thoroughly addressed. In addition, ARB will continue to work with the CPUC and the CEC to provide technical assistance in developing combined heat and power and energy efficiency programs.

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Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Resources Engineer (2)		The Air Resources Engineer positions would provide technical engineering expertise for development of programs that address GHG emissions from conventional generation, renewable generation, combined heat and power, distributed generation, and energy efficiency programs. Specific Duties would include: 1) Coordinating with CEC, CPUC, and California ISO staff, and electric utilities on implementation issues related to the state's renewable generation mandates. 2) Assessing the GHG emission benefits of the electricity sector programs, generally. 3) Providing technical expertise on GHG and criteria pollutant impacts of conventional generation, renewable generation, CHP and Energy Efficiency programs. 4) Assessing GHG emissions benefits annually of conventional generation, renewable generation, CHP and Energy Efficiency programs.
Sub_Program Area (Total Positions & Resources)	Implementing High-Global Warming Potential Gas Regulations (12 Positions, \$1,946,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560.	
Program Justification		The Air Resources Board addressed high global-warming potential (GWP) gases with regulations in three broad categories: consumer products, mobile sources, and stationary sources. ARB approved measures to: 1) Restrict high-GWP gases in consumer products. 2) Reduce refrigerant emissions from the non-professional servicing of motor vehicles. 3) Set SF6 limits in non-utility and non-semiconductor applications. 4) Reduce perfluorocarbons in semiconductor manufacturing. 5) Reduce leakage of high-GWP refrigerants from stationary commercial systems. 6) Recover high-GWP gases at end of life where possible. ARB is currently working with the CEC on specifications for commercial and industrial refrigeration systems. ARB will focus on implementation of these measures in fiscal year 2011-2012.
Assistant Division Chief (1)		The Assistant Division Chief position would provide general oversight of internal research activities and extramural research contracts with a focus on greenhouse gas activities. Specific Duties would include: 1) Providing policy recommendations to the Division Chief, Executive Office, and ARB Chairman's Office. 2) Overseeing High-GWP Regulation implementation. 3) Participating in the development of the refrigerant portion of the Advanced Clean Car Regulation. 4) Providing management direction to the Air Resources Supervisor II and technical staff responsible for evaluating technologies and economic assessments. 5) Overseeing economic analyses of AB 32 regulations.
Air Resources Supervisor II (1)		The Air Resources Supervisor II position would oversee the overall effort related to carbon capture and sequestration and the development and implementation of high-GWP regulations. Specific Duties would include: 1) Providing policy recommendations to the Assistant Division Chief (as appropriate), Division Chief, and Executive Office. 2) Providing management direction to the Air Resources Supervisor I and technical staff.

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Resources Supervisor II (1)		The Air Resources Supervisor II position would oversee the overall regulatory development and implementation of high-GWP gas regulations. Specific Duties would include: 1) Providing policy recommendations to the Assistant Division Chief (as appropriate), Division Chief, and Executive Office. 2) Coordinating with stakeholders on the certification of mobile air-conditioning (MAC) credits in the AB 1493 Regulation. 3) Coordinating activities with the CEC on the Title 24 Regulation rulemaking for new supermarket refrigeration systems. 4) Overseeing the implementation of the Refrigerant Management Program, Sulfur Hexafluoride (SF6, non-utility non-semiconductor), Sulfur Hexafluoride Emissions (non-semiconductor and non-utility applications), and Greenhouse Gas Emissions from Consumer Products regulations. 5) Providing management direction to Air Resources Supervisor I and technical staff.
Air Resources Supervisor I (1)		The Air Resources Supervisor I position would oversee the day-to-day regulatory development and implementation of high-GWP gas regulations. Specific Duties would include: 1) Managing the implementation of the Refrigerant Management Program Regulation for existing sources. 2) Working with CEC on a Title 24 Regulation rulemaking for new supermarket refrigeration systems. 3) Coordinating with stakeholders on the certification of mobile air-conditioning (MAC) credits in the AB 1493 and DriveClean regulations. 4) Overseeing the implementation of the Sulfur Hexafluoride (SF6)(non-utility non-semiconductor), Sulfur Hexafluoride Emissions (non-semiconductor and non-utility applications), and Greenhouse Gas Emissions from Consumer Products regulations. 5) Providing management direction to technical staff.
Air Resources Engineer (1)		The Air Resources Engineer position would provide technical engineering expertise for development and implementation of high-GWP regulations. Specific Duties would include: 1) Implementing the AB 1493 and DriveClean certifications (for specific models through 2016). 2) Quantifying greenhouse gas emission reductions realized through the certification of MAC credits and DriveClean regulations.
Air Pollution Specialist (7)		The Air Pollution Specialist positions would provide industry and regulatory expertise for development and implementation of high-GWP regulations. Specific Duties would include: 1) Implementing the Refrigerant Management Program Regulation for existing sources. 2) Working with CEC on a Title 24 Regulation rulemaking for new supermarket refrigeration systems. 3) Implementing the Sulfur Hexafluoride (SF6)(non-utility non-semiconductor) Regulation. 4) Implementing the Regulation to Reduce Sulfur Hexafluoride Emissions in Non-semiconductor and Non-utility Applications. 5) Implementing the Regulation to Reduce Greenhouse Gas Emissions from Consumer Products.
Sub-Program Area (Total Positions & Resources)	Implementing SB 375 Targets (2 Positions, \$602,000)	
Legal Authority	Health and Safety Code Sections 38501(f), and 38560.	

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Program Justification		ARB adopted GHG targets for passenger vehicles for 2020 and 2035 at the September 2010 Board meeting. Required under SB 375, the targets mark the first step toward a statewide program to integrate long-range land-use, housing and transportation planning at the regional level. California's eighteen Metropolitan Planning Organizations (MPO) are now preparing Sustainable Community Strategies (SCS) outlining their strategy to meet these targets. In fiscal year 2011-2012, ARB will be working with the MPOs to assure that each SCS meets the targets. The San Diego Association of Governments and the Sacramento Area Council of Governments are expected to be the first MPOs to submit plans for review in 2011. This work will continue through the fiscal year.
Air Pollution Specialist (2)		The Air Pollution Specialists would provide industry and regulatory expertise needed to implement SB 375 targets. Specific Duties would include: 1) Coordinating with MPOs on the development of the SCSs. 2) Evaluating the inputs and output of the transportation models used by the MPOs to estimate the GHG emissions of the transportation plans. 3) Determining whether, if implemented, the land use and transportation measures in the SCSs would achieve the GHG targets set by ARB.
	\$300	Contract funds are need to support evaluation of transportation models used by the MPOs
Sub-Program Area (Total Positions & Resources)	Implementing the Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation (1 Position, \$151,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560.	
Program Justification		In December 2008, ARB adopted a new regulation to reduce greenhouse gas emissions by improving the fuel efficiency of heavy-duty tractors that pull 53-foot or longer box-type trailers. Fuel efficiency is improved through improvements in tractor and trailer aerodynamics and the use of low rolling resistance tires. This regulation was modified in December 2011. In fiscal year 2011-2012, ARB will finalize the regulatory amendments and implement the regulation.
Air Pollution Specialist (1)		The Air Pollution Specialist position would provide industry and regulatory expertise to finalize and implement the regulation. Specific duties would include: 1) Developing outreach material for the regulated stakeholders. 2) Developing presentation and training materials and conducting training for stakeholders. 3) Developing factsheets to help fleets understand the various elements of this complex regulation. 4) Developing the reporting database for this regulation.
Sub-Program Area (Total Positions & Resources)	Implementing the Cost of Implementation Fee Regulation (4.25 Positions, \$658,000)	
Legal Authority	Health and Safety Code Sections 38501(f), 38560, and 38957. Government Code Section 65080.	
Program Justification		The AB 32 Cost of Implementation Regulation collects fees from greenhouse gas emission sources to pay the ongoing AB 32 program costs incurred by ARB and other state agencies. In fiscal year 2011-2012, ARB will continue to implement the regulation and will also pursue regulatory amendments to align the regulation with proposed modifications to the Mandatory Reporting Regulation (MRR).

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Resources Supervisor II (0.25)		The Air Resources Supervisor II position would oversee the overall implementation of the regulation. Specific Duties would include: 1) Providing policy recommendations to the Assistant Division Chief (as appropriate), Division Chief, and the Executive Office on amendments to the regulation to harmonize definitions and reporting deadlines with the Cap-and-Trade Regulation and amendments to the MRR, including 15-day changes and completion of a final statement of reasons. 2) Overseeing the collection, preparation, and quality check of emission and fuel data for invoicing for fiscal year 2011-2012. 3) Providing management direction to Air Resources Supervisor I and technical staff.
Air Resources Supervisor I (0.5)		The Air Resources Supervisor I position would manage the day-to-day implementation of the regulation. Specific Duties would include: 1) Reviewing the regulatory process for amendments to the regulation to harmonize definitions and reporting deadlines with the Cap-and-Trade Regulation and amendments to the MRR, including 15-day changes and completion of a final statement of reasons. 2) Monitoring the collection, preparation, and quality check of emission and fuel data for invoicing for fiscal year 2011-2012. 3) Providing management direction to technical staff.
Air Pollution Specialist (3.5)		The Air Pollution Specialist positions would provide industry and regulatory expertise for development and implementation of the regulation. Specific Duties would include: 1) Completing the regulatory process for amendments to the regulation to harmonize definitions and reporting deadlines with the cap-and-trade regulation and amendments to the MRR, including 15-day changes and completion of a final statement of reasons. 2) Collecting, preparing, and quality checking emission and fuel data for invoicing for fiscal year 2011-2012.
Sub-Program Area (Total Positions & Resources)	Developing and Evaluating Industrial Source Greenhouse Gas Emission Reduction Measures (4.75 Positions, \$1,041,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560.	
Program Justification		The Air Resources Board will evaluate additional measures to address industrial source greenhouse gas emissions. These evaluations will be based in part on reports required by the Regulation for Energy Efficiency and Co-benefits Assessment of Large Industrial Sources. This measure is designed to gather information on the energy-efficiency improvement opportunities that are available for California's largest industrial stationary sources of greenhouse gas emissions, and to quantify the associated emission reductions for greenhouse gases, criteria pollutants, and toxic air contaminants.
Air Resources Supervisor I (1)		The Air Resources Supervisor I position would manage the day-to-day implementation of the industrial audit measure and evaluation of the development of stationary source regulations. Specific Duties would include: 1) Reviewing the evaluation, development, and implementation of emission reduction measures aimed at large industrial sources and other stationary emitters. 2) Overseeing audits on large industrial emission sources. 3) Providing technical analysis and evaluation of audits. 4) Making policy recommendations to management. 5) Providing management direction to technical staff.

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Pollution Specialist (2.75)		The Air Pollution Specialist positions would provide industry and regulatory expertise for evaluation of energy-efficiency and co-benefits assessment reports and for the development of stationary source regulations. Specific Duties would include: 1) Evaluating, developing, and implementing emission reduction measures aimed at large industrial sources and other stationary emitters. 2) Overseeing audits on large industrial emission sources. 3) Verifying completion of all regulatory requirements for assessments. 4) Developing a report of the key findings and recommendations from audits. 5) Conducting workshop(s) to discuss findings and recommendations and receive public comment. 6) <u>Evaluating need for additional industrial source GHG regulations or programs.</u>
Air Resources Engineer (1)		The Air Resources Engineer positions would provide technical engineering expertise for evaluation of energy-efficiency and co-benefits assessment reports and development of stationary source regulations. Specific Duties would include: 1) Evaluating, developing, and implementing emission reduction measures aimed at large industrial sources and other stationary emitters. 2) Providing technical analysis and engineering evaluation of audits including evaluating completeness, appropriateness of engineering assumptions, and accuracy of energy efficiency improvement analysis and co-benefits evaluation. 3) Providing engineering support for developing a report on the key findings and recommendations from the audit. 4) Participating in public workshop(s) on audits findings with an emphasis on technical feasibility and cost of <u>improvement opportunities.</u> 5) <u>Evaluating need for additional industrial source GHG regulations or programs.</u>
	\$300	Third-party review of audits. To provide additional oversight to the program, approximately ten percent of the facility assessment reports would be designated for third-party review to verify completeness of the energy-efficiency and co-benefits assessment.
Sub-Program Area (Total Positions & Resources)	Implementation of the Landfill Methane Control Measure (1.5 Position, \$226,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560.	
Program Justification		A discrete early action item identified in the Scoping Plan, the landfill methane control measure requires the installation of gas collection and control systems at smaller and other uncontrolled municipal solid waste landfills. The regulation also includes requirements for all affected landfills to ensure that gas collection and control systems are operating optimally and that fugitive emissions are minimized.
Air Pollution Specialists (1.5)		The Air Pollution Specialist positions would provide industry and regulatory expertise needed to develop the mandatory recycling regulation. Specific Duties would include: 1) Reviewing and approving design plans for new or modified gas collection and control systems. 2) Reviewing and approving alternative compliance options, including changes to monitoring requirements and test methods and other procedures. 3) Tracking and monitoring compliance. 4) Preparing and maintaining implementation guidance documents. 5) Conducting workgroup meetings to discuss and resolve implementation issues.
Sub-Program Area (Total Positions & Resources)	Developing the Mandatory Commercial Recycling regulation (1 Position, \$151,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560.	
Program Justification		In 2011, the Board will consider the Mandatory Commercial Recycling Regulation. This proposed regulation is being developed in collaboration with the Department of Resources Recycling and Recovery (CalRecycle). FY 2011-2012 activities will include the finalization of the Regulation and work with CalRecycle to implement the regulation.

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Pollution Specialist (1)		The Air Pollution Specialist position would provide industry and regulatory expertise needed to develop the Mandatory Commercial Recycling Regulation. Specific Duties would include: 1) Completing and developing notices of 15-day changes to the regulation. 2) Assisting in the completion of the initial statement of reasons including all environmental impact analyses and economic analyses. 3) Assisting in the completion of the final statement of reasons. 4) Assisting in the implementation of the regulation, as needed.
Sub-Program Area (Total Positions & Resources)	Developing the Good Movement Efficiency Measures (3 Positions, \$1,453,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560.	
Program Justification		Activity at California ports is forecast to increase by 250 percent between now and 2020. Because of this, the Scoping Plan includes a measure to evaluate the freight transport system to reduce greenhouse gases, as well as criteria pollutants and air toxics. In fiscal year 2011-2012 the Air Resources Board, in concert with other government agencies, the ports, communities and industry stakeholders, will develop a plan to improve the efficiency of freight transport. Work will continue on evaluating available technologies and operational practices that can be applied to reduce emissions from freight transport, development of a freight best practices tool kit and improved tools to better understand the impacts of measures to improve the efficiency of freight transport.
Air Pollution Specialist (3)		The Air Pollution Specialist positions would provide industry and regulatory expertise for development of goods movement regulations. Specific Duties would include: 1) Developing a broad strategy to reduce greenhouse gas emissions from the freight transport sector in collaboration with local, regional and federal governments, stakeholders, and other state agencies. 2) Identification and evaluation of available and emerging technologies to reduce greenhouse gases and other pollutants from freight transport activities, quantification of emissions benefits, costs, and other impacts resulting from application of available technologies and operational practices to freight transport operations. 3) Development of educational and outreach materials to inform the use of freight best practices.
	\$1,000	Contract funds are required to support development of plan to improve overall efficiency of freight transport including identification of land use and transportation planning guidelines to improve freight transport efficiency, identification of life cycle impacts of various technologies that reduce freight transport emissions, and assistance with developing freight tool kit and supporting materials.
Sub-Program Area (Total Positions & Resources)	Developing and Evaluating Other Greenhouse Gas Emission Reduction Measures in the Solid Waste Sector (2 Positions, \$302,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560	
Program Justification		The Air Resources Board will evaluate additional measures to address industrial source greenhouse gas emission sources. ARB will focus on evaluating the benefits of composting, anaerobic digestion, enhanced methane recovery at landfills and other waste to energy projects. The primary focus will be directed at determining the benefits associated with composting and the improvements that can be achieved.

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Pollution Specialist (2)		The Air Pollution Specialist positions would provide industry and regulatory expertise for the development of stationary source regulations. Specific duties would include: 1) Developing a technical report on the opportunities available for composting. 2) Evaluating the benefits of enhanced methane recovery at landfills. 3) Examining the benefits of the technologies for anaerobic digestion. 4) Evaluating the need for additional waste-to-energy projects. 5) Coordinating activities with CalRecycle.
Sub-Program Area (Total Positions & Resources)	Developing a Green Buildings Strategy (1 Position, \$151,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38560.	
Program Justification		The Air Resources Board is working collaboratively with other state agencies and external stakeholders to reduce greenhouse gas emissions from buildings. Buildings represent the second-largest source of California's greenhouse gas emissions. Fiscal year 2011-2012 activities include working to strengthen building codes and providing information to local governments about ways to increase building efficiency in their communities.
Air Pollution Specialist (1)		The Air Pollution Specialist position would provide industry and regulatory expertise for green buildings programs and standards. Specific duties would include: 1) Strengthening green building codes that will improve energy efficiency, including revisions to the California Green Building Standards (CALGreen) Code. 2) Working with CPUC and other agencies to develop a path to zero net energy for new residential buildings by 2020 and new commercial buildings by 2030. 3) Maintaining the CoolCalifornia.org website, a unique collaboration of several state agencies, Next10 and UC Berkeley to deliver information on green buildings and other energy-saving measures to small businesses in a convenient form.
Program Area (Total Positions & Resources)	Developing enforcement programs and enforcing adopted AB 32 rules and coordinating the efforts of districts that elect to enforce AB 32 rules (5 Positions, \$761,000)	
Legal Authority	Health and Safety Code Sections 38501(f), and 38580.	
Program Justification		The Air Resources Board is required to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted under AB 32.
Air Resources Engineer (1)		The Air Resources Engineer position would provide the technical engineering expertise necessary to understand myriad complex industrial processes and emissions. Specific duties would include: 1) Developing proper procedures and procuring equipment needed to detect emissions violations. 2) Assisting and coordinating with rural air districts that elect to enforce ARB's AB 32 regulations in order to ensure consistent statewide enforcement. 3) Analyzing regulatory language to ensure violation detection techniques are clear and effective. 4) Working with ARB's Monitoring and Laboratory Division regarding sampling and test results. 5) Obtaining training necessary to conduct inspections effectively and in compliance with industry standards of safety. 6) Developing and implementing a program to enforce the Regulation to Reduce Methane Emissions from Municipal Solid Waste. 7) Developing and implementing a program to enforce the Regulation for the Management of High Global Warming Potential Refrigerants for Stationary Sources. 8) Developing and implementing a program to enforce the Reduction of SF ₆ in the Electricity Sector. 9) Conducting inspections, audits, and case tracking programs; participating in settlement conferences and court proceedings.

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Air Pollution Specialist (4)		The Air Pollution Specialist positions would provide the industry and regulatory expertise needed to conduct enforcement activities for regulations adopted under AB 32. Specific Duties would include: 1) Assisting and coordinating with rural districts that elect to enforce AB 32 regulations in order to ensure statewide consistency in policy, inspection procedures, and training. 2) Developing and implementing a program to enforce the Regulation to Reduce Methane Emissions from Municipal Solid Waste. 3) Developing and implementing a program to enforce the Regulation for the Management of High Global Warming Potential Refrigerants for Stationary Sources. 4) Enforcing the Regulation for the Mandatory Reporting of Greenhouse Gas Emission. 5) Developing and implementing a program to enforce the Regulation to Reduce Greenhouse Gas Emissions from Vehicles Operating with Under Inflated Tires. 6) Developing and implementing a program to enforce the Regulation for Small Containers of Automotive Refrigerant. 7) Conducting inspections, audits, tracking cases and penalties, and participating in settlement conferences and court proceedings.
Program Area (Total Positions & Resources)	Developing economic analysis to support the development and implementation of AB 32 rules. (2 Positions, \$302,000)	
Legal Authority	Health and Safety Code Sections 38501(e), 38501(f), 38501(h), 38550, 38560, , 38560.5, 38561, 38562, 38564, 38570, and 38591(d)	
Air Pollution Specialist (2)		The Air Pollution Specialist positions would provide the industry and regulatory expertise needed to conduct research/scientific activities on economic studies. Specific Duties would include: 1) Providing economic analysis support for AB 32 regulatory activities, including economic analyses for the Advanced Clean Car rulemakings, the Renewable Electricity Standard and the Low Carbon Fuel Standard regulation implementation, and general economic support for other transportation- and energy-related GHG emission sources. 2) Implementing enhanced macroeconomic modeling capabilities for major GHG sources and reviewing U.S. EPA and industry analyses.
Program Area (Total Positions & Resources)	Supporting business processes development associated with successfully implementing multiple AB 32-based programs (2 Positions, \$253,000)	
Legal Authority	Health and Safety Code Sections 38501(f).	
Program Justification	Providing Information Technology Support: Providing additional procurement, application and systems development/maintenance support services to projects planned and implemented in support of AB 32 (e.g. Low Carbon Fuel Standard, Mandatory Greenhouse Gas Reporting, Local Government Greenhouse Gas (GHG) Calculator, Cap and Trade Market Tracking System, portions of Goods Movement, etc.).	
Associate Information Systems Analyst (2)		The Associate Information Systems Analyst positions would assist climate change program staff in developing and implement information technology systems to implement AB 32 programs. Specific Duties would include: Providing procurement, application and systems development/maintenance support services to projects planned and implemented in support of AB 32 programs such as the Cap-and-Trade Market Tracking System, Low Carbon Fuel Standard, Mandatory Greenhouse Gas Reporting, Local Government Greenhouse Gas (GHG) Calculator, and Refrigerant Management Program reporting system.
Program Area (Total Positions & Resources)	Conducting research/scientific activities. (6.5 Positions, \$2,867,000)	
Legal Authority	Health and Safety Code Sections 38501(f) and 38580.	

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Program Justification		ARB is required to base AB 32 activities on evaluations of the best available scientific, technological, and economic information. In fiscal year 2011-2012, ARB will continue to pursue research to better understand the sources of GHG emissions, potential emission reduction options, carbon capture and sequestration, and macroeconomic modeling capabilities. This work will include both in-house research and laboratory work as well as extramural research contracts.
Air Resources Supervisor I (1)		The Air Resources Supervisor I position would manage the day-to-day research/scientific activities related to the measurement and estimation of greenhouse gas emissions. Specific Duties would include: Providing management direction to technical staff.
Air Pollution Specialist I (1)		The Air Pollution Specialist I position would manage the day-to-day research/scientific activities on greenhouse gas emissions and verification methods. Specific Duties would include: 1) Designing and deploying innovative in-field projects and ambient monitoring networks designed for GHG emission inventory verification and source identification. 2) Performing field studies for sources of under-estimated or unaccounted-for methane and N2O emissions with a statewide monitoring network complemented by two novel mobile monitoring platforms, and managing extramural research contracts for research N2O emissions from agricultural sources and high-GWP gases. 3) Providing management direction to technical staff.
Air Resources Engineer (1)		The Air Resources Engineer position would provide the technical expertise necessary to conduct research/scientific activities on greenhouse gas emissions and verification methods. Specific Duties would include: 1) Designing and deploying innovative in-field projects and ambient monitoring networks designed for GHG emission inventory verification and source identification. 2) Performing field studies for sources of underestimated or unaccounted-for methane and N2O emissions with a statewide monitoring network complemented by two novel mobile monitoring platforms, and managing extramural research contracts for research N2O emissions from agricultural sources and high-GWP gases.
Air Pollution Specialist (1)		The Air Pollution Specialist position would provide the industry and regulatory expertise conduct research/scientific activities on general climate science. Specific Duties would include: 1) Providing general scientific support for AB 32 regulatory activities, including management of extramural research contracts on mitigation options, data analysis of major fields studies recently conducted in California (ARCTAS, CalNex), and support for the Advanced Clean Car rulemaking on black carbon. 2) Leading research for carbon capture and storage issues, and the management of quantification procedures as recommended by the Blue Ribbon Panel.
Staff Services Manager I (0.5) Staff Services Analyst (1) Office Technician/Office Assistant (1)		The Staff Services Manager, Staff Services Analyst and Office Technician/Office Assistant positions would provide general administrative support for the management of extramural climate change research contracts.
	\$2,000	Contract funds are required to support extramural research to better understand the sources of GHG emissions, potential emission reduction options, carbon capture and sequestration, and macroeconomic modeling capabilities.
Sub-Program Area (Total Positions & Resources)	Support and Administration: Support legislative office analyses required for climate-related proposals. (2 Positions, \$238,000)	

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Legal Authority	Health and Safety	Code Sections 38501(f).
Program Justification		The Air Resources Board requires support and administrative functions to meet the extensive AB 32 related regulatory and program implementation needs and to provide legislative office analyses required for climate-related proposals.
Associate Governmental Program Analyst (2)		The Associate Government Program Analyst positions would provide analysis of climate change related legislation. Specific Duties would include: Managing, tracking and analyzing climate-change related legislation at the state and federal level.
Sub-Program Area (Total Positions & Resources)	Support and Administration: Provide legal support for regulatory efforts for AB 32 programs and defend against current and potential future legal challenges to AB 32 programs (5 Positions, \$822,000)	
Legal Authority	Health and Safety	Code Sections 38501(f).
Program Justification		The Air Resources Board requires legal support functions to support AB 32-related regulatory, implementation, enforcement, and litigation needs. Like all newly adopted regulations, AB 32 regulations are likely to require periodic regulatory amendments as implementation issues arise, and legal staff is necessary to help draft amendments and ensure that all Administrative Procedure Act requirements are met. Regulatory implementation activities will require extensive legal input, especially in the areas of carbon allowance tracking and trading, market monitoring and oversight, and insuring that market manipulation and security breaches do not occur. Ongoing legal analyses will be needed to address implementation and enforcement issues, many of which are likely to present novel legal issues that will require extensive analysis. Legal staff will also help defend AB 32 regulations from legal challenges. Several lawsuits have already been filed and are requiring significant, ongoing legal resources to address (i.e., lawsuits challenging the Low Carbon Fuel Standard and the AB 32 Scoping Plan). It is very likely that several additional lawsuits will be filed in the near future.
Assistant Chief Counsel (1)		The Assistant Chief Counsel position would provide focused legal oversight of ARB's AB 32 activities and coordination of the other attorneys working on AB 32 issues, and would handle the most complex and demanding AB 32 issues that require the most expertise. Specific Duties would include: 1) Supporting ongoing regulatory activity for regulations considered by the Board and in the approval process. 2) Supporting current regulatory activity for proposed regulations to be considered by the Board in fiscal year 2011-2012. 3) As implementation issues arise, helping to develop and adopt regulatory amendments for previously adopted AB 32 regulations. 4) Providing legal advice and written legal analyses to ARB staff on AB 32 implementation and enforcement issues. 5) Defending current lawsuits that have been filed on the AB 32 Scoping Plan and Low Carbon Fuel Standard. 6) Defending lawsuits expected to be filed regarding other AB 32 programs and regulations.

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California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Staff Counsel III (3)		The Staff Counsel III positions would provide the legal expertise necessary to support AB 32-related regulatory, implementation, enforcement, and litigation needs and handle the more complex AB 32 legal issues. It is expected that most AB 32 legal issues will be complex and require significant legal expertise, because AB 32 is a new statute that has never been interpreted by the courts, and because all AB 32 regulations are newly adopted and involve regulation of air pollutants (i.e., greenhouse gases) that have not previously been regulated. Specific Duties would include: 1) Supporting ongoing regulatory activity for regulations considered by the Board and in the approval process. 2) Supporting current regulatory activity for proposed regulations to be considered by the Board in fiscal year 2011-2012. 3) As implementation issues arise, helping to develop and adopt regulatory amendments for previously adopted AB 32 regulations. 4) Providing legal advice and written legal analyses to ARB staff on AB 32 implementation and enforcement issues. 5) Defending current lawsuits that have been filed on the AB 32 Scoping Plan and Low Carbon Fuel Standard. 6) Defending lawsuits expected to be filed regarding other AB 32 programs and regulations.
Staff Counsel (1)		The Staff Counsel position would provide the legal expertise necessary to support AB 32-related regulatory, implementation, enforcement, and litigation needs. This position would handle the more routine and less demanding AB 32 legal issues that do not require the greater expertise and experience of the Staff Counsel III positions. Specific Duties would include: 1) Supporting ongoing regulatory activity for regulations considered by the Board and in the approval process. 2) Supporting current regulatory activity for proposed regulations to be considered by the Board in fiscal year 2011-2012. 3) As implementation issues arise, helping to develop and adopt regulatory amendments for previously adopted AB 32 regulations. 4) Providing legal advice and written legal analyses to ARB staff on AB 32 implementation and enforcement issues. 5) Defending current lawsuits that have been filed on the AB 32 Scoping Plan and Low Carbon Fuel Standard. 6) Defending lawsuits expected to be filed regarding other AB 32 programs and regulations.
Sub-Program Area (Total Positions & Resources)	Support and Administration: Support effective communication with the public and stakeholders specific to AB 32 programs (3 Positions, \$759,000)	
Legal Authority	Health and Safety Code Sections 38501(f).	
Program Justification	Providing Public Information: There was an increased demand for public information due to the significant new programs developed to support AB 32 goals.	
Career Executive Assignment I (1)		The Career Executive Assignment I position would be responsible for managing all news and media relationships related to AB 32 programs. The position would lead the coordination of AB 32 communication efforts with ARB and with other state agencies.
Associate Governmental Program Analyst (1)		The Associate Governmental Program Analyst position would assist in managing news and media relationships related to AB 32 programs. The position would support the coordination of AB 32 communication efforts between ARB and other State agencies.
Air Pollution Specialist (1)		The Air Pollution Specialist position would provide the industry, small business, and regulatory expertise to effectively develop, target, and deliver efforts to encourage voluntary activities and liaison with small businesses. Specific Duties would include: 1) Developing and delivering tools to develop local government GHG emissions inventories. 2) Supporting regional small business development centers and programs to assist small businesses in reducing energy use. 3) Continuing partnership development, education, and programs for small businesses and local governments to aid in statewide efforts to transition to a low-carbon economy.

AB 32 Zero Based Budget Report - Program Detail

California Air Resources Board Budget Year 2011-2012 Staff and Resource Needs

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
	\$300	Contracts are needed to continue effectively communicating with small businesses and other audiences through the CoolCalifornia website, participation at conferences and trade shows, and other means.
Sub-Program Area (Total Positions & Resources)	Support and Administration: Providing administrative support services, including human resources, business management, contract management and financial operations to support AB 32 programs (7 Positions, \$704,000)	
Legal Authority	Health and Safety Code Sections 38501(f).	
Program Justification	Providing Administrative Support: Information Technology Support: There was an increased demand for administrative services due to the approximately 155 additional staff hired for AB 32. These services consist of personnel transactions, budgeting, and contract servicers.	
Account Technician (2)		The Account Technician positions would provide general administrative functions required to operate AB 32 programs. Specific Duties would include: 1) Providing contract and procurement support and facilities management. 2) Providing budgeting, accounting, and financial services.
Associate Governmental Program Analyst (2)		The Associate Governmental Program Analyst positions would provide general administrative functions required to operate AB 32 programs. Specific Duties would include: 1) Verifying final required revenue based on the legislature's final appropriations to the various state agencies supporting AB 32 activities. 2) Distributing invoices to those identified large emitters and upstream distributors of fuels within 30 days of the enactment of the 2011-2012 Budget. 3) Accounting for all FY 2010/11 expenditures associated with AB 32. 4) Processing loan installment payments, as specified in the 2008 Budget Act.
Personnel Specialist (1)		
Associate Personnel Analyst (1)		
Office Technician/ Office Assistant (1)		The Office Technician/Office Assistant position would provide general support for climate change activities within the administrative support services.
Sub-Program Area (Total Positions & Resources)	Support and Administration: Supporting the information technology (IT) needs of ARB staff working on AB 32 programs (2 Positions, \$253,000)	
Legal Authority	Health and Safety Code Sections 38501(f).	
Program Justification	Providing Information Technology Support: There was an increased demand for information technology (IT) services due to the approximately 155 additional staff hired for AB 32. These services include support for personal computers, shared servers, software, procurement, email, sufficient network capacity, help desk support, etc.	
Associate Information Systems Analyst (2)		The Associate Information Systems Analyst positions would provide general computer support for climate change-related positions. Specific Duties would include: 1) Providing help desk support, maintaining personal computers, shared servers, software, procurement, email, security, phone services, and sufficient network capacity. 2) Providing additional support in IT administration areas such as budgeting, contract management, and procurement.

AB 32 Zero Based Budget Report - Program Detail

California Environmental Protection Agency - Office of the Secretary Budget Year 2011-2012 Staff and Resource Needs

Program Area (Total Positions & Resources)	Interagency Climate Strategy Coordination (6 Positions, \$1,700,000)
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Legal Authority	Government Code Section 38501 (i); Government Code Section 12812.6; Government Code Section 12890; AB32 Climate Change Scoping
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Program Justification

The Secretary for Environmental Protection is required by statute to coordinate climate change efforts across state government (GC 12812.6). The Climate Action Team, chaired by the Secretary, is designated as the coordinating body for overall state climate policy (GC 35801 (i)). Office of the Secretary staff support the Secretary in this coordination role, and staff the Climate Action Team. Yearly climate change report cards (GC 12890) provide the basis for monitoring progress of state agencies in reducing greenhouse gas emissions. The six positions in the Office of the Secretary conduct the following activities related to AB 32 implementation: policy coordination across all state agencies and with other governments; technical support and direction for 10 sector workgroups active under the Climate Action Team; and coordination and support for budgetary and legislative efforts related to climate change throughout state government. Work is focused on areas where multi-disciplinary greenhouse gas reduction efforts require multi-agency involvement and coordination. Specific areas include, but are not limited to: Land Use and Sustainable Planning (including SB 375, statutes of 2008), Electricity and Natural Gas, Forestry, Public Health, State Government Operations and Research. This staffing level of six enables the Secretary to leverage the work of multiple other agencies, many of whom do not receive AB32 funding, thus realizing efficiencies in staffing and resource allocation. Additionally, the staffing level enables the Office of the Secretary to provide effective support based on priority sectors for greenhouse gas reductions. Coordination of multi-agency efforts remains a priority as program areas for greenhouse gas emission reduction evolve and measures throughout state government move to the implementation phases.

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Deputy Secretary (1)		The position of Deputy Secretary is crucial to the high-level intergovernmental coordination required to address the regional, national and global issues associated with climate change. The Deputy Secretary also coordinates budgetary and legislative efforts on climate change throughout state government. Specific Duties: Program coordination with other states, regions and federal government (40%); Liaison with Air Resources Board on AB32 (15%); Represent the Secretary on Climate issues (10%); Climate legislative and budget coordination (15%); Stakeholder outreach and technical coordination (10%); Other duties as required (10%)
Air Resources Supervisor I (1)		The ARS I supervises the technical and policy work conducted by the four technical staff. The Supervisor would also continue to function as the manager for the Climate Action Team and coordinates all inter-agency policy efforts, while at the same time directly engaging in several of the sector workgroup efforts. Specific Duties: Manage Technical Staff (40%); Cross sector work with state agencies and stakeholders on GHG emission reduction activities (20%); Coordinate Climate Action Team (20%); Sectoral Focus Areas: Land Use (including Strategic Growth Council), Energy, Forestry, Research (20%)
Air Pollution Specialist (1)		The APS is responsible for work in several sectors of GHG reduction, which requires technical expertise in each of those focus areas. Additionally, the APS would continue to focus specifically on economic analysis and related technical issues. Specific Duties: Sectoral Coordination: Energy, Economic Analysis, Green Development, Public Health (75%); Cross Cutting technical issues (10%); Integration of Western Climate Initiative economic issues with AB32 (15%)

AB 32 Zero Based Budget Report - Program Detail

California Environmental Protection Agency - Office of the Secretary Budget Year 2011-2012 Staff and Resource Needs

Air Pollution Specialist (1)		<p>The APS is responsible for work in several sectors of GHG reduction, which requires technical expertise in each of those focus areas. Additionally the APS would continue to coordinate the state GHG report card and manages contracts for the unit. Specific Duties: Sectoral Coordination: Land Use, Water, Biodiversity (80%); Climate Change Report Card (10%); Contract Management (5%); CAT outreach coordination (5%)</p>
Air Pollution Specialist (1)		<p>The APS is responsible for work in several sectors of GHG reduction, which requires technical expertise in each of those focus areas. Additionally the APS would continue to be responsible for the agency's greenhouse gas inventory. Specific Duties: Sectoral Coordination: Agriculture, Oceans and Coastal, State Operations (85%); State GHG Inventory (15%)</p>
Air Pollution Specialist (1)		<p>The APS is responsible for work in several sectors of GHG reduction, which requires technical expertise in each of those focus areas. Additionally the APS would provide specific expertise on market based solutions to greenhouse gas reduction and related technical issues. Specific Duties: Sectoral Coordination: Forestry, Research (75%); Integration of Western Climate Initiative market design issues with AB32 (20%); Climate Change Report Card (5%)</p>
	300	<p>Contract funds would allow the agency to pursue cross-sectoral data gathering and related efforts that do not fall under the purview of individual agency member of the CAT. Specific Projects: Environmental Indicators of Climate Change, IA with OEHHA (\$120,000); Cal/EPA GHG Inventory Verification (\$30,000), Inter -Agency GHG Inventory Coordination (\$100,000); Environmental Justice Climate Research (\$50,000)</p>

AB 32 Zero Based Budget Report - Program Detail

State Water Resources Control Board Budget Year 2011-2012 Staff and Resource Needs

Program Area (Total Positions & Resources)	Water/Energy (2 positions, \$535,000)
Legal Authority	Government Code Section 38501 (i); AB32 Climate Change Scoping Plan (2008)

Program Justification

The Water Boards are identified in the AB32 Scoping Plan as the lead agency to implement two of the six water-related Green House Gas (GHG) emission reduction measures. The two measures are intended to increase the availability of local water supplies to reduce the energy needed and associated GHG emissions to transport, store, and convey water over long distances. The Water Boards will identify and implement actions to achieve specific GHG reductions targeted by Measures W-2 (Water Recycling) and W-4 (Urban Water Reuse) in the Scoping Plan. The Water Boards will develop and implement specific actions to increase water recycling at waste water treatment plants, require the capture and infiltration or storage of storm water, and promote the development of regional infiltration facilities and neighborhood facilities. The Water Boards' efforts comply with the objectives of Executive Order S-3-05 and AB 32, and with Administration and legislative actions to preserve the State's water resources, including the supply and quality of surface and ground waters for beneficial uses.

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Sr. Water Resources Control Engineer (1)		This position would be responsible for evaluating and revising, as necessary, the Water Boards' recycled water and wastewater treatment policies and regulations to ensure that any barriers to expansion of water recycling are addressed. Specific duties would include the revision of permits requiring wastewater treatment plants to prepare and implement Recycled Water Plans, review of water quality standards and beneficial uses of recycled water, the evaluation of infrastructure requirements to deliver recycled water, and review and revision of policies for recycled water and landscape irrigation.
Environmental Scientist (1)		This position would be responsible for evaluating the policies, regulations, and permits to establish effective regulatory strategies to ensure maximum use of water resources, including the evaluation of aquifer storage and recovery of drinking water supplies, and the evaluation of actions to augment local water supplies including requiring the capture and infiltration or storage of storm water and the development of regional and neighborhood infiltration facilities.
	300	Contract resources would be used specifically to design a system to systematically report on the water-energy benefits achieved to measure progress toward the targeted GHG reduction for these measures contained in the AB32 Scoping Plan.

AB 32 Zero Based Budget Report - Program Detail

Department of Water Resources Budget Year 2011-2012 Staff and Resource Needs

Program Area (Total Positions & Resources)	Water Energy (2 Positions, \$315,000)
Legal Authority	Government Code Section 38501 (i); AB32 Climate Change Scoping Plan (2008); Water Code Sections 10608 and 10800 et seq.

Program Justification

The Department of Water Resources (DWR) is assisting with the implementation of the water-related measures in the AB 32 Scoping Plan, with funding from the Air Pollution Control Fund. Water and energy are two resources that are inherently linked, especially in California. The California Energy Commission estimates that the operation of water supply and wastewater systems throughout the state-*especially end use* -accounts for about 19 percent of the state's total use of electric power and 30 percent of non-power plant natural gas use in California. Because end uses comprise the vast majority of this energy intensity, a focused effort on integrating water and energy efficiency at the customer level will be the most efficient way to reduce the carbon footprint of water in California, and thereby help the state achieve the AB 32 mandate. The AB 32 funding thus supports two positions in DWR that are involved in analysis and evaluation of water use efficiency and its connection to energy use and greenhouse gas (GHG) emissions reduction related to urban water use and agricultural water use. Both positions will work on climate change mitigation strategies as part of the "WETCAT," California Water Plan Update, Water Conservation Act (SBX 7x-7) and Integrated Regional Water Management (IRWM) program. In addition, DWR alone has over 200 existing grant-funded water use efficiency projects that have energy and GHG emissions implications.

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Staff Land and Water Use Scientist (1)		One Staff Land and Water Use (LWU) Scientist position would analyze and evaluate water/energy use efficiency and GHG emissions reduction in water management planning and grant-funded projects for urban water use. The Staff LWU Scientist would focus on urban water conservation and water use efficiency, energy use efficiency, and GHG emissions reduction. The position would specifically assist with the development and implementation of water/energy use efficiency and GHG emissions reduction programs in coordination with other state and federal agencies; participate in implementation of urban water conservation called for in SB7x-7 (Statutes of 2010) and the California Water Plan Update; support the Water-Energy Subgroup of the Climate Action Team ("WETCAT"); quantify GHG emissions reduction for urban water use efficiency activities and practices; provide support to the IRWM and the Urban Water Management Plan programs; and collect and analyze data related to climate change, water and energy use, and GHG emissions.
Associate Land and Water Use Scientist (1)		One Associate LWU Scientist position would analyze and evaluate water/energy use efficiency and GHG emissions reduction in water management planning and grant-funded projects for agricultural water use. The Associate LWU Scientist will focus on agricultural water conservation and water use efficiency, energy use efficiency, and GHG emissions reduction. The position would specifically assist with the development of guidelines for best agricultural water use practices and agricultural water management planning; implementation of agricultural water/energy use efficiency and GHG emissions reduction programs in coordination with other state and federal agencies; quantification of GHG emissions reduction for agricultural water use efficiency activities and practices; support to the Update of the California Water Plan and the IRWM program; and collection and analysis of data related to climate change, water and energy use, and GHG emissions.

AB 32 Zero Based Budget Report - Program Detail

The Department of Housing and Community Development Budget Year 2011-12 Staff and Resource Needs

Program Area (Total Positions & Resources)	Green Buildings and RHNA (1.0 position, \$98,000)
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Legal Authority Government Code Section 38501 (i); AB32 Climate Change Scoping Plan (2008); SB 375 (Chapter 728, Statutes of 2008)

Program Justification AB 32 and SB 375 implementation strategies are dependent on new and expanded activities of HCD's mandated administrative responsibilities pursuant to State Housing Element Law (includes RHNA and housing elements), updating of State building codes, administration of local assistance grants and loans for housing development, and provision of local technical assistance and regulatory barrier relief. SB 375 specifically requires coordination of housing planning efforts with transportation planning efforts.

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
HCD Specialist I (1)		The specialist would address workload of the Division of Housing Policy Development (HPD) associated with 1) Regional Transportation-Related Greenhouse Gas Targets, 2) Housing Element Technical Assistance, 3) Affordable Housing Finance Incentives, 4) Green Building Standards, 5) Technical Assistance and 6) Regulatory Relief.

AB 32 Zero Based Budget Report - Program Detail

California Energy Commission Budget Year 2011-2012 Staff and Resource Needs

Program Area (Total Positions & Resources)	Electricity, Natural Gas, Transportation and GHG Inventory (4 Positions, \$483,000)
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Legal Authority	Government Code Section 38501 (i), Section 38561(a) ; AB32 Climate Change Scoping Plan (2008);
Program Justification	The Energy Commission submitted a BCP requesting conversion of four permanent positions funded from ERPA funds to instead be funded through the AB 32 Cost of Implementation Fee funds. The Energy Commission positions are needed to conduct a variety of activities including acquiring and providing information on maximum technical feasibility of GHG emission reductions associated with energy demand and supply. The Energy Commission will also provide technical assistance, information outreach, and feasibility assessment resources to local governments, industry owners, and other entities to facilitate development of energy-related projects that reduce GHG emissions. The positions will also participate in and support CAT activities and provide technical assistance to CARB on a broad range of AB 32 provisions on energy-related sources of GHG emissions; coordinate with CARB on all relevant Scoping Plan elements; and assist CARB in quantifying GHG reductions associated with a range of energy-related offset projects.

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Energy Commission Specialist III (TED) (1)		<u>One Energy Commission Specialist III (TED)</u> – This position would be responsible for the following: Coordinate technical support of AB 32 transportation energy strategies at the Energy Commission in support of statewide policy goals and targets (50%); analytical and technical assistance activities related to energy and land use, assistance to local governments on energy and GHG emissions (30%); development, analysis, and implementation of other transportation strategies and AB 32 topics in within transportation energy activities at the Commission (10%); preparation of reports, professional development, and other duties as needed (10%) (Special Projects Office – FTD).
Energy Commission Specialist II (TED) (1)		<u>One Energy Commission Specialist II (TED)</u> – This position would be responsible for the following: assessment of GHG reductions from alternative fuels, biofuels, and alternative transportation technologies (54%); participate in activities related to the low carbon fuel standard, life cycle analyses or full fuel-cycle analyses, and research on transportation energy and GHG emissions – (26%); monitor transportation energy policies and manage contractors working on Implement alternative fuels and technologies strategies and programs (20%); preparation of reports, professional development, and other duties as needed (10%). (Emerging Fuels & Technologies Office - FTD)
Energy Commission Specialist II (TED) (1)		<u>One Energy Commission Specialist II (TED)</u> – position would be responsible for the following: prepare analyses and provide technical support with strategies related to the renewable portfolio standard or a renewable energy standard (70%); manage contractors, provide technical support and monitor strategies related to renewable energy resources and GHG reductions (20%); preparation of reports, professional development, and other duties as needed (10%) (Renewable Energy Office – ERED)

AB 32 Zero Based Budget Report - Program Detail

California Energy Commission Budget Year 2011-2012 Staff and Resource Needs

Electric Generation System Specialist II (1)	<p><u>One Electric Generation System Specialist II</u> – position would be responsible for the following: analysis of California electricity supply and demand, including demand response measures, and issues related to expected GHG emissions (55%); provide technical support to the CARB and the CPUC on electricity sector strategies, including forecasts of the electricity resource mix and GHG emissions associated with changes in electricity demand and supply (25%); manage technical support contractors and monitor events that may impact electricity and natural gas sectors and GHG emission reduction strategies (20%) (Electricity Analysis Office - ESAD).</p>
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AB 32 Zero Based Budget Report - Program Detail

California Department of Resources Recycling and Recovery Budget Year 2011-2012 Staff and Resource Needs

Program Area (Total Positions & Resources)		
Solid Waste Management (6 Positions, \$501,000) (Contracts \$0)		
Legal Authority		
Government Code Section 38501 (i); Government Code Section 12812.6; Government Code Section 12890.		
Program Justification		
<p>CalRecycle is responsible for implementing solid waste management strategies identified in the AB 32 Scoping Plan. The solid waste management strategies in the AB 32 Scoping Plan are: Mandatory Commercial Recycling (5 MMTCO₂e); increase organic material diversion from landfills to anaerobic digestion (2 MMTCO₂e); increasing the production and markets for composting and other organic products, especially in the agriculture sector (2 MMTCO₂e); implement product stewardship programs (Extended Producer Responsibility) that deal with end-of-life environmental issues for consumer products; and increasing the efficiency of landfill methane capture.</p> <p>CalRecycle's activities to implement these strategies that reduce greenhouse gas emissions from solid waste include: research to ascertain the costs and savings of implementing commercial recycling programs; research to determine the impact of increased recycling on the existing solid waste management and recycling infrastructure; development of a Program Environmental Impact Report to assess the environmental effects that may result from the development of anaerobic digestion facilities in California; research to determine N₂O and CH₄ emissions from the compost life cycle, starting with emissions during the production of compost to quantifying the impact on soil N₂O emissions when compost is applied to agriculture lands; a demonstration project with Caltrans on compost based best management practices; evaluation of the economic incentives and disincentives of composting; research to assist in understanding the potential greenhouse gas and other environmental, economic, and social benefits of a producer responsibility/stewardship approach to product management; implementation of paint and carpet product stewardship programs; assessment and demonstration of the long-term performance, effectiveness, and maintenance requirements of using a biocover, consisting of suitable, readily available organic material, to help mitigate methane emissions over the surface of a landfill; and publication of a guidance document for landfill operators and regulators that provides recommended technologies and management practices for reducing landfill gas emissions through improved landfill design, construction, operation, and closure.</p> <p>These activities are designed so that they directly implement the solid waste and recycling measures that ARB adopted in the AB 32 Scoping Plan. Some of these strategies are being implemented now or will be in the near future, while others need additional evaluation and development in order to realize full implementation by the year 2020. When fully implemented, these will result in millions of tons of additional waste diversion and over 10 MMTCO₂e in greenhouse gas reductions.</p>		
Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Research Program Specialist II (1)		Research Program Specialist II (RPS) would be CalRecycle's expert in the analysis of CIWMB regulations, proposals and programs to reduce solid waste and greenhouse gas (GHG) emissions by running financial and economic models. The RPS evaluates environmental and economic impacts of solid waste reduction and recycling measures for cost-effectiveness during the implementation of GHG emission reduction measures. This will provide a basis for determining the best implementation mechanism for each measure, such as market-based, regulatory, or carbon-trading systems.

AB 32 Zero Based Budget Report - Program Detail

California Department of Resources Recycling and Recovery Budget Year 2011-2012 Staff and Resource Needs

<p>Integrated Waste Management Specialist (2)</p>		<p>CalRecycle is the lead agency designated to develop the mandatory commercial recycling measure. CalRecycle, in partnership with ARB, has engaged in an informal rulemaking process to develop the mandatory commercial recycling regulations. As part of this effort, the IWMS' have already engaged in extensive dialogue with the potential regulated community and developed draft regulatory language. Formal rulemaking is anticipated to begin in Spring 2011 with the ARB scheduled to adopt the regulation by January 1, 2012.</p> <p>The IWMS' would continue these efforts and also assist the commercial sector to increase recycling, by evaluating model commercial recycling ordinances and assisting the business sector and local jurisdictions in developing and implementing commercial recycling ordinances. This also entails assisting businesses, local government, and the waste industry in utilizing a commercial diversion software tool to evaluate costs and savings and calculate reductions in GHG emissions associated with solid waste activities.</p> <p>After implementation begins, the IWMS' would be responsible for providing ongoing guidance and technical assistance to jurisdictions on how to design and implement programs in compliance with the regulations, and they will be involved in</p>
<p>Integrated Waste Management Specialist (1)</p>		<p>The IWMS would continue to develop strategies and providing technical assistance on methods to optimize solid waste collection and recycling routes; developing a methodology for forecasting potential VMT reductions; providing outreach and education on strategies for reducing VMT to local governments, solid waste and recycling industries, and the general public; and tracking progress in meeting VMT targets.</p> <p>The IWMS wiyld also continue collaborating with ARB staff in the development of an anaerobic digestion fuel pathway for the Low Carbon Fuel Standard. Anaerobic digestion of organic materials in the waste stream is a climate change measure.</p>
<p>Integrated Waste Management Specialist (1)</p>		<p>The IWMS would continue working with the ARB, California Climate Action Registry (CCAR), and the International Council for Local Environmental Initiatives (ICLEI), in developing solid waste management protocols and providing education and outreach to affected stakeholders. These protocols will assist local governments in quantifying and reporting GHG emissions associated with their government operations. These protocols will also assist businesses and entities such as landfills and anaerobic digestion facilities in entering the carbon market.</p>
<p>Integrated Waste Management Specialist (1)</p>		<p>The IWMS would be the lead staff in educating and providing technical assistance to approximately 420 local jurisdictions and the solid waste and recycling industry on the use of the California-specific GHG tools. The IWMS interacts with the ARB staff in the development of California-specific GHG emission reduction factors, associated with waste management alternatives such as recycling, for specific material types. The IWMS also conducts research to advance knowledge of other available greenhouse gas tools and models that aid in the quantification and reduction of GHG emissions.</p>

AB 32 Zero Based Budget Report - Program Detail

California Department of Public Health Budget Year 2011-2012 Staff and Resource Needs

Program Area (Total Positions & Resources)	Research and Support for Public Health Issues (3 Positions, \$314,000)
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Legal Authority	Government Code Section 38501 (i); AB32 Climate Change Scoping Plan (2008);
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Program Justification Climate change presents the single most significant long-term threat to the health and well-being of Californians. Measures in the Global Warming Solutions Act (AB 32) to address climate change also have very significant public health impacts. The work of the 3 staff include support for the Climate Action Team Public Health Working Group (CAT-PHWG) and related efforts to determine the co-benefits and/or unintended health consequences of various AB 32 mitigation measures; develop and implement surveillance systems to evaluate the public health impacts of AB 32 mitigation measures, including impacts on vulnerable communities; develop and implement technical assistance, and risk communication and outreach strategies for local health departments including modules related to land use and transportation planning (SB 375); and, foster local and state policy development to address the health aspects of AB 32 implementation

Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Research Scientist III (1)		The Research Scientist III would be the primary scientific support to the CAT-PHWG, supervises staff, and is responsible for developing and implementing program activities. Specific Duties: serving as project lead or co-lead/ expert on health impact assessment; vulnerability assessment; research; surveillance; and training and technical assistance (20%); determines the scientific agenda of public health involvement in CAT (20%); working with ARB counterparts and other climate scientists to develop priority scientific activities to be conducted by the CAT (20%); developing and refining public health indicators for evaluating effectiveness of public health activities related to AB 32 (20%); working with other CAT work groups and as a liaison with other state and national climate change efforts (15%); and providing systematic reviews of the climate change literature (5%).
Health Program Specialist I (1)		The HPS I would provide technical support for the CAT-PHWG in implementing AB 32-related activities. Specific Duties: serving as project lead/expert policy development; training and technical assistance; and communication and outreach (30%); providing primary technical support to the CAT (30%) and CAT-PHWG (25%) for developing agendas, working with ARB to develop materials on a public website, writes correspondence, recruits new members, works with stakeholder groups, and developing general communication; works with other CAT work groups (non-PHWG) to understand health impacts of AB 32 mitigation measures (10%); coordinating with other public sector entities working on AB 32 such as the Strategic Growth Council and SB 375 regional planning (15%).
Assoc Governmental Program Analyst (1)		The Associate Governmental Program Analyst (AGPA) would be a member of the CAT-PH Work Group team, along with a Health Program Specialist I and Research Scientist III. The AGPA would be the administrative and program analyst for the team. Specific Duties: Serving as staff support to the Climate Action Team Public Health Work Groups (40%); tracking the implementation of the work plan (15%); serving as administrator for legislative analyses and fiscal issues relating to contracts, interagency agreements, MOUs, and consultant agreements (20%); assisting other staff in training and technical assistance; surveillance; communication and outreach; and policy development (10%); providing administrative and fiscal analysis in response to additional funding opportunities (10%); and other duties as required (5%).

AB 32 Zero Based Budget Report - Program Detail

Department of General Services Budget Year 2011-2012 Staff and Resource Needs

Program Area (Total Positions & Resources)		
State Government Compliance Activities (4 Positions, \$385,000)		
Legal Authority		
Government Code Section 12890		
Program Justification	These positions were justified within the BCP to perform USGBC LEED Operations and Maintenance (O+M) Certifications, assist with Energy Efficiency Projects and Energy Benchmarking Programs. The positions are funded from the Service Revolving Fund and not an AB 32 Fee Revenue Fund. They are not eligible for funding from the AB 32 Fee because their primary function is ensuring state government compliance with the requirements of AB 32, as opposed to policy development and implementation. Compliance efforts will continue to involve activities including: Energy benchmarking of state buildings; Energy efficiency projects; Leadership in Energy and Environmental Design (LEED) for buildings operation and management; Energy management control system implementation.	
Position Classification (number)	Contract Funding (\$1000)	Itemized Justification
Chief Engineer II		The workload would continue to be divided into two major areas: LEED Certification and Implementation of Energy Conservation Projects. The Chief Engineer performs a wide variety of field and office assignments associated to the LEED certification and retrofitting of buildings including but not limited to, LEED USGBC computations and submittals, energy efficiency measures review and implementation processes positions would be responsible for providing oversight and certification of all energy retrofit projects identified for the buildings.
Associate Electrical Engineer		The workload has been divided into two major areas, LEED Operations and Maintenance Certification and Implementation of Energy Conservation Projects. The Electrical Engineer is responsible for identifying, designing, specifying and reviewing the electrical components of Energy Conservation Projects identified for the buildings, including project design and specifications for ARRA Stimulus Fund financed lighting retrofit projects. The Electrical Engineer also performs field electrical engineering associated with identified LEED projects, specifically Sustainable Sites credit SSc8 Light Pollution Reduction, Energy and Atmosphere prerequisite EAp1 Energy Efficient Best Management Practices – Planning, Documentation and Opportunity Assessment, and Materials and Resources credit 4 Sustainable Purchasing – Reduced Mercury in Lamps. The Electrical Engineer provides the electrical computations, submittals, energy efficiency measures review, coordination of electrical drawings and specifications for LEED certification as required by USGBC.
Mechanical Engineer		The workload has been divided into two major areas, LEED Operations and Maintenance Certification and Implementation of Energy Conservation Projects. The Mechanical Engineer is responsible for identifying, designing, specifying and reviewing the mechanical components of Energy Conservation Projects identified for the buildings, including reviewing specifications for building chiller and boiler repair and replacement projects. The Mechanical Engineer also performs field mechanical engineering associated with identified LEED projects, specifically Energy and Atmosphere prerequisite EAp1 Energy Efficient Best Management Practices – Planning, Documentation and Opportunity Assessment, Energy and Atmosphere credit EAc3.2 Performance Measurement – System Level Metering, Indoor Environmental Quality prerequisite IEQp1 Minimum Indoor Air Quality Performance, and IEQc1.2 Indoor Air Quality Best Management Practices – Outdoor Air Delivery Monitoring. The Mechanical Engineer provides the mechanical computations, submittals, energy efficiency measures review, coordination of mechanical drawings and specifications for LEED certification as required by USGBC.
Associate Government Program Analyst		The workload would continue to be divided into two major areas, LEED Certification and Benchmarking. The AGPA would facilitates the Leadership in Energy and Environmental Design (LEED O+M) Existing Buildings certification and retrofitting of buildings and energy benchmarking of 50 state-owned buildings using the Energy Star Portfolio Manager Program. The LEED-EB certification includes but not limited to, LEED USGBC implementation of policies and procedures, computations and submittals, energy efficiency measures, review and implementation processes.

AB 32 Zero Based Budget Report - Summary

Fiscal Year 2011-2012 Projected Expenses

Grand Totals	Positions	Personnel & Operations	Contracts	Total
Program Area				
Planning and Policy Development	7	\$ 989	\$ 500	\$ 1,489
Greenhouse Gas Emissions Inventory and Mandatory Reporting	17	\$ 2,644	\$ -	\$ 2,644
Adopt, Implement, and Enforce Greenhouse Gas Reduction Measures	126.5	\$ 19,536	\$ 6,900	\$ 24,181
Conducting research/scientific activities	6.5	\$ 1,181	\$ 2,000	\$ 2,867
Support and Administration	19	\$ 2,476	\$ 300	\$ 2,776
State Government Compliance Activities	4	\$ 385	\$ -	\$ 2,538
Total	180	\$ 27,211	\$ 9,700	\$ 36,911

Program Area Detail	Department	Positions	Personnel & Operations	Contracts	Total
Planning and Policy Development	ARB	7	\$ 989	\$ 500	\$ 1,489
Greenhouse Gas Emissions Inventory and Mandatory Reporting	ARB	17	\$ 2,644	\$ -	\$ 2,644
Completing Cap-and-Trade Regulation	ARB	8	\$ 1,263	\$ -	\$ 1,263
Implementing Cap-and-Trade Regulation	ARB	24	\$ 3,698	\$ 4,000	\$ 7,698
Developing and Implementing the Low Carbon Fuel Standard Regulation	ARB	27	\$ 4,058	\$ 1,000	\$ 5,058
Developing and Implementing the Low Carbon Fuel Standard Regulation	CEC	1	\$ 121	\$ -	\$ 121
Developing and Implementing the Advanced Clean Car Regulation	ARB	3	\$ 473	\$ -	\$ 473
Developing and Implementing the Renewable Energy Standard	ARB	2	\$ 315	\$ -	\$ 315
Developing and Implementing the Renewable Energy Standard	CEC	1	\$ 121	\$ -	\$ 121
Support for Energy Sector Measures	CEC	1	\$ 121	\$ -	\$ 121
Implementing High-Global Warming Potential Gas Regulations	ARB	12	\$ 1,946	\$ -	\$ 1,946
Implementing SB 375 Targets	ARB	2	\$ 302	\$ 300	\$ 602
Implementing SB 375 Housing Elements	HCD	0.5	\$ 49	\$ -	\$ 49
Support for SB 375 Energy Analysis	CEC	1	\$ 121	\$ -	\$ 121
Implementing the Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation	ARB	1	\$ 151	\$ -	\$ 151
Implementing the Cost of Implementation Fee Regulation	ARB	4.25	\$ 658	\$ -	\$ 658
Developing and Evaluating Industrial Source Greenhouse Gas Emission Reduction Measures	ARB	4.75	\$ 741	\$ 300	\$ 1,041

AB 32 Zero Based Budget Report - Summary

Implementation of the Landfill Methane Control Measure	ARB	1.5	\$ 226	\$ -	\$ 226
Developing the Mandatory Commercial Recycling regulation	ARB	1	\$ 151	\$ -	\$ 151
Developing the Mandatory Commercial Recycling regulation and Related Measures	CalRecycle	6	\$ 501	\$ -	\$ 501
Developing the Goods Movement Efficiency Measures	ARB	3	\$ 453	\$ 1,000	\$ 1,453
Developing and Evaluating Other Greenhouse Gas Emission Reduction Measures in the Solid Waste Sector	ARB	2	\$ 302	\$ -	\$ 302
Developing a Green Buildings Strategy	ARB	1	\$ 151	\$ -	\$ 151
Developing a Green Buildings Strategy	HCD	0.5	\$ 49	\$ -	\$ 49
Implementing Water Recycling and Reuse Measures	SWRCB	2	\$ 235	\$ 300	\$ 535
Implementing Water Efficiency Measures	DWR	2	\$ 315	\$ -	\$ 315
Developing enforcement programs and enforcing adopted AB32 rules and coordinating the efforts of districts that elect to enforce AB 32 rules	ARB	5	\$ 761	\$ -	\$ 761
Developing economic analysis to support the development and implementation of AB 32 rules	ARB	2	\$ 302		
Supporting business processes development to successfully implement AB 32 programs	ARB	2	\$ 253		
Implementation and Coordination of Multi-Agency Measures	Cal/EPA	6	\$ 1,700	\$ -	\$ 1,700
Conducting research/scientific activities	ARB	6.5	\$ 867	\$ 2,000	\$ 2,867
Conducting Research and Support for Public Health Issues	DPH		\$ 314	\$ -	\$ 314
Support and Administration: Support legislative office analyses required for climate-related proposals.	ARB	2	\$ 238	\$ -	\$ 238
Support and Administration: Provide legal support for regulatory efforts for AB 32 programs and defend against current and potential future legal challenges to AB 32 programs	ARB	5	\$ 822	\$ -	\$ 822
Support and Administration: Conduct media relations, encourage implementation of voluntary emission reduction measures and liaison with small businesses	ARB	3	\$ 459	\$ 300	\$ 759
Support and Administration: Providing administrative support services, such as: human resources, business management, and financial operations to support AB 32 programs	ARB	7	\$ 704	\$ -	\$ 704
Support and Administration: Supporting the information technology (IT) needs of ARB staff working on AB 32 programs	ARB	2	\$ 253	\$ -	\$ 253
State Government Compliance Activities	DGS	4	\$ 385	\$ -	\$ 385
Totals		180	\$ 27,211	\$ 9,700	\$ 36,911

ARB Totals		155	\$ 23,180	\$ 9,400	\$ 32,025
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Because of the wide-ranging sources of GHG emissions in the State, the implementation of AB 32 requires a multi-agency effort. Agencies include the California Environmental Protection Agency (Cal/EPA), the Air Resources Board (ARB), the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), the Department of Food and Agriculture (CDFA), the Department of Forestry and Fire Protection (CalFire), the Department of Water Resources (DWR), the State Water Resources Control Board (SWRCB), the Department of General Services (DGS), the Department of Public Health (DPH), the Department of Housing and Community Development (HCD), the Department of Resources Recycling and Recovery (CalRecycle). These agencies continue to be engaged in implementing AB 32 in FY 2011-2012 and beyond.

2.0 Air Resources Board (ARB)

ARB began implementation of AB 32 in 2007, hiring a team of technical experts and support staff to undertake the tasks outlined in the statute. ARB has subsequently met every statutory requirement under AB 32 including the development of a Scoping Plan to outline a strategy to achieve the 1990 emission goal by 2020 and the adoption of a number of emission reduction measures. After four years of work to “start up” AB 32, ARB is transitioning the climate change program to a steady and continuing part of its portfolio. As ARB looks to the future, the currently outlined priorities for FY 2011-2012 and subsequent years will be to:

- Develop processes to adaptively manage, implement, enforce, and measure GHG emission reductions focusing on strategies that result in the greatest emission reductions. This requires an economy-wide approach with components including measures which address: vehicle fuels and vehicle technology, renewable electricity generation and electricity efficiency and measures to address industrial processes.
- Work with other states, provinces, and regions and the federal government to standardize climate change policies to provide economy-wide reductions in GHG emissions, expand the range of measures to reduce GHG emissions on a regional basis, and so provide a broader range of cost-effective solutions for regulated entities.

The rationale for these priorities is simple; focus on those activities that ensure success in cost-effectively reaching the 2020 GHG emissions limit and setting the State on course to achieve the long-term reduction goal of 80 percent below 1990 levels by 2050. The following sections describe ARB’s planned activities for FY 2011-2012 to meet these objectives. These plans are based on current Board mandates and other legal requirements for AB 32 implementation.

In addition to these priority reduction areas, ARB continues to work with other State agencies on GHG inventory projects and GHG emission reduction measures identified in the Scoping Plan. These include, but are not limited to:

- Energy Efficiency: Continued implementation and expansion of building and appliance standards and codes (CEC, CPUC, HCD, DGS).

- Forestry: Policy development and implementation and research related to forest carbon inventories, forestry offsets, biomass utilization, and forest conservation (CalFire, Board of Forestry, CEC).
- Land Use: Implementation and providing assistance to regional and local entities on SB 375 (Statutes of 2008) and related sustainable planning priorities (Office of Planning and Research, HCD, Caltrans, CEC, DPH).
- Recycling and Waste Management: Implementation of policies on methane capture from landfills, commercial recycling, and organic waste diversion from landfills (CalRecycle).
- Water: Development and implementation of strategies to reduce the energy and GHG emissions associated with water transport, treatment and use, including research quantifying the links between water and energy use (SWRCB, DWR, CEC, CPUC).

Many of these programs are being pursued because of their significant associated co-benefits, such as energy efficiency and reduced criteria pollutant emissions, in addition to their GHG emissions reductions. Nonetheless, they represent important contributions to the economy-wide cost-effective GHG emission reductions described in the Scoping Plan.

ARB also has other ongoing programs that provide GHG emission reduction co-benefits that are not included in the resource estimates for FY 2011-12. Because the sources of criteria pollutants, air toxics, and GHG are frequently the same, programs that are designed to reduce “co-pollutant” emissions will also address GHGs. For example, ARB has long had a program to address smog-forming emissions from methane digesters. With the addition of climate change to ARB’s portfolio, the staff working on methane digesters now also include GHG considerations and analyses in their work. Many of the other agencies described in this report, as well as those who have not received direct AB 32 resources, are also able to perform GHG mitigation work within their other mandated program areas. These resources are not included in the zero-based budget estimates. In addition, it is important to note that the zero-based-budget estimates are a snapshot in time. As such, it will be necessary to shift resources over time in order to successfully meet the evolving demands of implementing AB 32.

2.1 GHG Emissions Inventory and Mandatory Reporting

The first step in any air quality plan is to understand the source of the emissions in order to determine the best strategy to reduce emissions. As required by AB 32, ARB established a GHG emission reduction goal and adopted rules for large facilities to report their GHG emissions. The *Mandatory Reporting of Greenhouse Gas Emissions Regulation* requires annual reporting from the largest emitting facilities in the State, accounting for 94 percent of GHG emissions from industrial and commercial stationary sources in California. This regulation is being modified to align with federal reporting requirements and support the cap-and-trade regulation.

FY 2011-2012 and Future Work

As with all emission inventories, ARB will continue to update the GHG inventory to reflect the latest technical and economic data in the forecasts of emissions. This work is critical to understanding progress toward meeting the 2020 goal, and also serves to provide information that underpins the development of emission reduction measures. ARB will also need to finalize modifications to the Mandatory Reporting Regulation, continue training and oversight of the third-

party verifiers of the emissions data, and monitor and enforce compliance with the reporting regulation.

2.2 Planning and Policy Development

The major planning and policy effort required under AB 32 was the development of a Scoping Plan that outlined a strategy for achieving the 2020 GHG emission reduction goal. According to Health and Safety Code Section 38562(h), this Plan must be updated at least every five years. In the interim, adjustments to the Plan's elements are needed as new emissions data is compiled and as emission reduction measures are adopted. ARB is also coordinating with regional and federal entities to standardize climate change policies.

FY 2011-2012 and Future Work

ARB's planning and policy development components include the over-arching planning of activities within ARB, as well as coordinating with other state agencies, regional organizations, and the federal government. Coordination of programs with the many entities and programs outside of ARB, requires substantial staff time from program specialists and managers. As required under AB32, ARB has attempted to coordinate its programs with California's trading partners and others in North America and throughout the world, in order to augment the California's GHG emission reduction programs. Economy-wide emission reductions programs, such as cap-and-trade, are examples of programs which require this type of coordination, but other significant programs such as those involving vehicles, fuels and electricity benefit from work with other states and regions. Additionally, ARB will begin work on the next iteration of the Scoping Plan in 2012. Early in the fiscal year, ARB will complete a revision to the Scoping Plan analysis of alternatives, including alternatives to the cap-and-trade program.

2.3 Adopt, Implement, and Enforce GHG Reduction Measures

AB 32 requires that measures needed to achieve the 2020 emissions goal must be adopted on or before January 1, 2011, and be operative beginning on January 1, 2012. This requirement means that ARB is transitioning from a focus on rule development and adoption to implementation and adaptive program management. Recent experience with regulations such as the Low Carbon Fuel Standard (LCFS) has shown that implementation and enforcement can be more complex and resource-intensive than rule development. As a result, a major focus of the implementation effort is on adaptive program management, regularly adjusting the program to reflect the most current economic and environmental information available. For example, ARB has already revised emissions data to account for the impact of the economic downturn on State economic activity and accordingly made adjustments to policies to reflect the new data. This capability to dynamically implement the program is a key part of the effort to ensure that emission reduction goals are met cost-effectively.

In FY 2011-2012, ARB staff will focus on implementing and enforcing the full set of adopted regulations. Additionally, staff will complete rulemakings that are in process, including considering program revisions in response to Board direction, stakeholder comments and other factors as needed. ARB will also pursue additional rulemakings including the Advanced Clean Car regulation.

2.3.1 Economy-wide Greenhouse Gas Mitigation Strategies

ARB is pursuing greenhouse gas mitigation strategies that address the entire economy. In December 2010, the Board endorsed an economy-wide cap and trade regulation. The cap-and-trade program covers major sources of GHG emissions in the State such as refineries and power plants, industrial facilities, and transportation fuels. The endorsed regulation includes an enforceable emissions cap, beginning in 2012, that will decline over time. As currently designed, the State will distribute allowances, which are tradable permits, equal to the emissions allowed under the cap. Sources under the cap would need to turn in allowances equal to their emissions at the end of each compliance period. ARB is currently revising the Scoping Plan alternatives analysis, which includes potential alternatives to the cap-and-trade program .

FY 2011-2012 and Future Work

Current plans are to complete the cap and trade rule-making process and prepare to implement the regulation in FY 2011-2012. ARB plans to report on market readiness early in the fiscal year. Toward the end of 2011, these resources should transition to implementation, which is slated to begin in 2012. Should ARB decide based on the alternatives analysis to pursue a different approach, it will apply these resources to obtain the necessary emission reductions via that approach. , The activities and resources necessary to implement any of the economy-wide strategies being considered in the alternatives analysis will be substantially similar to the activities and resources described in this report for the cap-and-trade program, because of the fundamental requirements of any economy-wide GHG emission reduction program.

2.3.2 Low Carbon Fuel Standard

Under the LCFS regulation, ARB set performance standards that fuel producers and importers must meet each year beginning in 2011. The standard will result in the reduction of the average carbon intensity of transportation fuels by 10 percent by 2020.

FY 2011-2012 and Future Work

The focus in LCFS will be on working with stakeholders to provide additional fuel pathways for compliance, clarify the regulation, and ensure effective implementation. This work will include continued consultation with the LCFS Advisory Panel and continued consideration of its recommendations in potential future regulation amendments. Additionally, through workgroups, ARB will continue to address various aspects of the LCFS such as high carbon-intensity crude oils, sustainability, electricity opt-in, and reporting tool revisions. ARB will also continue laboratory testing efforts to support the implementation of the LCFS.

2.3.3 Advanced Clean Cars

ARB's Advanced Clean Car rulemaking combines efforts to limit traditional tailpipe emissions with GHG reduction measures. In keeping with the fact that the transportation sector is the largest source of GHG emissions (almost 40 percent of the State's total), emission reductions from cars will be the largest portion – close to one-third – of the GHG reductions required under AB 32. This regulation achieves this by building on the Pavley GHG standards, and also

incorporates the next generation of ARB's smog standards for cars. ARB is working with the U.S. Environmental Protection Agency (U.S. EPA) and the U.S. Department of Transportation (U.S. DOT) on coordinated State and federal regulations to reduce GHG and smog-forming emissions from new passenger vehicles by requiring that each model year between 2017 and 2025 meet feasible and increasingly stringent fleet average emission standards.

FY 2011-2012 and Future Work

The Advanced Clean Car regulation is a major effort that will draw upon ARB's technological, research, laboratory, and regulatory expertise. The regulation is scheduled for consideration in November 2011, and final rulemaking will take place during the remainder of the fiscal year. ARB will hold workshops in Spring 2011, in preparation for release of the staff's proposed regulation in September 2011.

2.3.4 Electricity

Electricity generation is a significant source of greenhouse gas emissions, comprising about 25 percent of the emission inventory. ARB will continue to coordinate with the CEC, the CPUC and the California Independent System Operator on programs that address greenhouse gas emissions from conventional generation, renewables, combined heat and power, distributed generation, and energy efficiency programs.

FY 2011-2012 and Future Work

In this fiscal year, ARB will continue to evaluate the GHG and criteria pollutant and toxic air pollutant impacts of the energy system to ensure that AB 32, public health, and environmental justice considerations are thoroughly addressed. ARB will coordinate with the energy agencies to implement SB 2 which mandates a 33 percent renewable energy target, as well as energy efficiency programs, combined heat and power, and distributed generation.

2.3.5 High Global Warming Potential Gases

ARB has addressed high-global warming potential (GWP) gases, highly potent GHGs with hundreds to thousands of times the climate impact as the same amount of carbon dioxide, with regulations in three broad categories: consumer products, mobile sources, and stationary sources. ARB approved measures to restrict high-GWP gases in consumer products, reduce refrigerant emissions from the non-professional servicing of motor vehicles, set limits for SF₆ (the most potent of all GHGs) in non-utility and non-semiconductor applications, and reduce perfluorocarbons in semiconductor manufacturing. ARB has also adopted regulations for stationary sources that use these potent GHGs for refrigeration, focusing on best practices, reducing leakage and limiting the presence of high-GWP gases where possible. To implement this high-GWP refrigerant management program, ARB will engage in outreach to regulated facilities, and is currently working with the CEC on developing specifications for commercial and industrial refrigeration systems.

FY 2011-2012 and Future Work

ARB will focus on implementation of these measures in FY 2011-2012.

2.3.6 Senate Bill 375 Regional Targets

ARB has set GHG emission reduction targets for passenger vehicles for 2020 and 2035. Required under SB 375 (Chap. 728, Statutes of 2008), the targets mark the first step toward an unprecedented statewide program to integrate long-range land use, housing, and transportation planning at the regional level. California's eighteen Metropolitan Planning Organizations (MPOs) are now preparing Sustainable Community Strategies (SCS) outlining their strategy to meet these targets.

FY 2011-2012 and Future Work

ARB is working with the MPOs to assure that each SCS meets the targets. The San Diego Association of Governments and the Sacramento Area Council of Governments are expected to be the first MPOs to submit SCSs for review in 2011. ARB will determine whether the SCS, if implemented, would meet the emission reduction target. This work will continue through the fiscal year and will require coordination, oversight, and research efforts related to planning and working with the MPOs.

2.3.7 Other GHG Reduction Measures

ARB has adopted emission reduction measures addressing emissions from a variety of other sources. These sources include trucks, landfills, and industrial sources. In addition, ARB is working with CalRecycle to reduce GHG emissions by requiring commercial recycling, on strategies to reduce GHG emissions from the freight transport system, and on strengthening building codes for more efficient buildings. Finally, pursuant to AB 32, ARB is also implementing a fee to support the continued implementation of AB 32.

FY 2011-2012 and Future Work

ARB will focus on implementation of adopted measures in FY 2011-2012, including the AB 32 Cost of Implementation Fee Regulation. ARB will also continue to develop a strategy to improve the efficiency of the freight transport system, and evaluate the need for emission reduction measures to address additional sources of GHG emissions.

2.4 Research

AB 32 requires ARB to design GHG emission reduction measures to be technologically feasible and cost-effective. Because of this requirement, it is important for ARB to keep abreast of the most current science and economic analysis available.

FY 2011-2012 and Future Work

ARB will continue to pursue research to better understand the sources of GHG emissions, potential emission reduction options, the public health co-benefits of reducing GHG emissions, carbon capture and sequestration, and macroeconomic modeling capabilities. This work will include both in-house research and laboratory work, as well as extramural research contracts to better understand the sources of GHG emissions, potential emission reduction options, carbon capture and sequestration, and macroeconomic modeling capabilities.

2.5 Support and Administration

In order to implement the AB 32 program in a timely and efficient manner, ARB has expanded its support staff to provide additional legal, legislative, information technology, and personnel-related resources necessary to meet AB 32 goals.

FY 2011-2012 and Future Work

ARB will continue to require enhanced legal, legislative, information technology, and personnel-related services to support the AB 32 program and staff. This work will continue in FY 2011-2012 and beyond.

3.0 AB 32 Implementation Priorities at Other Agencies

As described in AB 32 and in the AB 32 Scoping Plan, there are a number of priority areas which center on the efforts of other agencies. These areas include GHG emission reduction efforts related to the reduction of electricity and natural gas usage, including energy efficiency and demand response; reduction in energy associated with water transport, treatment and heating; and management of recycled materials and solid waste. There is also work underway on strategies to reduce emissions through better urban planning, more efficient land-use and through forest management practices. There is also analysis required on diverse topics from public health impacts associated with AB 32, to establishing more precise relationships between water use and GHG emissions to improving forest carbon inventories. These and other efforts are catalogued annually in the Climate Change Report Card.

FY 2011-2012 and Future Work

The CEC will continue implementation of energy efficiency standards and programs and renewable energy efforts with ARB and the CPUC. The CEC will also continue to play important roles in land use related efforts, vehicle fuel programs, and climate research efforts. The HCD guides housing related aspects of land use planning efforts and will be involved in the creation and revision of green building codes. DWR and SWRCB will continue to implement strategies on urban and agricultural water and energy efficiency (DWR), and urban water reuse and water recycling (SWRCB). CalRecycle will continue to lead implementation of emission reduction measures related to waste management including landfill methane capture, organics waste diversion alternatives, and mandatory commercial recycling. DGS implements GHG reduction measures for the State fleet and State buildings and is involved in the revision of the State's green building code. Analysis of the health impacts of AB 32 measures will continue to be conducted by DPH. Coordination of these and other AB 32 efforts, including the GHG report card, will continue to be performed by the climate change unit at Cal/EPA.

3.0 Conclusion

As the programs outlined above evolve it will be necessary to maintain many of fundamental aspects of the program, which are critical to meeting statutory requirements in 2020. It is also critical that the suite of measures allow the State to begin to address the longer term GHG emission reduction requirements required for global stabilization of GHG concentrations at

levels which protect California from severe impacts of climate change. To achieve these goals, and successfully carry out the above-described objectives, ARB and its partner agencies will require adequate resources in FY 2011-2012 and for the foreseeable future.