LAO POLICY BRIEF

Implementation of AB 32—Global Warming Solutions Act of 2006

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Summary and Background

Summary of Analysis. The budget proposes $39 million across twelve state agencies to continue implementation of the Global Warming Solutions Act of 2006, Chapter 488, Statutes of 2006 (AB 32, Núñez), which seeks to reduce California's greenhouse gas (GHG) emissions. In the following analysis, we provide an update on the implementation of this legislation, commonly referred to as "AB 32." We discuss how AB 32 implementation has been funded to date and provide details of the new AB 32 administrative fee included in the budget to provide the bulk of the program's funding beginning in the budget year. We follow with an accounting of how the Air Resources Board (ARB) proposes to spend its $33 million budget to implement AB 32. Finally, we comment on the merits of the administration's budget proposal and offer some recommendations intended to ensure that (1) sufficient resources are devoted to economic analysis of AB 32 measures and (2) future AB 32 expenditures and fees are justified and set at appropriate levels.

Goals and Requirements of AB 32. Assembly Bill 32 established the goal of reducing GHG emissions statewide to 1990 levels by 2020. The act charged the ARB with monitoring and regulating the state's sources of GHGs and identified a timeline by which ARB is to complete specified implementation actions. Specifically, among various other requirements, it directed ARB to:

- Adopt regulations by January 1, 2008, to require reporting and verification of statewide GHG emissions.
- Develop a plan by January 1, 2009, encompassing a set of measures that taken together would be a means by which the state could achieve its 2020 GHG reduction target. This plan is commonly referred to as the AB 32 Scoping Plan.
- Adopt regulations by, and enforceable no later than, January 1, 2010, to implement "early action measures" to reduce GHG emissions.
- Adopt additional regulations by January 1, 2011, to be enforceable January 1, 2012, to achieve the GHG emissions reductions goals established by AB 32. These additional regulations may include those for "market-based" compliance mechanisms, as defined in AB 32.

Progress of AB 32 Implementation To Date

Emission Reporting Regulations Adopted on Time. The ARB adopted regulations relating to the reporting and verification of statewide GHG emissions in December 2007. This entails requirements that certain emitters defined in the regulations report each year to the ARB on their level of GHG emissions. This information is aggregated in a statewide emissions inventory, which will be used in the future to measure progress in meeting the goals of the law and to verify that emitters are in compliance with the various AB 32 measures that apply to them.

Scoping Plan Developed on Time. In December 2008, ARB adopted the AB 32 Scoping Plan which contains a list of 72 proposed measures and regulations intended to meet the state's 2020 GHG emission reduction target. The scoping plan documentation included an analysis of the economic impacts of the plan. The ARB released an update of this economic analysis in late March of this year, attempting to respond to critiques of its initial economic analysis that found it deficient on a number of fronts.

Regulations for Nine Early Action Measures Adopted; Three Not Yet in Effect. As required by AB 32, ARB identified a number of measures for which "early action" would be taken to reduce GHG emissions. Assembly Bill AB 32 required that all of these early action regulations be put in place by January 2010. The board has adopted regulations for the nine early action measures that it identified, the most prominent of which is the Low Carbon Fuel Standard, which requires that the carbon intensity of transportation fuels used in California be reduced over time. However, three of the nine sets of regulations are not yet in effect, and thus are not in compliance with the due date specified in AB 32. These regulations are currently being reviewed by the Office of Administrative Law.

Other Regulations Adopted or Under Development. In addition to developing regulations for the early action measures and market-based compliance mechanisms (discussed below), the ARB has adopted or is developing regulations for other measures included in the AB 32 Scoping Plan. For example, regulations have been adopted to reduce GHG emissions from (1) light-duty vehicles (commonly referred to as the "Pavley regulations") and (2) trucks used to haul goods at ports. Regulations currently under development would implement a renewable energy standard and reduce GHG emissions from (1) natural gas transmission and distribution systems and (2) refrigerant systems.

In a recent previous budget analysis, *The 2010-11 Budget: Resources and Environmental Protection*, we raised concerns about ARB's regulatory efforts to develop a renewable energy standard. We recommended that ARB immediately cease spending funds for the purpose of developing a new renewable energy standard or similar requirement absent the enactment of legislation that authorizes such activities.

Cap-and-Trade Rulemaking Under Development. The ARB's Scoping Plan proposes the establishment of a cap-and-trade mechanism to address the state's GHG emission reduction goals. Cap-and-trade is a market mechanism whereby an emissions cap is placed by the government on a defined set of emitters—in this case, entities emitting GHGs—that is decreased over time. Under one approach, emitters could be allocated allowances equal to their current emissions output, with the allowances reduced over time. Alternatively, the right to emit a certain number of units of GHG emissions could be auctioned off to any willing purchaser. (A mix of these two allocation strategies is also possible.) However they are allocated, an emitter that had excess emission allowances (for example, because it was effective in reducing its GHG emissions) could sell them to other emitters still needing them to comply with the regulation. In theory, as the cap decreased over time, emitters would have an incentive to either implement cost-effective technological improvements to decrease their level of emissions or purchase emissions credits from others who could accomplish such reductions in a cost-effective manner.

The ARB released a preliminary draft of its cap-and-trade regulation in November 2009. A revised draft of the cap-and-trade regulation is expected to be released in late Spring of this year. The ARB has indicated that it plans to conduct a hearing on the proposed regulation at an October 2010 board meeting and to adopt the regulation by the end of the calendar year, with an effective date of January 2012.

Funding for AB 32 Implementation

Majority of AB 32 Implementation Has Been Funded Through Special Fund Borrowing. From 2007-08 through 2009-10, AB 32 implementation has been funded primarily from special funds and bond funds. Over this period, total funding has ranged from a low of $30 million in 2007-08 to a high of $48 million in 2009-10. The largest funding source by far has been the Air Pollution Control Fund, supported by $84 million in various loans over a three-year period from the Beverage Container Recycling Fund and the Motor Vehicle Account. Statute requires that these loans be repaid, with interest, from revenues from a new AB 32 administrative fee (not yet established at the time the loans were made). We discuss this new fee in further detail below.

New Fee Will Now Be Primary Funding Source for AB 32 Implementation. Assembly Bill 32 authorized ARB to assess a fee on GHG emitters that are subject to state regulation to pay the state's administrative costs for implementing the statute. The ARB has adopted such a fee, which will go into effect beginning in the budget year. The fee will be assessed on natural gas utilities, users, and pipeline owners and operators that distribute or use natural gas in California; producers and importers of gasoline and diesel fuels; refineries; cement manufacturers; retail providers and marketers of imported electricity; and facilities that burn coal.

For each of the first four years, the overall level of fee collections will be based on a calculation of (1) the total amount of funds needed to implement AB 32-related programs in that year and (2) the amount required annually to repay the special fund loans that supported the program in its early years. (Under the ARB's plan to repay the loan over four years, it will need to collect an additional $27 million annually for the first three years and $9 million in the fourth year.) Beginning in year five, the fee will be based primarily on the revenue needed to pay for the program's annual budget. The fee that is charged to any individual emitter will be based on the entity's overall emissions and the carbon intensity of the fuel source associated with those emissions. Invoices are to be sent to affected entities 30 days after the state budget is enacted. The revenues collected will be deposited into the Air Pollution Control Fund, and will be available upon appropriation by the Legislature.

Governor's Budget Proposal

Governor Proposes $39 Million to Implement AB 32 in 2010-11. The Governor's budget includes $39 million allocated to twelve departments for the purposes of implementing AB 32-related activities. The figure below summarizes, on a department-by-department basis (1) base budget expenditures, and proposed new expenditures; and (2) the current number of base budget positions and proposed new positions.

Largest Percentage of Funding Goes to ARB's AB 32 Programmatic Activities. As shown in Figure 1, while multiple departments have workload associated with AB 32 implementation, the bulk of this work is being conducted by ARB. The ARB has requested budget approval for 155 personnel-years and $33 million for the continued implementation of the Scoping Plan. The ARB's budget request for AB 32 implementation can be broken down into the following five activity areas:

- ***Development and Implementation of GHG Emission Reduction Measures in Scoping Plan—$23 Million; 99 Personnel Years.*** The Scoping Plan's GHG emission reduction approach includes developing regulations, incentive programs, voluntary actions, and public outreach programs. Figure 2 summarizes ARB's allocation of 99 personnel years in the budget year among various activities related to the development and implementation of Scoping Plan measures. For the 13 of the 27 regulations described in the Scoping Plan that have already been adopted, ARB's role will shift to implementation and enforcement of these regulations. The ARB will continue work-

Figure 1

AB 32-Related Activities in the *2010-11 Governor's Budget*

(Dollars in Thousands)

Budget Item	Department	2010-11 Base Funding: Amount	2010-11 Base Funding: Positions	New Funding Proposed in 2010-11: Amount	New Funding Proposed in 2010-11: Positions	Totals in *2010-11 Governor's Budget*: Amount	Totals in *2010-11 Governor's Budget*: Positions
0555	Secretary for Environmental Protection	$1,821	6.0	—	—	$1,821	6.0
1760	Department of General Services	416	5.0	—	—	416	5.0
2240	Department of Housing and Community Development	—	—	$54	0.5	54	0.5
3360	California Energy Commission	590	5.0	—	—	590	5.0
3500	Department of Resources Recycling and Recovery[a]	—	—	501	6.0	501	6.0
3540	Department of Forestry and Fire Protection	—	—	1,255	—	1,255	—
3760	State Coastal Conservancy	—	—	120	0.8	120	0.8
3860	Department of Water Resources	236	1.0	326	2.0	562	3.0
3900	Air Resources Board	32,932	155.0	—	—	32,932	155.0
3940	State Water Resources Control Board	—	—	535	2.0	535	2.0
4265	Department of Public Health	—	—	299	—	299	—
8570	Department of Food and Agriculture	—	—	309	1.0	309	1.0
Totals		**$35,995**	**172.0**	**$3,399**	**12.3**	**$39,394**	**184.3**

[a] Formerly the Integrated Waste Management Board. Note that 6 positions and $501,000 shown for the 2010-11 fiscal year is the result of redirection that was originally approved for the 2009-10 fiscal year.

ing on the development of the balance of the regulations in the budget year.

- ***GHG Emission Inventory and Reporting—$3.8 Million; 19 Personnel Years.*** For the budget year, ARB plans to continue to update and maintain the California statewide GHG emission inventory, including an update of GHG emissions for the 2007 and 2008 calendar years. It will also continue to support the mandatory reporting of GHG emissions data to the state, including ensuring third-party verification of emissions data reports. In addition, it will begin development of compliance-based GHG emissions accounting protocols, which are necessary to comply with AB 32's requirements for verification and enforcement of emission reductions.

- ***Applied Studies and Scientific Analysis—$3.5 Million; Ten Personnel Years.*** For the budget year, ARB staff will continue to evaluate the technological feasibility and cost-effectiveness of GHG emission reduction measures, and ARB will continue to fund contracted research that supports AB 32 implementation and the state's long-term goal of 80 percent GHG reduction by 2050.

- ***AB 32 Program Planning—$1.8 Million; 12 Personnel Years.*** For the budget year, ARB plans to continue to track and coor-

Figure 2

Development and Implementation of Scoping Plan Measures

	ARB Positions
Fuel, Electricity, and Industrial Sectors	61
Major Activity:	
• Develop and implement the renewable electricity standard	
• Implementation of Low Carbon Fuel Standard	
Other Activities:	
• Develop and implement regulation to reduce sulfur hexaflouride emissions from gas-insulated electricity transmission and distribution equipment	
• Develop and implement energy efficiency audits for large industrial sources	
• Develop and implement mandatory commercial recycling	
• Develop and implement regulation to reduce greenhouse gases from natural gas transmission and distribution	
• Develop and implement regulation to reduce greenhouse gases from oil and gas production, processing and storage	
Mobile Sources	13
Major Activity:	
• Develop and implement new greenhouse gas emission standards for passenger cars and light trucks	
• Develop and implement amendments to the zero-emission vehicle regulation	
• Develop and implement regional greenhouse gas targets pursuant to Chapter 728, Statutes of 2008 (SB 375, Steinberg)	
Cross-Cutting	25
Major Activity:	
• Develop and implement the cap-and-trade regulation for greenhouse gases	
Other Activity:	
• Implement fee regulation	
Total	**99**

dinate the development and implementation of the 72 measures in the Scoping Plan among multiple state, federal, and local agencies. This effort is intended to maintain consistency with the requirements of AB 32's regulatory mandates. Planned activities include coordinating the state's several energy entities to meet GHG goals; working with the local air districts on new federally mandated GHG permitting programs; coordinating with the U.S. Environmental Protection Agency on its mobile and stationary-source GHG programs; participating in the Western Climate Initiative activities; and providing policy support to technical staff working on GHG reduction regulations.

➢ ***Support and Administration—$1.6 Million; 15 Personnel Years.*** For the budget year, these staff provide legal, legislative, information technology, and personnel-related support.

Evaluating the Budget for AB 32 Implementation

We do not have significant concerns with the overall level of AB 32-related expenditures proposed for the budget year. The department has generally provided sufficient workload justification for its requests. However, we are concerned that the board's budget may not provide sufficient funding for the board's economic analysis workload. We also are concerned that upcoming shifts in the nature of the AB 32 workload as a whole warrant careful budgetary planning. We discuss these two matters in more detail below.

Is Economic Analysis Underbudgeted? Current law prescribes multiple requirements for economic analyses as part of the regulatory adoption process. Such AB 32-related regulations as the Low Carbon Fuel Standard and the proposed cap-and-trade regulation can be particularly complex and break new regulatory ground, thereby making the required economic analysis challenging and labor-intensive. Our office and peer reviewers have raised concerns about the timeliness and the comprehensiveness of the ARB's economic analysis work connected with AB 32. A committee established to advise ARB on its analysis of the economic impacts of the AB 32 Scoping Plan voiced concern that insufficient ARB staff members and resources were available to analyze the potential economic impacts of AB 32.

Given these concerns, we recommend that the Legislature evaluate at budget hearings whether sufficient resources are being devoted by ARB to AB 32-related economic analysis work. To assist the Legislature in this evaluation, we recommend that ARB be directed to present at budget hearings (1) its projected AB 32-related economic analysis workload for the budget year, in terms of required hours of staff time or contract resources, (2) the current level of staffing and other resources devoted to AB 32-related economic analysis, (3) the level of staffing and other resources it deems necessary to adequately address the projected workload, and (4) a plan to redirect resources from lower-priority activities to the extent that an unmet funding requirement for economic analysis is identified.

Ensuring That Future AB 32 Expenditures and Fee Levels Are Justified. The implementation of AB 32 will soon be at a major crossroads. Already in the fourth year of implementation, the program's initial stage of planning, regulation development, and regulation adoption is nearing completion. (Regulations must generally be adopted by January 1, 2011.) The focus of the program will soon naturally shift from regulatory development to implementation and enforcement. As such, the "base budget" funding requirements for the program in future budget years could be substantially different than the program's current funding requirements.

We believe that, beginning with the 2011-12 budget, the Legislature should step back and reevaluate the base funding requirements of AB 32 program implementation. In other words, the whole budget for AB 32 program implementation going forward after the budget year should be justified. This exercise will also be important from the perspective of ensuring that AB 32 administrative fees are set at an appropriate level to offset the costs of implementing the program.

Therefore, we recommend that the Legislature direct ARB to submit, as part of the *2011-12 Governor's Budget*, a zero-based budget and workload analysis for AB 32 program implementation across all state agencies in 2011-12. The administration should be directed to justify all expenditures proposed to support AB 32 implementation. This would enable the Legislature to better understand the overall size of the program and how funds are being allocated and prioritized for particular programs and functions, as well as how the proposed expenditures will further the goals and objectives of AB 32.

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