

**CALIFORNIA AIR RESOURCES BOARD**  
AB 32 Technical Stakeholder Working Group Meeting

**DISCUSSION OF ARB WORK UNDERWAY  
TO FULFILL AB 32 EVALUATION REQUIREMENTS**

April 25, 2008  
9:00 a..m. - 12:30 p.m.

Sierra Hearing Room  
2<sup>nd</sup> floor of the California Environmental Protection Agency (CalEPA)  
Headquarters Building  
1001 "I" Street, Sacramento, California

Note: The Sierra Hearing Room at CalEPA Headquarters has limited seating. The meeting will be webcast (<http://www.calepa.ca.gov/broadcast/>) and open to real-time questions via e-mail ([ccplan@arb.ca.gov](mailto:ccplan@arb.ca.gov)).

This is another in an ongoing series of technical stakeholder meetings. These meetings are being conducted to provide interested stakeholders the opportunity to provide specific technical input concerning various elements of the evaluation and analysis that will support the program design decisions that will be incorporated into the Assembly Bill (AB) 32 Scoping Plan. The attached white paper provides a summary of the work that ARB is undertaking to fulfill the various evaluation criteria established in AB 32.

**AGENDA**

- A. Opening Remarks
- B. Air Resources Board (ARB) Staff Presentation
- C. Round-Table Discussion

Key questions for stakeholders:

1. Do you have comments or recommendations relating to the evaluation plan described in the white paper below?
2. Are there specific additional analyses or analytic tools that ARB should consider using in approaching these evaluations?
3. Are there additional specific data sources that ARB should consider using for these evaluations?

Written comments and responses are welcome. Please submit your comments to [ccplan@arb.ca.gov](mailto:ccplan@arb.ca.gov) by May 9, 2008.

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**WORK UNDERWAY TO FULFILL AB 32 EVALUATION REQUIREMENTS**

This paper outlines what ARB will do to fulfill the various evaluation criteria established in AB 32. It first addresses the criteria that apply to the preparation and approval of the Scoping Plan itself. It then describes how the Scoping Plan will consider the evaluation criteria that apply to the adoption of regulations.

**Criteria Applied to Preparation and Approval of Scoping Plan**

Section 38561(d) establishes the basic evaluation framework for the Scoping Plan. This section directs the ARB to:

Evaluate the total potential costs and total potential economic and noneconomic benefits of the plan for reducing greenhouse gases to California's economy, environment and public health, using the best available economic models, emission estimation techniques, and other scientific methods

This evaluation will consist of a qualitative, policy-level synthesis and discussion of information from a variety of sources. To the extent possible, impacts will be assessed quantitatively at the statewide and regional levels. Evaluation of the effect of the greenhouse gas reduction plan on California's environment and public health will start with a staff evaluation of the statewide emission impact of proposed GHG measures relative to existing and planned criteria and toxic air pollution controls. Staff expects that on a statewide and regional basis the GHG measures, because they often result in significantly reduced fuel combustion, will lead to an additional reduction in criteria and toxic emissions.

Staff will also evaluate the potential effect of the GHG reduction measures on criteria pollutant emissions from various sectors, including electricity production, oil refining, transportation and others. Staff is relying on information on potential GHG reduction measures developed by sector teams that include staff from ARB and other state agencies that are part of the Climate Action Team. These sector teams are identifying and evaluating key GHG emission reduction measures that may be included in the Scoping Plan recommendations, including evaluations of emission reduction potential, costs, likely co-pollutant effects, and other related factors. This analysis builds on the earlier work done for the Climate Action Team Macroeconomic Report.

Staff is using this information to consider the statewide sector level effects of the measures, and also will consider the range of potential actions at typical facilities within the sector and related indirect emission impacts or benefits (i.e. increase or decrease in truck traffic). These actions would include some that result in reductions in criteria emissions along with GHG emissions (e.g. reduced fuel combustion due to improved efficiency) and others that could result in changes to overall regional emission sources including emissions from new facilities that would be subject to local land use, CEQA

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process, and air district permitting requirements. Air district permitting processes include mitigation of criteria pollutants and restrictions on exposure to toxics.

This evaluation will also include a qualitative discussion of the impacts (both positive and negative) of the different program design options and an estimate of the magnitude of the expected benefits (or disbenefits, if any). Where flexibility or market oriented options are examined, the evaluation will identify the potential for reduced co-benefits from facilities that use flexibility options or offsets rather than instituting measures to achieve GHG reductions onsite.

Criteria pollutant estimates from the Energy 2020 model will be used as appropriate to crosscheck the staff statewide and sector-level evaluation.

The evaluation of the effect on the state economy will be based on outputs from the Environmental Revenue Dynamic Assessment Model (E-DRAM) model of the California economy. Key indicators will include:

- Effect on gross state product
- Effect on jobs, total and by sector
- Effect on household income, by income bracket

E-DRAM will make use of outputs from the Energy 2020 model, including:

- Fuel prices
- Investment and reductions by sector
- Fuel use by sector

This evaluation will also include a staff assessment of the potential for green technology and related job creation.

Section 38561(e) directs the ARB, in developing the plan to take into account the potential for adverse effects on small businesses. E-DRAM has the capability to analyze the impacts of electricity and natural gas rate increases on small, medium, and large businesses. This task will also be informed by staff evaluation of individual reduction measures.

**AB 32 Evaluation Criteria for Regulatory Development and Compliance Mechanisms**

In AB 32 there are also legal requirements to apply criteria to the adoption of regulations to implement the Scoping Plan's recommendations, at which point a more detailed and quantitative assessment of the potential impacts will be available. Several additional criteria apply when market-based compliance mechanisms are included in the regulations. Although these requirements do not explicitly apply to the preparation and approval of the Scoping Plan per the Health and Safety Code, ARB staff will be mindful of all such criteria and will incorporate them into the Scoping Plan evaluation to the extent feasible with the information available.

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Specifically, section 38562(b) states that

In adopting regulations [to implement the recommendations in the Scoping Plan], to the extent feasible and in furtherance of achieving the statewide greenhouse gas emission limit, the state board shall do all of the following:

- (1) Design the regulations, including distribution of emissions allowances where appropriate, in a manner that is equitable, seeks to minimize costs and maximize total benefits to California, and encourages early action to reduce greenhouse gas emissions.
- (2) Ensure that activities undertaken to comply with regulations do not disproportionately impact low-income communities.
- (3) Ensure that entities that have voluntarily reduced their GHG emissions prior to implementation of this section receive appropriate credit for early voluntary reductions.
- (4) Ensure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.
- (5) Consider cost-effectiveness of these regulations.
- (6) Consider overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.
- (7) Minimize the administrative burden of implementing and complying with these regulations.
- (8) Minimize leakage.
- (9) Consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases.

Section 38570(b) directs that:

Prior to the inclusion of any market-based compliance mechanisms in the regulations, to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

- (1) Consider the potential for direct, indirect, and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution.
- (2) Design any market-based compliance mechanism to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.
- (3) Maximize additional environmental and economic benefits for California, as appropriate.

Many of these criteria are similar to the overarching required evaluation of the Scoping Plan as set forth in section 38561(d) and discussed above, and will be covered at least in part in the required evaluation. Other criteria are more specific, but can be addressed

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at the Scoping Plan level. Wherever possible such considerations will be included in the Scoping Plan analysis. For example:

- E-DRAM and other economic data and tools will be used to assess the distributional impact of the compliance costs of the plan on various income levels. This will help address the potential for disproportionate impact on low income communities.
- Diversification of energy sources will be assessed through a staff analysis based on Energy2020 output of energy supply, supplemented by information on the impacts of the Low Carbon Fuel Standard, Renewable Portfolio Standard, and energy efficiency programs.
- Consideration of other benefits to the economy, environment and public health will include staff evaluation of benefits from improved land use and community design, possible natural resource impacts, and other factors.
- The administrative burden of various program options can be assessed via a review of past experience with various compliance options.
- The potential for leakage can be assessed in the sector level analysis of reduction measures.

In general, staff will incorporate the above criteria into the Scoping Plan evaluation to the extent feasible with the information available at the Scoping Plan level.