

9 December, 2008

*California Air Resources Board
1001 I Street
Sacramento, California 95841*

Subject: Climate Change Proposed Scoping Plan, Tracking and Measuring Progress

The legislation proposed under the auspices of AB 32 *The California Global Warming Solutions Act of 2006*, is ground-breaking, progressive and an important step in the right direction towards a national dialog and emissions reduction program in concert with a credible national energy policy. The legislation has been followed up by the recently-released “*Climate Change Proposed Scoping Plan, October 2008*” which lays out the implementation of AB 32, which is also an important step towards defining the requirements, needs, and methodology to meet the reductions mandated under AB32. However, “*Tracking and Measuring Progress*” (Section IV-D) is fundamentally flawed in its assumptions and implementation in nearly exclusively relying upon a ‘bottom-up’ inventorying methods for quantifying and tracking “greenhouse gas” (GHG) emissions. There is a large and extensive scientific literature base which documents that such inventories can be off by factors of two (2) or more. This is the case nationally in the US where the bottom up estimate of SF6 emissions are close to a factor of three (3) lower than what is required to match what is observed in the atmosphere. This single example shares commonality with other estimates of other emissions which show that bottom-up inventories are always biased to UNDERESTIMATING the true emissions. This is the case even when there are not substantial financial incentives and dis-incentives to ‘gerrymander’ the inventory to meet a specific outcome (*eg.*, when cap and trade, “mitigation” efforts, and “carbon” auctions, each of which carries financial benefits and incentives for specific players, are being combined in the case of AB 32’s implementation).

A credible, scientifically defensible estimate of GHG emissions requires additional effort beyond the “Report Card” approaches described in the *Scoping Plan*. Such methods need to include an analysis of the uncertainties in the GHG emissions, and independent verification of the bottom-up inventories. There is only a brief reference to verification based on atmospheric measurements at the end of the third paragraph in Section IV-D: “*Continuous atmospheric monitoring of greenhouse gases may be useful for determining the effectiveness of emission reduction strategies and for future inventory development.*” Such a statement is ineffective and artificially weak in articulating the true need of such an activity.

In order to add credibility to the *Scoping Plan*, I strongly recommend that the Air Resources Board include an expanded description on the role of instrumental observations, including but not exclusive to continuous monitoring and discrete whole air sampling and improving verification strategies such as the combination of observations with modeling (*vis a vis* “top down inversion” models). Without such a statement the *Scoping Plan* if implemented as stated will not meet the stated goals and actual progress towards (verified) emissions reductions.

Respectfully yours,

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