June 20, 2008

Mary Nichols
Chairperson, California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

Re: Renewable Energy in the AB 32 Scoping Plan

Dear Chairperson Nichols,

The undersigned public health, environmental, environmental justice, business, and science groups are writing to share concerns regarding the recent economic modeling conducted for the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to assist the energy agencies in developing their recommendations to CARB for implementation of AB 32 in the electricity sector. We are concerned that the recently-presented modeling results provide incomplete and potentially unreliable information to form the basis of AB 32 policy decisions. Alternative runs of the modeling, along with qualitative factors that are not considered by the model, demonstrate that achieving a 33 percent RPS is both cost-effective and necessary for putting California on a path toward meeting its 2020 and 2050 climate goals.

We urge CARB to include a 33 percent RPS as a core measure in the scoping plan.

Several of the undersigned groups have also submitted comments to the CPUC and CEC to express concerns similar to those in this letter. These comments can be made available upon request.

The CPUC and CEC are utilizing a model developed by E3 to examine the impacts of different AB 32 regulatory scenarios on the electricity sector. The model suggests that an "aggressive" policy case that includes a 33 percent RPS and achievement of high energy efficiency goals would result in a reduction of 29.6 million metric tons of global warming pollution in 2020, at a cost of more than $130 per ton. However, if the model is run with more reasonable assumptions, the same model shows that the same level of global warming pollution reductions can be achieved at approximately a third of this cost.

This difference in cost of global warming pollution reductions is due to the fact that the model fails to account for:

Expected solar technology cost reductions over time. For example, the model assumes that solar thermal and PV costs are unchanged from 2008 to 2020, while U.S. government cost projections predict significant cost reductions ranging from 16% to 68% over the same time period.

Expected improvement in wind turbine technology. The model assumes that the capacity factor for wind remains constant from 2008 to 2020, which contradicts the historical trend and is inconsistent with government analyses that predict higher wind capacity factors due to improvements in turbine technology. For example, a May 2008 U.S. Department of Energy report estimates that wind capital costs will decline by 10% and that capacity factors will increase by about 15% over the next two decades.

Price risks associated with a high fossil fuel-based electricity mix versus an electricity mix with substantial renewable resources. California's heavy reliance on volatile natural gas

process carries significant and growing financial risks for customers that are not reflected in the model. The model also assumes that natural gas prices remain at a constant $7.85/MMBtu through 2020 – a highly conservative assumption considering that natural gas prices are currently trading in excess of $10/MMBtu in the California market. Obviously, one of the best ways to moderate future gas prices is to invest in clean resources that displace gas-fired generation. The aggressive policy case, which includes a 33 percent RPS and achievement of high energy efficiency goals, could reduce natural gas demand by approximately 20 percent, and would have a significant impact in lowering gas prices.

Shared costs of new transmission. The model allocates the full cost of transmission investment to access renewable resources to renewable generators, ignoring the base case transmission requirements and the system benefits that these upgrades provide to the entire electricity network.

Increases in the cost of building new combined-cycle natural gas plants. The model uses costs from two California natural gas plants that were built in 2004 and 2005—before the recent dramatic increases in the cost of steel and other materials used for plant construction.

Additionally, the model does not take into account any of the environmental, public health, and economic development co-benefits of increased renewable energy and energy efficiency, as AB 32 requires. Therefore, the dollars-per-ton cost of CO2 reductions that the model estimates for these measures should be seen as highly conservative figures that may not meet the cost-effectiveness test required by AB 32. Furthermore, the model's dollar-per-ton cost estimates are extremely sensitive to small changes in input assumptions, and are at present too uncertain and unreliable to form the basis of important AB 32 policy decisions.

Based on alternative runs of the model using more reasonable assumptions performed by the Union of Concerned Scientists, Natural Resources Defense Council, and others, we believe that implementing a statewide 33 percent RPS and adopting other clean energy measures to achieve significant greenhouse gas reductions in the electricity sector are cost-effective and essential to meeting the state's climate and energy goals.

A 33 percent RPS would employ an already-established, readily implementable and verifiable means to achieve a substantial proportion of California's GHG goals. Establishing a clear renewables goal is necessary if renewables are to play a significant part in GHG reduction. Renewable energy is capital-intensive with long-term planning needs, both for the facilities themselves and the transmission infrastructure necessary to support them. It is unrealistic to expect a substantial contribution from renewables without establishing a clear goal that will spur the necessary investments.

For these reasons, we urge CARB to include a 33 percent RPS as a core measure in the scoping plan.

Sincerely,

Maia & Elfie Ballis, **SunMt**

Jason Barbose, **Environment California**

Sara Birmingham, **The Solar Alliance**

Adam Browning, **Vote Solar**

Steve Chadima, **Energy Innovations**

Audrey Chang, **NRDC**

Cliff Chen, **Union of Concerned Scientists**

Luke Cole, **Center on Race, Poverty, and the Environment**

Will Coleman, **Mohr Davidow Ventures** *(Listed for affiliation only)*

Shannon Eddy, **Large-Scale Solar Association**

Tom Franz, **Association of Irritated Residents**

Bonnie Holmes-Gen, **American Lung Association of California**

John Humphrey, **Sustainable Energy Partners**

Andy Katz, **Breathe California**

Craig Lewis, **GreenVolts**

Rey Leon, **Latino Environmental Advancement & Policy Institute**

Jim Metropulos, **Sierra Club California**

Rachel McMahon, **CEERT**

Gregg Morris, **Green Power Institute**

Renee Nelson, **Clean Water and Air Matter**

Brian Nowicki, **Center for Biological Diversity**

Karen Pierce, **Bayview Hunters Point Community Advocates**

Shankar Prasad, **Coalition for Clean Air**

Pete Price, **California League of Conservation Voters**

Nancy Rader, **California Wind Energy Association**

Polly Shaw, **SunTech America, Inc**.

Kari Smith, **SunPower**

Jim Stewart, **Earth Day Los Angeles**

Mark Stout, **Cleantech America, Inc.**

Matt Vander Sluis, **Planning and Conservation League**

Derek Walker, **Environmental Defense Fund**

cc: Speaker Karen Bass
Senator Don Perata
Chuck Shulock, CARB
Edie Chang, CARB
David Kennedy, CARB
Linda Adams, CalEPA Secretary
Darren Bouton, Governor's deputy cabinet secretary
Susan Kennedy, Governor’s Chief of Staff
Commissioner Jackalyne Pfannenstiel
Commissioner James D. Boyd
Commissioner Arthur H. Rosenfeld
Commissioner Jeffrey Byron
Commissioner Karen Douglas