SoCool, Inc., 26371 Paloma #87, Foothills Ranch, California 92610 Tel: (949) 293-2742

May 31, 2012

Ms. Mary D. Nichols, Chairwoman
California Air Resources Board
1001 "I" Street
Sacramento, California 95814

Dear Ms. Nichols and Board Members:

Pursuant to your invitation for interested parties to submit written comments regarding investing California's Cap-and-Trade Program auction proceeds to advance the goals of Assembly Bill No. 32 ("AB-32"), and following SoCool's attendance at the public forum held May 24, 2012 at which Mr. Hoffman spoke during the public comment session, SoCool, Inc. is hereby submitting the following comments. It is apparent to our management that the ARB and the citizens of California, as represented by those panel members and citizens who offered their opinions, that funds need to be expended on programs that:

- Reduce Green House Gases ("GHGs") in significant volumes,
- Are truly transformational (generate maximum impact on multiple AB-32 goals),
- Be quantifiable, measurable, and free of misinterpretation,
- Benefit all citizens, including disadvantaged sectors, and create jobs,
- Be able to be easily scalable and come to market to make a near-term and long-lasting impact on air quality.

SoCool, Inc. has been developing a product based on many of the criteria set forth in AB-32, and will soon release that product to the general market. SoCool's Cool Breeze product uses solar photovoltaic power to remove hot air from the cabin of a vehicle at rate that allows the interior of the vehicle to be maintained at or below ambient temperature. This removal and cooling process occurs whether the vehicle is stationary, parked in the sun, or moving. As a result, vehicles rely on solar power to cool vehicle cabins and do not need the costly and pollution-causing effects afforded by vehicle air conditioners, thereby significantly reducing fuel use and reducing GHGs.

The National Renewable Energy Laboratories ("NREL") has issued numerous studies on the detrimental effects of vehicle air conditioning as a means of keeping vehicle cabins cool. In NREL Abstract CP-540-28960, NREL stated that, "***Current air-conditioning systems can reduce the fuel economy of high fuel-economy vehicles by about 50% and reduce the fuel economy of today's mid-sized vehicles by more than 20% while increasing NOx by nearly 80% and CO by 70%.***"

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Proposal:

- CARB should mandate or encourage the installation of a carbon reducing, fuel efficient air cabin cooling system in every state, municipality and agency vehicle via a Cap and Trade funded rebate to such entity for each installation.
    - This can be started as a pilot project for select units of government and, based upon measured results and benefits that prove GHG reductions and resolve other AB-32 goals, it can be subsequently rolled out to other units of government in a controlled and measured program. This will not only solve the multiple goals set forth in AB-32, but also give CARB immediate success on which CARB progress may be measured. Additionally, although not part of AB-32, the fuel efficiencies translate into cost reductions that will be realized by entities using the solar-powered vehicle cabin air cooling system. Saving 10% to 50% of fuel otherwise consumed by vehicles using standard air conditioning is absolutely huge and vitally important to the State and its municipalities and agencies.
- CARB should subsequently encourage legislation to require proven solar-powered GHG emission reductions and fuel efficiencies on all vehicles operated statewide after the benefits to units of government are proven and documented.

Measurable Benefits:

- The direct benefit in GHG emission reduction will be the largest ever obtained and far larger than any proposed to date in the State. The technology has been tested and studied by NREL, and the Cool Breeze product, accompanied by NREL-certified test results to be presented to CARB in the coming months, will allow an immediate and practical method to implement real GHG emission reductions.
- The benefit in fuel savings to units of government is staggering. NREL's data on the amount of fuel used in operating vehicle A/C systems shows this to be true.
    - A NREL study found that 79% of all vehicle journeys are for 30 minutes or less. Between these journeys the vehicle is parked, and is heating up if parked in the sun. SoCool's Cool Breeze keeps the parked vehicles at ambient temperature, lowering the need to operate the air conditioner at full speed to "cool the cabin down", upon the driver’s return to the vehicle.
    - NREL noted that during the periods that the vehicle is moving and the A/C is on at full speed, the vehicle is using extra fuel equivalent to operating the vehicle at 35 MPH. A major issue is that the vehicle is not likely to have cooled the cabin during the short "30 minute" journey and is therefore just going to heat up again faster on the next trip - another full A/C journey later.

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- NREL noted that the average reduction in fuel use by not operating the air conditioning is approximately 20-50%, with also leads to a 20-50% drop in emissions. Translated, 79% of all journeys will elicit a 20-50% fuel saving and emission reduction if the vehicle cabin is kept at ambient temperature while parked.
- **Therefore all State and municipal units of government that use a solar-power vehicle cabin cooling system can expect a general reduction in fuel costs of between 20% and 50%, and also reduce emissions by a similar amount**.
- **If California were to implement a complete State-wide installation of solar-power vehicle cabin cooling system, the State could show a 20-50% reduction in vehicle-derived emissions by the end of the adoption period, and this would be the most significant drop in vehicle-derived GHG emissions in State history**.

- The installation of solar-powered vehicle cabin systems will create immediate and sustained benefits for disadvantaged California citizens as well. Not only will GHGs be reduced, but with fuel economies significantly impacted, less fuel will be burned and the air quality in areas near freeways will improve. As each vehicle will require approximately two hours of installation time plus pick up and delivery services, this program will create job opportunities for semi-skilled and unskilled workers in the State of California. These jobs will be created in all areas of the State and may also cause our business partner Signature Automotive Products to open new installation facilities in under-represented markets.

SoCool will soon be armed with certifiable test results from the NREL testing facilities in Golden Colorado, and it will bring those results and a more structured proposal to CARB in the near future. We are confident that our proposal set forth herein will when implemented bring to CARB and the citizens of California the benefits responsive to the mandates of AB-32.

Sincerely,

Edwin Hoffman,
President and Chief Technology Officer
SoCool, Inc.