



224 Airport Parkway, Suite 620  
San Jose, California 95110  
(408)501-7864 Fax (408)501-7861  
<http://www.svlgrp.net>

CARL GUARDINO  
President & CEO

**Board Officers:**  
MICHAEL SPLINTER  
Chair

Applied Materials  
WILLIAM D. WATKINS  
Vice Chair

Seagate Technology  
ROBERT SHOFFNER  
Secretary/Treasurer  
Citibank

WILLIAM T. COLEMAN III  
Immediate Past Chair

Cassatt Corporation  
AART DE GEUS  
Past Chair

Synopsys  
Board Members:

JOHN ADAMS  
Wells Fargo Bank  
JOHN AMBROSE

Coherent, Inc.  
NED BARNHOLT  
KLA-Tencor

TOM BOTTORFF  
Pacific Gas & Electric  
MARK DEAN

IBM Corporation  
RAQUEL GONZALEZ  
Bank of America

JON HOAK  
Hewlett-Packard Company  
LEONARD KWIATKOWSKI

Lockheed Martin Space Systems  
RICHARD LEVY  
Varian Medical Systems

PAUL LOCATELLI, S.J.  
Santa Clara University  
HIROAKI NAKANISHI

Hitachi Global Storage Technologies  
LEN PERHAM  
Optima Corporation

KIM POLESE  
SpikeSource, Inc.  
BYRON SCORDELIS

Greater Bay Bancorp  
DAVID J. SHIMMON  
Celerity, Inc.

ABHI TALWALKAR  
LSI Logic  
DAN WARMENHOVEN

Network Appliance  
KENNETH WILCOX  
SVB Financial Group

JOANN ZIMMERMAN  
Kaiser Permanente  
Working Council Chair

LEON BEAUCHMAN  
AT&T  
Established in 1978 by

DAVID PACKARD

September 24, 2007

Mary Nichols, Board Chair  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**RE: Comments on ARB Draft Staff Report on an Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California.**

Dear Madam Chair:

The Silicon Valley Leadership Group appreciates the opportunity to provide comments on the Expanded List of Early Action Measures proposed in the Draft Staff Report issued September 2007 under the Global Warming Solutions Act (AB32). We applaud ARB staff for their tremendous work in this area.

The Silicon Valley Leadership Group, founded in 1978 by David Packard of Hewlett-Packard, represents 210 of Silicon Valley's most respected employers on issues, programs and campaigns that affect the economic health and quality of life in Silicon Valley, including energy, transportation, education, housing, health care, tax policies, economic vitality and the environment. Leadership Group members collectively provide nearly 250,000 local jobs, or one of every four private sector jobs in Silicon Valley. The Leadership Group is a Santa Clara County Certified Green Business.

After reviewing the ARB Draft Staff Report, we would like to respond specifically to five of the Early Action proposals, three of which have been recommended as Discrete Early Actions. We also have several general areas of feedback, included at the end of this letter:

- 1) SF<sub>6</sub> reductions from the non-electric sector** – Our members recognize the potential for reducing emissions of SF<sub>6</sub> in its use to test ventilation efficacy of laboratory fume hoods. The use of SF<sub>6</sub>, however, is often most directly controlled by fume hood manufacturers and service providers rather than the facility operators, who contract with them for this equipment. We would encourage outreach to and soliciting stakeholder input from those applicable fume hood industry representatives. ARB staff has correctly identified ASHRAE as an affected trade association who may currently have standards on SF<sub>6</sub> use in fume hood testing, and we would encourage staff to consider working with SEMI, the semiconductor trade association, as well. Also, it is important for ARB staff to coordinate with Cal-OSHA and ensure that any regulatory approaches are harmonized to both reduce SF<sub>6</sub> emissions and meet requirements for laboratory employee safety. If alternative, cost-effective gases are available, then they should be encouraged.
- 2) Reduction of PFCs from the semiconductor industry** – As ARB staff has correctly recognized, many leading semiconductor manufacturers are participating in a voluntary national effort to reduce PFC emissions under an MOU with the U.S. EPA. It is important to note that although a

semiconductor “manufacturer” may be located within California, this does not automatically mean they have actual manufacturing facilities here. We would encourage staff to review and publicly distribute the data behind this claim in the staff analysis: “Only three of 93 California manufacturers (about 15 percent of California production) participate in the MOU agreement” (C-5). For example, many of the remaining semiconductor “manufacturers” in California only perform administrative, research & development, or other non-manufacturing related activities in the state. As staff notes, due to global business dynamics, many manufacturing activities have either been moved to company facilities overseas, or contracted to specialized third-party manufacturers overseas. Older equipment is often re-sold and upgraded for these purposes, and therefore is able to extend its useful life.

In regards to two of the technology options for process optimization and alternative chemistry development, we would advise that establishing a percentage of required PFC reduction using a performance standard approach will be more flexible and feasible for entities to comply with, rather than mandating technologies and systems to use. The semiconductor industry thrives on innovation, and can meet goals for PFC reduction in unique and currently unknown ways.

- 3) **Alternative suppressants in fire protection systems** - In evaluating the feasibility and potential for reducing climate impacts in this measure, our members had many of the same questions outlined by ARB staff, namely whether alternatives are as effective (and therefore whether insurance and fire safety professionals will approve them) and what are the multi-media environmental and health impacts of alternatives. It is likely that another agency with more direct experience with fire and worker safety may be appropriate to evaluate this measure in more depth. More detailed analysis of overall global warming impacts due to fire protection systems should also be undertaken, since chemicals with global warming potential are only released in limited fire emergencies, and these systems are not known to leak. We would encourage ARB staff to quantify the often considerable costs of retrofitting existing fire protection systems, as oppose to installing new systems. Also, due to the high risk applications of these systems (used for expensive and critical data centers containing vital information, clean rooms running complex R&D experiments, and essential telecommunications equipment), we would recommend to allow flexibility for users to choose the most appropriate system and technologies for their use.
- 4) **Guidance/protocols for businesses to facilitate GHG emissions reductions** - As a business association that directly provides its members with greenhouse gas emission reduction guidance and a palette of informational resources, the Leadership Group is encouraged to see this early action measure identified by the ARB. Through our energy efficiency joint effort with PG&E that is projected to save 34 million kWhs and reduce 19,000 tons of carbon dioxide, our partnerships with Sustainable Silicon Valley to reduce regional GHGs by 20% below 1990 levels by 2010, and our “Clean and Green” Alternative Energy Action Plan which has programs to encourage employee commuting alternatives, plug-in hybrid market creation, solar industry performance excellence, datacenter energy efficiency, and others, we understand the strategies, importance, and impact of educating businesses to take action on climate change. Our members include a range of small to large companies and employers, and we would welcome coordinating with ARB to make this measure effective and successful.
- 5) **Low-carbon Fuel Standard** – The Leadership Group supports the Governor’s proposal for a Low Carbon Fuel Standard, and its implementation by ARB.

In addition to comments on these five Early Action Measures, we would like to note that implementation and enforcement of these measures over the next four years calls for flexibility as well as patience. Given the dynamic and evolving areas of climate change policy, as well as climate change solutions, we would be interested in how the ARB proposes that additions, revisions, or deletions to these measures may occur over this timeline. As new approaches to mitigating climate change impacts arise (eg. maturation of the carbon offsets market) or transformations occur in the emissions demographic of California industries (eg. semiconductor industries increasingly manufacturing out-of-state), it would be good to understand how ARB will incorporate these changes over time.

Also, the evaluation of these Early Action Measures appears to have occurred with limited input from other ARB AB 32 implementation efforts, such as the ETAAC, Market Advisory Committee, and Early Action Credit approaches. The Leadership Group members are very interested in those efforts, and would encourage dialogue

between staff of these various processes in order to capture areas of overlap, determine the most cost-effective strategies, or opportunities to coordinate.

The members of the Silicon Valley Leadership Group are committed to remaining engaged and supportive of the process to implement AB32. Thank you again for considering our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Teng". The signature is written in a cursive, flowing style.

Frank Teng  
Senior Associate, Energy and Environmental Programs  
Silicon Valley Leadership Group

Cc:  
Chuck Shulock  
Eileen Tutt  
Jerry Hill