

SIA COMMENTS TO “PROPOSED PERFORMANCE STANDARDS FOR SEMICONDUCTORS AND RELATED DEVICES”

**4th Public Workshop
Reducing Fluorinated Gas Emissions From Semiconductor &
Related Devices Industry**

**Sacramento, CA
October 23, 2008**



Agenda

- ❖ **Lack of Transparency**
- ❖ **Overly Aggressive Expectations**
- ❖ **Cost Effectiveness**
- ❖ **Ban on SF₆**
- ❖ **Lack of Recognition for Past Efforts**

Lack of Transparency

- ❖ We would appreciate the opportunity to discuss in more detail the information provided by CARB in our 9/12 inquiry
- ❖ It's not clear why
 - The emissions for each Tier keep changing from one iteration to the next
 - A 0.15 MMTCO₂E reduction (51.7%) was identified as needed for the industry
- ❖ It's not clear why the 0.29 MMTCO₂E that the industry represents (~0.06% of the total CA GHG emissions) warrant selection for early action
- ❖ It's still not clear how costs for attaining the proposed standards were determined since they seem to be considerably lower than industry estimates
- ❖ It's not clear that CARB has given credit to companies already voluntarily reducing GHG emissions and what that credit was

Overly aggressive expectations

- ❖ **Original targets in the Early Action Measures were 50% reductions by 2020.**
- ❖ **Based on CARB belief that additional reductions were available and cost effective, the reduction target was restated as a 52% reduction by 2012.**

Cost Effectiveness

- ❖ In the CARB Draft Scoping Plan, a figure of \$3 Million was estimated as the annualized cost to the CA semiconductor industry to reduce emission to 0.15 MMTCO₂E (a 50% reduction).
- ❖ Costs associated with achieving the current required reduction are likely to be much higher and will likely exceed the CARB estimate for each affected facility .
- ❖ The small benefit achieved from achieving this target does not warrant the cost, nor, will it significantly help CARB achieve its' goal to reduce CA GHG emissions by 169 MMTCO₂E by 2020 .

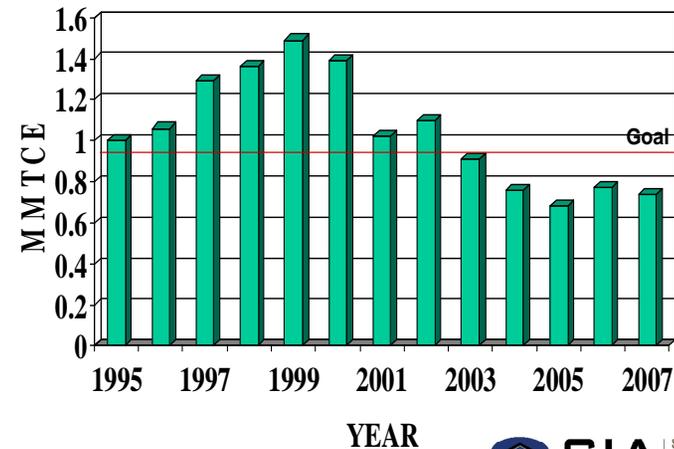
Ban on SF₆ for Chamber Cleaning

SIA thanks CARB for rethinking and eliminating the proposal to ban SF₆ in certain chamber clean processes

Lack of Recognition for Past Efforts

- ❖ AB 32 requires ARB to ensure that entities that have voluntarily reduced their greenhouse gas emissions prior to the implementation of GHG emission limits and GHG reduction measures receive “appropriate credit” for early voluntary reductions (see Health & Safety Code section 38562(b) (3)).
- ❖ Proposed performance standard does not adequately reward progress made by the industry prior to 2006.
 - No credit for gains from process optimization.
 - No credit for gains from chemical substitution.
 - No credit for implementation of remote plasma in chamber cleaning.
- ❖ To exemplify this, SIA MOU participant emissions have gone from a high value of 1.49 MMTCE (5.47 MMTCO₂E) to 0.74 MMTCE (2.72 MMTCO₂E) in 2007, a reduction of 50%.

SIA Partners PFC Emissions 1995-2007



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