CALIFORNIANS AGAINST WASTE

June 4, 2007

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OFFICE OF THE CHAIRMAN
AIR RESOURCES BOARD

Alan C. Lloyd, Ph.D., Chair
Economic and Technology Advancement Advisory Committee
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Ideas and Suggestions for Technologies to Reduce Climate Change Emissions in California

Dear Chair Lloyd:

Thank you for the opportunity to provide input on global warming reduction technologies. We urge you to consider increased recycling and material-specific disposal limits as a means to reduce greenhouse gas emissions while having a positive impact on the economy. A modest 25% reduction in disposal of materials commonly collected in curbside programs could deliver 5 $MMTCO_2E$ of GHG reductions, an amount equal to over half the GHG emissions from the solid waste sector[1].

Ton for ton, recycling reduces more pollution, saves more energy and reduces GHG emissions more than any other solid waste management option. Despite a robust materials collection infrastructure and achievement of a 50% diversion rate statewide, Californians disposed over 42 million tons of solid waste in 2004. Over 60% of these materials were recyclable.[2] When disposed they generated 8.45 $MMTCO_2E$ of GHG emissions. [3]

Recycling reduces GHG emissions in two important ways. First, recycling keeps materials out of the landfill, thus avoiding methane emissions. More importantly, recycling reduces emissions associated with the mining, processing, and transportation of virgin resources. Everyday consumer products such as paper and aluminum cans are made from virgin materials mined from the earth, transported great distances, and eventually processed with industrial machinery. This all results in significant GHG emissions. We simply cannot afford to continue to waste these precious commodities.

Recycling offers multiple benefits as a greenhouse gas reduction strategy

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[1] All GHG reduction estimates were generated using the National Recycling Center Environmental Benefits Calculator. Reductions in Greenhouse Gas Emissions through Recycling is based on the data and methodology developed by the U.S. Environmental Protection Agency.[i] EPA based most of its calculations on data from Franklin Associates,[ii] Research Triangle Institute, [iii] and research on methane emissions by N.C. State University.

[2] CIWMB

[3] Inventory of California Green House Gas Emissions and Sinks: 1990-2004. p 73. California Energy Commission, October 2006.

Recycling offers unique benefits as a strategy for reducing greenhouse gases, both substantively and symbolically. Reducing methane emissions will yield greater immediate results than CO_2 based strategies alone. Methane has 23 times the climate forcing potential than CO_2, and has a lifespan of only 12 years. Thus, a single ton of CH4 will have 23 times the impact over 12 years that a ton of CO_2 will over 100. Ensuring methane reduction is part of a global warming strategy will help achieve a quick initial reduction in GHG.

Recycling is also widely accepted and has a proven economic track record. Increasing recycling will achieve significant GHG reductions without investment in new technologies or systems. Increasing the flow through California's existing materials recovery and recycling infrastructure will generate significant economic benefits. The CIWMB has estimated that recycling waste has twice the economic benefit of landfilling the same material.[4]

Recycling is one of the few activities that allows ordinary citizens and businesses to take proactive steps to protect their environment. It is widely accepted, readily implemented, and can deliver significant GHG reductions.

Expansion of Curbside Recycling. Residential waste accounts for 32% of California's overall waste stream. Paper, cardboard, glass and metals are among the most prevalent materials in the residential waste stream. Despite their popularity and effectiveness, just half of California residents have access to convenient and cost effective curbside recycling. Curbside recycling should be made available to every household (single and multi-family) by 2010.

Expansion of Commercial Recycling. Commercial waste accounts for 47% of California's overall waste stream. Cardboard and paper make up the single largest component of commercial waste, making up over 26% of the stream. Over the last decade thousands of California businesses have seen their waste management costs reduced through the establishment and expansion of commercial waste recycling. However, for many medium and small businesses in California, their remains a disconnect between the waste they generate on a day-to-day basis, and the portion of their business overhead costs which go to waste management. Commercial enterprises should be required to obtain recycling services by 2010.

Increased Composting Increased composting of organic materials would serve as a very effective and efficient greenhouse gas mitigation technology. The anaerobic decomposition of these materials in landfills results in large amounts of methane being produced. Although some of this methane is recovered by a gas capture system, even a gas collection system with perfect efficiency does not collect methane before it is turned on or after it is turned off. Increased composting would serve as a superior alternative to the landfilling of organics. Composting has multiple GHG benefits, including avoided

[4] CIWMB State Agency Workplans, December 2005.

landfill emissions, greater carbon sequestration in crop biomass, a decrease in the need for GHG-releasing fertilizers and pesticides, and a decline in energy-intensive irrigation.

Material Specific Disposal Bans. A surprisingly small number of readily recyclable materials (e.g . corrugated cardboard and mixed paper), account for the lion's share of California's GHG emission reduction potential. In addition to those materials disposed through residential and commercial collection, approximately 20% of disposed waste is hauled directly to the landfill by residents and businesses. Of this material, over half is readily recyclable construction and demolition debris (C&D). Material Specific disposal limits would require all Californians to limit their disposal of recyclable materials such as cardboard, paper, or C&D, regardless of whether it is collected by a refuse company or self hauled to the landfill.

These proven strategies would achieve very substantial reductions in global warming emissions, while stimulating the economy and helping reduce the need for virgin products as manufacturing inputs. We believe that waste reduction and recycling represent not only an opportunity to reduce existing emissions from the waste sector, but provide an opportunity for significant additional reductions deep within the energy and transportation sectors. We look forward to working with you on implementing the effective measures.

Sincerely,

Scott Smithline
Director of Legal and Regulatory Affairs

cc: Steve Church, Research Division, ARB