

To: ETAAC
From: Dorothy Rothrock
Date: August 13, 2007

Subject: Big Ideas for Industrial Sector and “Other” Areas

The following list of Big Idea recommendations are based on materials presented to the interested individuals over the last few months. The background information is more fully contained in the attached document. In no particular order of “bigness”, here they are:

1. Small Business

a. On-Bill Financing for energy efficiency projects

To overcome cash flow and capital constraints for small businesses, we recommend that utilities finance the cost of energy efficiency projects. On Bill Financing (OBF) is a method where investments in energy efficiency are purchased the same way energy is purchased, by the month in installments paid via a line item on the utility bill. Where OBF design proposals differ from established norms and would impose unacceptable risk, insuring loans may be appropriate. In addition, it may be important to remove any negative tax impact for small businesses receiving this benefit.

c. Small business “greentech” tax incentives

Assemblyman Juan Arambula, Chair of the California State Assembly Committee on Jobs, Economic Development and the Economy has a series of bills to support small business adoption of GHG reduction technologies. AB 1506 requires Business, Transportation and Housing Agency to study how to provide incentives for small businesses to adopt cleaner technologies. AB 1527 would provide R&D tax credits to small businesses doing research related to clean technologies. AB 1651 would give a 10% income tax credit for the purchase of clean tech equipment by small businesses. The ETAAC should consider tax policies such as these to encourage small (and large) businesses to undertake measures to meet AB 32 goals that would otherwise be cost prohibitive.

2. Industrial Sector

a. Industry/Government partnership to improve industrial energy intensity

California should join the planning effort for the USDOE “Superior Energy Performance Partnership”. This is a proposal to achieve significant cost effective GHG emissions reductions and energy savings through company commitments for reduction, adoption of

energy management plans, adopting best practices and reporting annual reductions toward the goals. Resources include tools, training, and assessments. Proposed rewards for meeting goals include public recognition and preference for RD&D solicitations.

Support for this approach comes from successful programs in other countries. The key ingredient for success is that companies have the flexibility to determine how reductions can be achieved, that government is working as a partner to provide support and technical assistance, and that improving energy intensity, not simply lowering emissions, is the goal of the program. It is vital that companies not be rewarded for reducing production in order to achieve GHG emission targets.

b. Revolving fund for technology demonstration projects

Companies are reluctant to be the first to adopt technologies coming onto the market, particularly when the technologies are closely involved with the manufacturing process. The risks are simply too great when a failure could threaten the health of the company, relationships with suppliers, the confidence of consumers, etc. And until proven, the technologies will not pass muster with permitting agencies, will not qualify for utility rebate programs, and may not qualify for financing. Until proven through successful demonstrations, technologies cannot gain a foothold in the market. There are limited funds to overcome these barriers. More than the paucity of funds, it is essential that the bureaucratic and process barriers to working with the private industry be eliminated; so that the demonstration of new technology could happen in a timely fashion.

A new program for California Demonstrations for Industrial Energy Technologies (California DIET) would accelerate adoption of emerging, technically proven energy efficiency technologies through industrial demonstrations by:

- Creating a low-cost loan fund, to be replenished by royalties on demonstrated projects, shared energy savings and shared carbon credits banked for future use or sale.
- Providing demonstration funds on a cost-sharing basis to industry or developers
- Eliminating bureaucratic and process barriers through legislative exemptions.
- Providing independent, third party validation of results
- Provide accelerated depreciation & tax credits.
- Encouraging industry supported technology transfer and promotion

c. Rebates for load reduction using non-generation technologies

Many technologies that could provide GHG emission reduction benefits (as well as peak load reduction) fall through the cracks of current rebate programs funded by utility customers. Examples include solar technologies that provide refrigeration/cooling without combustion or compression, waste heat technologies that provide refrigeration/cooling and energy storage technologies that allow peak reduction and demand response (as an alternative to running GHG emitting peaker units).

d. Improve policies to support on-site Combined Heat and Power

CHP installations can provide significant energy efficiency improvements in industrial applications by using otherwise wasted heat from combustion processes to create electricity for use on site. (There is also a tremendous opportunity to expand CHP to supply electricity to the grid, but the policy issues for those applications were not considered in this process.) While not a new technology, state and utility policies with regard to “self-generation” have discouraged full penetration of cost-effective CHP into the industrial sector and commercial sectors. Qualifying CHP would need to be defined, depending on the technologies employed, the equipment being replaced, and alternative supply emission characteristics. To accomplish the goal to expand CHP, the state should:

- CHP installations (like other energy efficiency measures) should not be penalized with departing load charges in connection with utility resource or reliability procurement or otherwise.
- Maintain GHG emission credit ownership with the facility for trading in California’s cap and trade program
- Restore combustion technologies to the Self Generation Incentive Program
- Provide incentives to utilities to participate in CHP solutions

3. Buildings

The use of energy in buildings is a large component of the GHG emissions in the state. The Governor started a “Green Buildings Initiative” to reduce energy use in state building, and the California Energy Commission periodically updates energy efficiency standards for new construction in the state. Existing technologies are sufficient to reap significant energy efficiency savings if incentives are aligned correctly and policies support their adoption. The following are ideas to encourage better energy performance in new buildings, and to encourage cost-effective building retrofits:

- Support green building fast-track permitting and provide funding and training for building officials
- Require building audits for water and energy as a condition for utility service in all buildings. Audit documentation would be required every five years to continue service
- Fund and organize collection of climate data and the development of software to aid in building designs that would work with the climate to minimize energy use.
- Encourage combined heat and power systems

- Provide a state green building information resource. This resource would provide consulting and maintain online impartial technology reviews, a service provider directory, and a product directory.
- Provide education and training for contractors in energy efficient alternatives and green building technology.

4. Waste Conversion

Over 80% of California waste stream is organics. The alternatives for waste management include recycling, landfill or transformation. Waste conversion is the transformation alternative that does NOT include incineration. Instead, it uses thermal, chemical, or biological processes to transform waste into fuel, chemicals or other products. It can be used for waste that is not readily recyclable. GHG reduction benefits would flow from reduced transportation of waste and providing feedstock for low emission bio-mass electricity production. To make conversion an option for waste management requires we should:

- Establish a viable permitting process for waster conversion facilities that protects the public while making it possible to permit these types of facilities within reasonable timeframes.
- Enable waste conversion to qualify for diversion credit, by modifying the criteria laid out by AB 2770, 2002.

5. Broad state participation to achieve GHG emission reduction goals

Request that the Governor specifically direct each state agency that interfaces with businesses and/or consumers to do everything possible to help AB32 succeed in reducing emissions and to report back on progress at six month intervals. This would encourage agencies to review the scope of their authority, to find where their policies may be conflicting or not supportive of business and consumer efforts to reduce their GHG emissions, and to take appropriate steps to improve the situation.