AB 32: Meeting the Challenge of Reducing Emissions in a Growing Economy

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Scale of the Challenge

- AB 32 requires California to reduce emissions to the 1990 level by 2020
- If current trends continue, this implies reductions of approximately 170 million metric tons of CO$_2$e, relative to “Business-as-Usual”
- Meanwhile, CA population is expected to grow by more than 20% and the economy is expected to grow even faster
ARB’s Discrete Early Actions are vital to jump-start the transition

• ARB staff proposed 37 Early Actions for consideration by the Board
• AB 32 requires ARB to implement discrete early action regulations by 2010 to prompt consumers and firms to begin moving toward the goal
• 3 discrete early actions approved June ‘07
  – Low carbon fuel standard
  – Limit on sale of small cans of refrigerant for auto A/C
  – Expanded programs for capture of landfill methane
CalEPA’s Market Advisory Committee had sharp focus and limited scope

- MAC charged with making recommendations on design of emissions cap-and-trade program
- Recommended program that will limit emissions from fuels and electricity sold in CA
- MAC proposal opens option to generate offsets by reducing emissions in ‘uncovered’ activities
More is needed to achieve the goals of AB 32

• Early Actions plus Cap-and-Trade **not enough**
• Need to improve economic and engineering efficiency of energy use
• Need to educate consumers, municipalities, and businesses about opportunities to achieve economic goals with lower emissions
• Need to stimulate sustained technological innovation, changes in consumer behavior, and increasing market share for emissions-reducing technologies
CA Anticipates an Era of Increasing Population and Rising Affluence

- Emissions(t) = Pop * GSP/capita * Emissions/GSP

- To achieve progressively larger reductions from now to 2020 (and then on to 2050), CA must focus on reducing Emission/GSP

- This will require increasing investment in clean techs, coupled with a clear strategy for progressively opening markets for deployment of low-carbon technologies
MAC and ETAAC have complementary roles

- MAC laid out the framework for limiting total, economy-wide emissions
- ETAAC needs to focus on financial and non-financial incentives
  - to accelerate commercialization,
  - to promote consumption patterns that reflect traditional California consumer values of good stewardship, and
  - to encourage investment in manufacturing infrastructure for clean technologies in CA
Other states and other countries use a variety of incentives to promote market penetration and commercialization of clean techs.

- Public outreach and education
- Regulatory streamlining
- Facilitative financing
- Location incentives for manufacturers
Public Outreach and Education Measures

- UK offers public access to a Carbon Footprint Calculator that can help consumers understand the impacts of their behavior.
- CT, MA, and NJ regulators require electricity suppliers to disclose emissions info and fuel mix to retail electricity customers.
- MA allows some communities to choose power supply collectively.
- CA should develop a life-cycle emissions calculator and improved sectoral data set to support good decision-making by households, municipalities, and firms.
Regulatory streamlining

- CEC offers ‘one-stop’ window for expediting power plant siting and permitting
- NY property laws call for solar easements to protect solar access
- However, CA now presents a ‘maze’ of permitting agencies and institutions to firms seeking to site new facilities
Facilitative Financing

• ICICI Bank in India provides special conditional loans to early stage companies, repayment occurs during first profitable year
• CT provides special rebates for emergency generators and distributed generation when installed on customer’s side of meter
• NY, CT, MA provide concessional loan rates on fixed term loans to residential purchasers of Energy Star appliances and firms making Green Building improvements
• CA allows communities to form Municipal Assessment Districts that finance utility undergrounding; this concept could be adapted to help consumers finance retrofits of efficiency or renewable technologies
• CA charges sales/use tax on manufacturing equipment while OR, MA, NJ, and other states offer sales tax waivers for clean techs
Location Incentives

• Many states offer ‘property tax holidays’ and other tax incentives for locating new plants
• CA could offer targeted worker training at Junior Colleges, specific help with locating skilled job applicants, cooperative links with UC and State University system
• City of Berkeley is developing a mechanism to facilitate consumer access to renewable energy credits (RECs) for solar PV
• Tradable efficiency credits (“white certificates”) and RECs should be made easily accessible in all energy and goods purchases
• Low-carbon choices must be easy to access/choose at individual to municipal to industrial levels
Conclusions

• CA needs to promote sustained technology innovation and investment in clean tech to achieve goals of AB 32
• Many options exist to promote investment in clean techs without undermining tax base
• ETAAC can complement recommendations of MAC by highlighting mechanisms to spur sustained investment in clean technologies