

R.11-03-021 UNC/jt2



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07-22-11  
10:28 AM

# ATTACHMENT A

## Attachment A

### **Basis for Comparing the Tradeoffs of Different Proposals Regarding the Use of Allowance Revenues**

The use of revenues generated from the auctioning of emission allowances is not a new area of deliberation. Over the past four years, the Air Resources Board, the California Public Utilities Commission, the California Energy Commission, and stakeholders have considered this issue in a variety of forums. To help inform our assessment of the proposals that will be put forward in this proceeding, we have considered the various policy objectives the use of allowance revenue should achieve according to decisions and advisory materials developed over the course of AB 32 implementation. The materials we rely upon to help identify these objectives include D.08-03-018, D.08-10-037, the Economic and Allocation Advisory Committee's Report "Allocating Emissions Allowances Under a California Cap-and-Trade Program" (EAAC Report), the Air Resources Board regulations<sup>1</sup> including Appendix J regarding Allowance Allocation, as well as the PHC statements and responses to the Joint Utility Motion filed in this proceeding.<sup>2</sup> We recognize that this is not a comprehensive set of source materials; however, these materials provide a useful starting point for identifying those policy objectives that have been generally recognized as meriting consideration in determining the use of auction revenues. Based on our review of these materials, we offer seven policy objectives, described below, that will be used to assess the proposals submitted by parties in this proceeding. While these are not the only objectives that may be considered, and parties are not precluded from suggesting others they believe should also be considered, we direct parties to explain the degree to which their proposals are consistent with or conflict with each of those identified below. We also ask parties to assess the relative importance of these policy objectives as well as others they may identify by ranking them against one another. In providing this ranking, parties should clearly articulate why they believe a particular objective merits the ranking given. We also note that in some instances these objectives may be in direct

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<sup>1</sup> <http://www.arb.ca.gov/regact/2010/capandtrade10/capandtrade10.htm>

<sup>2</sup> May 11<sup>th</sup> Joint Motion filed by PG&E, SCE and SDG&E in R.11-03-012.

conflict with each other. At this point we are not determining which objectives should be given the most weight in making a determination regarding which proposals or elements thereof should prevail, rather we wish to create a framework that allows us to better understand the tradeoffs among the different policy objectives embodied in parties' proposals.

- 1) Preserve the Carbon Price Signal
- 2) Prevent Economic Leakage
- 3) Equitably Distribute Revenue Value Recognizing the Public Asset Nature of the Atmospheric Carbon Sink
- 4) Reduce Adverse Impacts on Low Income Households
- 5) Correct for Market Failures that Lead to Underinvestment in Carbon Mitigation Activities and Technologies.
- 6) Competitively Neutral Across Load Serving Entities
- 7) Administratively Simple/Easy to Implement and Comprehend

### **1.) Preserve the Carbon Price Signal**

This policy objective will be assessed based on the degree to which the price of greenhouse gas emissions under a given proposal is reflected in the prices faced by end use consumers. One of the fundamental motivations for the adoption of cap and trade is the idea that absent an express price on greenhouse gas emissions users will emit more greenhouse gases than is socially optimal. In economic terms, the damage associated with greenhouse gas emissions is an externality, defined as a cost that an emitter imposes on society and for which the emitter does not have to pay. Because emitters (and by extension, consumers that purchase the products or services produced by emitters) do not bear any cost associated with greenhouse gas emissions, the price of goods and services will be lower than they otherwise would be, leading to consumption, and emissions, in excess of the socially optimal level. In contrast, when the cost of greenhouse gas emissions is internalized, emitters, and consumers, will have an incentive to reduce their production/consumption of those goods or services which result in emissions. In the context of the electricity sector, this reduction could take the

form of increased conservation, increased energy efficiency<sup>3</sup>, and/or the broader deployment of low or zero emission generating technologies in lieu of more emissive technologies. Thus, putting a price on greenhouse gas emissions, and having those costs reflected in prices faced by end users serves as a key catalyst for shifting the resource and consumption choices of the California economy to reflect the socially optimal level of emissions as defined by the targets established in AB 32.

The importance of not suppressing the price signal was specifically embraced by the Commission in D.08-10-037 which states, “any mechanism implemented to provide bill relief be designed so as not to dampen the price signal resulting from the cap-and-trade program”. Similarly, the EAAC report recognized the importance of preserving the carbon price signal, stating “The EAAC believes that preventing such increases in electricity rates [due to putting a price on greenhouse gas emissions] would undercut the main purpose of AB 32: to provide incentives for reduced electricity consumption (and associated emissions reductions).”<sup>4</sup> At the time of writing, the draft ARB regulations also expressly limit the manner in which allowance revenues allocated to the utilities may be used to provide rebates to customers. These limitations are consistent with the notion of preserving the emissions price signal in rates. Section 95892(d)(3)(B) states, “To the extent that an electrical distribution utility uses auction proceeds to provide ratepayer rebates, it shall provide such rebates with regard to the fixed portion of ratepayers’ bills or as a separate fixed credit or rebate.” Similarly, Section 95892(d)(3)(C) states, “To the extent that an electrical distribution utility uses auction proceeds to provide ratepayer rebates, these rebates shall not be based solely on the quantity of electricity delivered to ratepayers from any period after January 1, 2012.”

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<sup>3</sup> Note that “conservation” is different from “energy efficiency” as used here. The former refers to a reduction in energy services used, including, potentially, energy services as embedded in goods and services, whereas “energy efficiency” refers to measures that reduce the use of primary energy to provide a given level of energy service.

<sup>4</sup> EAAC Report See pg. 66, EAAC recommendation

In pursuing this objective, it should be noted that owing to statutory constraints on ratemaking, certain customers, specifically residential customers buying energy in the lower rate tiers will not bear any carbon costs under the cap and trade regime. SB 695 allows very limited increases in tier 1 and 2 rates, which, in the context of the cap and trade program means that no emission costs resulting from residential customer electricity consumption can be recovered through tier 1 and 2 rates. Thus, those customers that only consume energy in tiers 1 and 2 will not bear any of these costs despite the fact that their consumption generates greenhouse gas emissions and compliance obligations. Instead, all of these costs must be recovered through upper tier rates, with the result being that upper tier rates will increase much more than they should to reflect their specific contribution to aggregate emissions and costs. One could argue that the allowance revenues should be allocated to customers in a manner that recognizes and addresses the disproportionate burden upper tier users face under cap and trade. This suggests that it may be reasonable to use the revenues to reduce the emission costs reflected in the upper tiers to the level they would reach if the carbon costs could be spread across all residential energy consumption equally. Such an approach would preserve the price signal while not forcing upper tier customer to bear a cost burden disproportionate to their responsibility in the creation of the underlying greenhouse gas emissions.

## **2.) Prevent Economic Leakage**

This policy objective will be assessed based on the degree to which a given proposal protects emission intensive, trade exposed industries from competition by firms outside of the cap and trade regime, and which, as a result, do not bear greenhouse gas compliance costs. One of the key concerns with cap and trade is that it will put industries within the cap and trade regime at a competitive disadvantage relative to entities that do not face a price for greenhouse gas emissions. The degree of risk is a function of the price elasticity of demand for a given firm or sectors' goods and services. Entities producing goods or services whose prices are set globally are unable to pass additional costs through to consumers in the form of higher prices. As a result, these enterprises will be forced to absorb these costs through reduced profit margins, which may lead to the reduction or elimination of in-state production. Furthermore, because prices for these goods and services do not change under cap and trade, total consumption remains unchanged, as do total emissions. Production and the emissions associated with that production will likely shift to facilities and

jurisdictions located outside of the cap and trade framework.<sup>5</sup> Policies should be designed to limit adverse impacts on the California economy, particularly to the extent such impacts do not result in net greenhouse gas emission reductions. This concern has been specifically recognized by the Air Resources Board in its allocation scheme which provides allowances directly to those entities it has designated as “Emission Intensive, Trade Exposed”. ARB’s regulations allocate allowances directly to these entities to cover approximately 90% of their direct emissions, defined as those emissions for which the entities are directly accountable through the combustion of fossil fuels. The ARB’s regulations did not address indirect emissions, defined as those emission costs embedded in the price of electricity used by these entities. Depending on the nature of the good or service and the associated production process, such indirect cost exposure may be substantial. In determining how to use the allowance revenues, a key focus should be on doing so in a manner that prevents economic leakage by reducing the adverse competitive impacts greenhouse gas emissions pricing will have on Emission Intensive, Trade Exposed entities.<sup>6</sup>

### **3.) Equitably Allocate Revenue Value Recognizing the “Public Asset” Nature of the Atmospheric Carbon Sink**

This policy objective will be assessed based on the degree to which the revenues, or the value created from the use of those revenues, under a given proposal are equitably distributed across ratepayers/households. It can be argued that all citizens have equal claim over the atmospheric property right, the use of which is being partially auctioned under the regulations developed by the Air Resource

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<sup>5</sup> To the degree that production shifts to areas outside of California characterized by more emission intensive production processes, greenhouse gas emissions could actually increase.

<sup>6</sup> An important corollary to this is that for those industries that are not designated as Emission Intensive Trade Exposed, no direct relief through the allocation of allowance revenues is justified. Consumers will face these costs, consistent with the objective of preserving the carbon price signal, and adjust their consumption accordingly. Similarly non-trade exposed entities will have an incentive to modify their resource and output choices reflective of an emissions compliance cost.

Board to implement AB 32.<sup>7</sup> According to this view, all citizens should have equal claim over the proceeds generated from the sale of emission allowances, and revenues that have not been earmarked for another purpose (e.g. covering the indirect emission costs of Emission Intensive Trade Exposed entities), should be allocated on a per capita basis or, as a proxy for that, a per residential account basis. We note that one of the potential ancillary benefits of this approach is that it necessarily confers greater benefits, as a share of household income, to lower income households, the very households that are likely to be most adversely affected by placing a price on carbon, and/or the impacts of climate change.<sup>8</sup> See policy objective 4 below regarding cost impacts on low income households.

#### **4.) Reduce Adverse Outcomes to Low Income Households**

This policy objective will be assessed based on the degree to which the anticipated costs to low income households resulting from cap and trade and climate change are recognized and addressed, given the state's and the Commission's longstanding commitment to protect vulnerable communities from adverse outcomes. The impacts of the cap and trade regime are likely to be felt most acutely by low income households and communities. As a percent of income, the price increases in goods and services reflecting the price of carbon will necessarily be greater in the case of low income households relative to higher income households. In addition, lower income households may be less able to adjust consumption behavior and patterns to mitigate carbon cost exposure than wealthier households to the degree that such changes require expenditures for new appliances, efficiency measures, etc. Similarly, lower income households may be disproportionately comprised of renters as opposed to homeowners, and thus are less likely to be able to make structural changes that would mitigate carbon cost exposure. For these reasons, the use of auction

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<sup>7</sup> See Section 4.1.3, Dividends to the Public, pg. 34, "Allocating Emissions Allowances Under a California Cap-and-Trade Program", Economic and Allocation Advisory Committee,

<sup>8</sup> Note that in terms of electricity costs, lower income households will be largely shielded from higher electricity prices due to the limited increases in tier 1 and 2 rates allowed by SB 695 and the discounts received under the CARE program.

revenues should seek to address the disproportionate cost burden that carbon pricing is likely to impose on lower income households. It should be noted that in terms of electricity rate impacts, there are a number of programs and policies in place designed specifically to protect low income consumers from cost increases. These include the California Alternative Rates for Energy, which provides direct discounts to eligible customers on their energy bills, but also includes the investor owned utilities' low income energy efficiency programs as well as solar distributed generation programs, which offer specific programs to support deployment to low-income households and buildings. Both energy efficiency and solar can provide an alternative to buying electricity from the utilities and thus can act as a hedge against increasing energy prices under cap and trade. That said, it should also be noted that to the degree energy costs do increase, the price of all goods and services may be impacted, not just the energy bills for which households are directly responsible.

Just as the costs of mitigation are likely to disproportionately affect low income households and communities, the costs of adaptation in response to the climate change that is likely to occur will also be disproportionately felt by these groups, given their relatively limited access to capital. To the degree that climate change results in a greater number of heat waves, increased storm intensity, more prolonged droughts, increased fire risk, etc., low income communities are the least able to respond and adjust to insulate themselves from the associated impacts. In contrast, higher income households and communities have the ability to increase their reliance on air conditioning, move to less impacted localities, purchase insurance products, and otherwise protect themselves from adverse outcomes.

### **5.) Correct for Market Failures that Lead to Ongoing Underinvestment in Carbon Mitigation Activities and Technologies**

This policy objective will be assessed based on the degree to which the proposed use of auction revenues addresses market failures that inhibit or prevent investment in carbon mitigation activities and technologies. Despite the presence of a carbon price, market failures inhibit socially optimal investments in different mitigation technologies. It is widely recognized that the private sector under-invests in emerging technologies, to the degree that such investments are characterized by relatively high risk and provide benefits that cannot be fully captured by the entity that makes the investment. Given the nascent and

uncertain state of the markets into which these technologies would be deployed, the risks may be perceived as too great for private capital. However, to the degree each of these technologies are recognized as playing a critical role in achieving the longer term goals of AB 32, there is a compelling argument for public investment. Another area where the carbon price signal may prove insufficient to overcome market failures relates to upfront costs. Insufficient access to capital and/or financing can stand as a significant barrier that prevents households, businesses and other entities from making cost effective investments. This has been widely recognized as a substantial challenge impeding investments in energy efficiency.<sup>9</sup> Although the carbon price signal will, all else equal, enhance the economics of energy efficiency, as well as other emission reducing technologies, it is unlikely, in and of itself, to address first cost barriers. Auction revenues could be used to defray first costs or support financing in those areas where these costs continue to pose a significant impediment.

#### **6.) Competitively Neutral Across Load Serving Entities**

This policy objective will be assessed based on the degree to which a given approach to allocating revenues does not alter the relative competitive position of utilities, energy service providers, community choice aggregators and publicly owned utilities. A key concern raised by parties in this proceeding thus far relates to the potentially adverse impacts that revenue allocation could have on the competitive positions of the various actors providing electricity in the state. Specifically, if allowance revenues are disproportionately allocated to some entities relative to others, it may give those entities a competitive advantage, either because those revenues might be used to reduce prices (to the extent the

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<sup>9</sup> See D.09-09-047 at 273, "Actual experience has shown that in many customer markets the lack of access to capital for energy improvements on attractive terms may be holding back substantial levels of potential efficiency investments. The reasons are many - a hassle to arrange financing separate from the purchase and installation of efficiency measures, higher competing uses for borrowed funds, payback periods of three, five, or ten years that exceed an owner or occupant's expected use of a home or business, high transaction costs, or the principal-agent problem where a building owner has no economic motivation to undertake energy improvements where an occupant pays the utility bill and would reap the benefits of bill savings."

revenues are approved for use to offset rates) or otherwise provide additional value to customers that other entities may not be able to offer as a result of the revenue allocation. As a general matter, the approach to allocating allowance revenues should not unduly or significantly impact the relative competitive positions of the load serving entities operating in the California marketplace.

**7.) Administratively Simple/Easy to Implement and Comprehend**

This policy objective will be assessed based on the ease of implementation of a given proposal. The allocation of auction revenue should not be overly complex, whether from the standpoint of implementation or the ability of consumers to comprehend.