DRA

Division of Ratepayer Advocates
California Public Utilities Commission

Dana S. Appling, Director

505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-2544
Fax: (415) 703-2057

http://dra.ca.gov

March 28, 2008

Comments to the California Air Resources Board Regarding Allowances Allocation Issues

The Division of Ratepayer Advocates (DRA) appreciates the opportunity to comment on auction allocation issues, following the California Air Resources Board (ARB) Technical Stakeholder Working Group Meeting, held on March 17, 2008. At this meeting, ARB requested input on several questions regarding the allocation of greenhouse gas (GHG) emission allowances.

DRA is an independent division of the California Public Utilities Commission (CPUC) that advocates on behalf of customers of public utilities within the CPUC's jurisdiction. DRA's statutory mandate is to obtain the lowest rate for service consistent with safe and reliable service levels. DRA is currently a party to a joint proceeding before the CPUC and California Energy Commission (CEC) that is considering issues related to regulation of GHG emissions in California.

DRA recommends distributing allowances based on the demands of each sector. For the electricity sector, auctioning all the allowances should be the ultimate goal as it would send a more direct price signal, raise revenues for easing the transition to a carbon-constrained economy, and more easily accommodate new market entrants. However, in order to gain experience with an auction system, California should transition to a 100% auction system gradually. DRA recommends using auction revenue to benefit the sector from which the revenue originates, although those benefits might accrue through investments in other sectors. In the case of the electric sector, revenue should be used to help mitigate rate shock and ease the transition to a carbon-constrained economy. These recommendations are discussed in more detail below.

Allocation methodologies should be determined separately for each sector.

Current discussions regarding the California GHG emissions reduction program envision that ARB would designate separate emission allowances for each sector. DRA recommends that the ARB decide on a sector-by-sector basis whether allowances would be administratively allocated, auctioned, or distributed through a combination of these approaches. There is not necessarily a one-size-fits-all solution to the question of allowance allocation. Various characteristics – including differing degrees of competition from uncapped sectors, ability to pass on allowance costs to consumers, and more general economic impacts – will necessitate individual consideration of allowance allocation for each sector.

There are many advantages to auctioning emission allowances, including:

- **Minimizing the potential for windfall profits**: Non-regulated entities that can pass on the opportunity cost of the allocation may be able to raise their prices to consumers at a

rate greater than their increase in cost, resulting in windfall profits to these entities at the expense of the consumer.

- **Encouraging and rewarding early action**: Under an auction system, covered entities who have already taken actions, and/or are willing to invest in additional measures to reduce their emissions will be rewarded since they will need to buy fewer permits.
- **Minimizing barriers to entry**: If allowances are given away for free, existing firms may have a competitive advantage over new firms, and therefore will require some intervention mechanism to remove barriers to entry. Under an auction system, new and incumbent firms are on a level playing field.
- **Raising revenues**: Revenues from the auction can be used to ease the transition to a carbon-constrained economy by funding research and development projects and providing targeted assistance to those hardest hit by the transition.
- **Creating a robust price signal for carbon allowances**: If permits are purchased, most of the associated costs will be passed along to consumers in their electricity rates. Carbon cost may more quickly become a factor in dispatch and procurement if permits are auctioned than if permits are given away for free. Regulatory oversight will be needed (including, e.g., the procurement review process) to ensure that utilities will seek out lower-cost energy options.

However, some sectors might require some administration allocation of allowances as a starting point. For example, administrative allocation might be justified for firms that face competition from uncapped jurisdictions. These firms might not be able to pass on the allowance cost to their consumers, as their prices may become less competitive than prices of firms that do not face carbon regulation; in this case, some administrative allocation would be necessary to keep those regulated firms competitive.

Additionally, there are some situations where rapidly rising costs creating economic hardship for consumers or regulated entities would make auctions less desirable. Market participants are not always able to instantaneously respond to price signals, and meeting GHG reduction goals should not cause unnecessary economic harm.[1] In order to reward early action to reduce emissions, the allocation of allowances should generally be proportional to product output rather than determined based on historical emissions.

The ultimate goal for distributing allowances to the electric sector should be 100% auction of allowances, since this is the most economically efficient method of distribution, and would raise funds to help ease the transition to a lower-carbon economy.

DRA recommends a combined auction/administrative allocation for initial distribution of allowances in the electric sector.

DRA generally supports auctioning of allowances as the ultimate goal for the electric sector, but in order to allow market participants to gain experience with the auction process, recommends a gradual transition to a full auction. DRA recommends initially auctioning a small but significant portion of allowances (e.g., around 20%) while allocating the rest at no cost. The portion of allowances distributed by auction should increase over time. The actual proportions allocated administratively and auctioned in each year warrants further discussion. A portion of the

[1] *See* California Health and Safety Code, Sections 38562(b)(1) and 38562(b)(2).

administratively-allocated allowances could be set aside for new entrants, as has been done in the Environmental Protection Agency's Acid Rain Program and similar trading programs.

A transition phase will allow utilities to make procurement decisions looking forward to an eventual auction of all allowances. The transition period will allow them to incorporate the price of carbon in their long-term planning, and begin to move away from carbon-intensive sources of electricity. At the same time, this transition period can also serve as a learning phase to fine tune the auction process before reaching the point at which 100% of the allowances are auctioned. As the price volatility during Phase I of the European Union Emissions Trading Scheme illustrates, the initial years of a cap-and-trade program will likely involve significant details that must be resolved to achieve optimal results.

Additionally, as discussed in the next section, customers in high-carbon intensity service areas may be vulnerable to short-term rate shocks if all allowances must be purchased from the beginning. These rate shocks may be mitigated somewhat if some allowances are given away for free. The extent that free allocation will help mitigate these shocks depends on several factors, including regulatory oversight and the extent to which market participants can raise their prices.

Auction revenue from a given sector should benefit that sector.

Money spent by a given sector to purchase auctioned allowances should benefit that sector. This condition is important to prevent significant economic impacts on any sector that may need to purchase large amounts of allowances or otherwise experiences higher prices as a result of increasing carbon constraints. While price signals are an important feature of carbon regulation, short-term inelasticity of electricity usage can cause economic hardship to some areas.

DRA estimated the rate impact on two sets of ratepayers: customers in Pacific Gas and Electric's (PG&E) service territory, which is a relatively low-carbon intensive area, and the Los Angeles Department of Water and Power's (LADWP) service territory, which is a relatively high-carbon intensive area. These estimates set forth in Appendix A, show rate impacts for carbon prices ranging from $10 to $40/ton. These calculations are only rough estimates, and the true rate impacts will be determined by numerous decisions made in the ratemaking process. However, these estimates are a reasonable starting point for understanding the approximate impact that carbon prices will have on the consumer under a 100% auction.

As shown in Appendix A, a carbon price of just $10/ton would increase PG&E's rates about 2% percent, and LADWP's rates about 6%. If the carbon price rises to $40/ton, those rate increases would be about 8% for PG&E and 26% LADWP. These increases are quite significant, especially for high-carbon areas such as LADWP. In order to ease such dramatic rate shocks, DRA recommends using auction proceeds to help customers impacted by significantly higher electric rates. If, for example, electricity ratepayers pay large sums of money to purchase auctioned allowances, then that money should be used in such a way as to help mitigate the economic hardship the sector as a whole endures to purchase those allowances.

However, requiring that auction revenues benefit its respective sector does not necessarily mean that those revenues must be directly returned to that sector, especially in the longer term. The most cost-effective emission reductions might occur in other sectors, and in some cases, it may be appropriate for auction revenue to be used to help achieve those reductions. There might be cost-effective emissions reduction potential within a particular sector that would require investments that exceed the allowance value generated within that sector. As an example, the state could invest in public transportation infrastructure to reduce vehicle miles traveled, but the

allowance value generated within the transportation sector may not be sufficient to cover the large investments necessary to improve the public transportation infrastructure.

It is premature to earmark specific funding now, but ARB should have the flexibility to determine how best to allocate allowance value in order to achieve the maximum emission reduction potential across the sectors at the lowest economic cost, while also protecting against economic hardship in any particular sector. To allow such flexibility, ARB should consider the establishment of a California Carbon Trust. Funds in this Trust could be used for initiatives in any sector that will most cost-effectively achieve carbon reductions, technological R&D, and emission reductions in uncapped sectors.

Other considerations for distributing revenues within a sector may include:

- Assistance to low-income consumers, small businesses, and communities that bear disproportionate environmental and public health burdens;
- Research, development, and deployment of GHG emission reduction technologies and strategies; and
- Adaptation programs for entities in the sector that face serious financial hardship due to the effects of climate change.

For the electricity sector specifically, auction proceeds could be used to fund the following:

- Provide financial assistance to those ratepayers hit hardest by carbon regulations.
- Adding additional funding to rebate programs (e.g. the 20/20 program) to incentivize energy efficiency by consumers. Demand-side efficiency could be encouraged by giving customers a financial incentive to reduce their electricity usage.
- Replacing the surcharge for the proposed California Institute for Climate Solutions. As currently proposed, the CICS would be funded only by investor-owned utility customers. Using auction proceeds instead would more equitably distribute the costs across the electricity sector, while still garnering GHG research-related benefits.

Sincerely,

/s/

Dana S. Appling
Director
Division of Ratepayer Advocates
California Public Utilities Commission
(415) 703-2544
dsa@cpuc.ca.gov

Appendix A – Estimated Rate Impacts of Carbon

Approximate average carbon intensity of electricity mix[2]

PG&E – 0.3 tons per MWh
LADWP – 0.6 tons per MWh

Electricity Price Increase Due to Carbon Costs (carbon intensity x carbon price)

Assumption: 100 percent of carbon cost passed through to ratepayers

Price of Carbon	Add'l cost to PG&E rates (cents/kWh)	Add'l cost to LADWP rates (cents/kWh)
$10/ton	0.3	0.6
$20/ton	0.6	1.2
$30/ton	0.9	1.8
$40/ton	1.2	2.4

Estimated 2003 Retail Rates for PG&E and LADWP (cents per kWh)[3]

	PG&E	LADWP
	cents/kWh	cents/kWh
Residential	12.9	10.4
Small Commercial	19.5	10.8
Medium Commercial	14.5	9.6
Industrial	12.4	7.4
Agricultural	19.8	n/a

Predicted Retail Rates with Carbon Price of $10, $20, $30, and $40 per ton (2003 retail rate + electricity price increase due to carbon cost)

Assumption: rate increase is evenly distributed among customer classes.

Carbon Price = $10/ton	PG&E		LADWP	
	cents/kWh	% increase	cents/kWh	% increase
Residential	13.2	2.3%	11.0	5.7%
Small Commercial	19.8	1.5%	11.4	5.5%
Medium Commercial	14.8	2.1%	10.2	6.3%
Industrial	12.7	2.4%	8.0	8.1%
Agricultural	20.1	1.5%	n/a	n/a
Average		*2.0%*		*6.4%*

[2] Comments of CPUC Commissioner Peevey at Commission Meeting, March 13, 2008.
[3] California Energy Commission, "2003 California Average Retail Electricity Rates by Major Utility." Available online at <http://www.energy.ca.gov/electricity/current_electricity_rates.html>. Site accessed March 2008.

Carbon Price = $20/ton	PG&E		LADWP	
	cents/kWh	% increase	cents/kWh	% increase
Residential	13.5	4.7%	11.6	11.5%
Small Commercial	20.1	3.1%	12.0	11.1%
Medium Commercial	15.1	4.2%	10.8	12.6%
Industrial	13.0	4.8%	8.6	16.2%
Agricultural	20.4	3.0%	n/a	n/a
Average		*4.0%*		*12.8%*

Carbon Price = $30/ton	PG&E		LADWP	
	cents/kWh	% increase	cents/kWh	% increase
Residential	13.8	7.0%	12.2	17.2%
Small Commercial	20.4	4.6%	12.6	16.6%
Medium Commercial	15.4	6.2%	11.4	18.8%
Industrial	13.3	7.3%	9.2	24.3%
Agricultural	20.7	4.6%	n/a	n/a
Average		*5.9%*		*19.2%*

Carbon Price = $40/ton	PG&E		LADWP	
	cents/kWh	% increase	cents/kWh	% increase
Residential	14.1	9.3%	12.8	23.0%
Small Commercial	20.7	6.2%	13.2	22.1%
Medium Commercial	15.7	8.3%	12.0	25.1%
Industrial	13.6	9.7%	9.8	32.4%
Agricultural	21.0	6.1%	n/a	n/a
Average		*7.9%*		*25.7%*