Summary of the CPUC & CEC Joint Recommendation on Allowance Allocation in the Electricity Sector

Prepared for the July 1 meeting of the Economic and Allocation Advisory Committee

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This memo summarizes the CEC and CPUC's recommendations on allowance allocation for the electricity industry provided to ARB in our October 2008 Joint Decision. The first portion of the memo describes the different allocation options that the Commissions considered, and the second portion of the memo describes our recommendations and the rationale behind them.

Allocation Options Considered

We considered six internally developed allocation options, as well as one stakeholder-proposed approach:

- *Historical Emission-Based Allocation to Deliverers (generators and importers of electricity)* – All allowances are allocated to deliverers based on the shares of emissions during a fixed historical base period
- *"Pure" Output-Based Allocation to Deliverers* – All allowances are allocated based on a per MWh basis, regardless of technology or emission level
- *Fuel Differentiated Output-Based Allocation to Deliverers* – Similar to the pure output-based approach, except using different allocation levels based on fuel source
- *Auction with no revenue return* – Distribute allowances through an auction with no return of auction revenues to retail sellers of electricity
- *Auction with emission-based return of auction revenue to retail sellers of electricity* – Distribute allowances through an auction, and return auction revenue to retail sellers based on emissions from a pre-determined year
- *Auction with sales-based revenue of auction return* – Distribute allowances through an auction, and return auction revenue to retail sellers based on a recent prior year's sales
- *SCE's Harm-based Allocation* – Allocate allowances based on four categories of harm identified by SCE.

The allocation options were evaluated for how they performed against five criteria:

1. Minimize cost to consumers
2. Treat market participants equitably and fairly
3. Support a well-functioning market
4. Minimize administrative complexity
5. Aligns incentives with goals of AB 32

The following table summarizes the results of this analysis, focusing on the criteria that best served to differentiate among the allocation options.

Allocation Method	Description	Minimize cost to consumers	Treat Market Participants Equitably and Fairly	Admin. Complexity	Additional Notes
Historical Emission-based Allocation	All allowances are allocated to generators based on the emissions from a pre-determined historical year	High consumer cost due to windfall profits	Minimal transfers	Low	
"Pure" Output-based Allocation (OBA)	All allowances are allocated based on a per MWh basis, regardless of technology or emission level	Minimizes cost due to "market clearing price" effects, but blunts price signal and raises allowance costs	Large transfers from customers of coal-dependent utilities to customers of utilities with low-carbon portfolios	Low	Per MWh allocation is assumed to be determined based on prior year(s) sales levels
Output-based Allocation (Fuel Differentiated)	Same as above, except using different allocation levels based on fuel source	Mitigates market clearing price effect, but exacerbates efficiency losses	Minimal transfers, but higher if non-emitting sources included	Moderate	Significantly reduces incentive to reduce emissions, particularly if non-emitting generators are excluded
Auction with no revenue return	Distribute allowances through an auction	High consumer costs	Minimal transfers among retail sellers; indirect transfers if state uses auction revenues evenly across state	Low	Without returning auction value to LSEs, electricity customers will pay the full cost of compliance through higher electric rates
Auction with emission-based return of auction revenue	Distribute allowances through an auction. Return auction revenue to retail sellers based on emissions from a pre-determined year.	Low aggregate cost impact, with consistent impacts across retail sellers	Minimal transfers	Moderate	Assumes that auction revenue is directed toward GHG mitigation programs &/or fixed rebates, rather than rate relief
Auction with sales-based revenue of auction return	Distribute allowances through an auction. Return auction revenue to LSEs based on current or prior year sales	Low aggregate cost impact on customers, with varied impacts across retail sellers	Large transfers from customers of coal-dependent utilities to customers of utilities with low-carbon portfolios	Moderate	Assumes that auction revenue is directed toward GHG mitigation programs &/or fixed rebates, rather than rate relief
SCE's Harm-based Allocation	Allocate allowances based on four categories of harm identified by SCE	Returns some allowance value to customers to mitigate harm	Moderated through allocations to coal users	High - difficult to determine all the instances of harm and provide allowance value equal to that harm	

CPUC/CEC Allocation Recommendation

Based on this analysis, the Decision provided the following recommendations concerning the distribution of allowances.

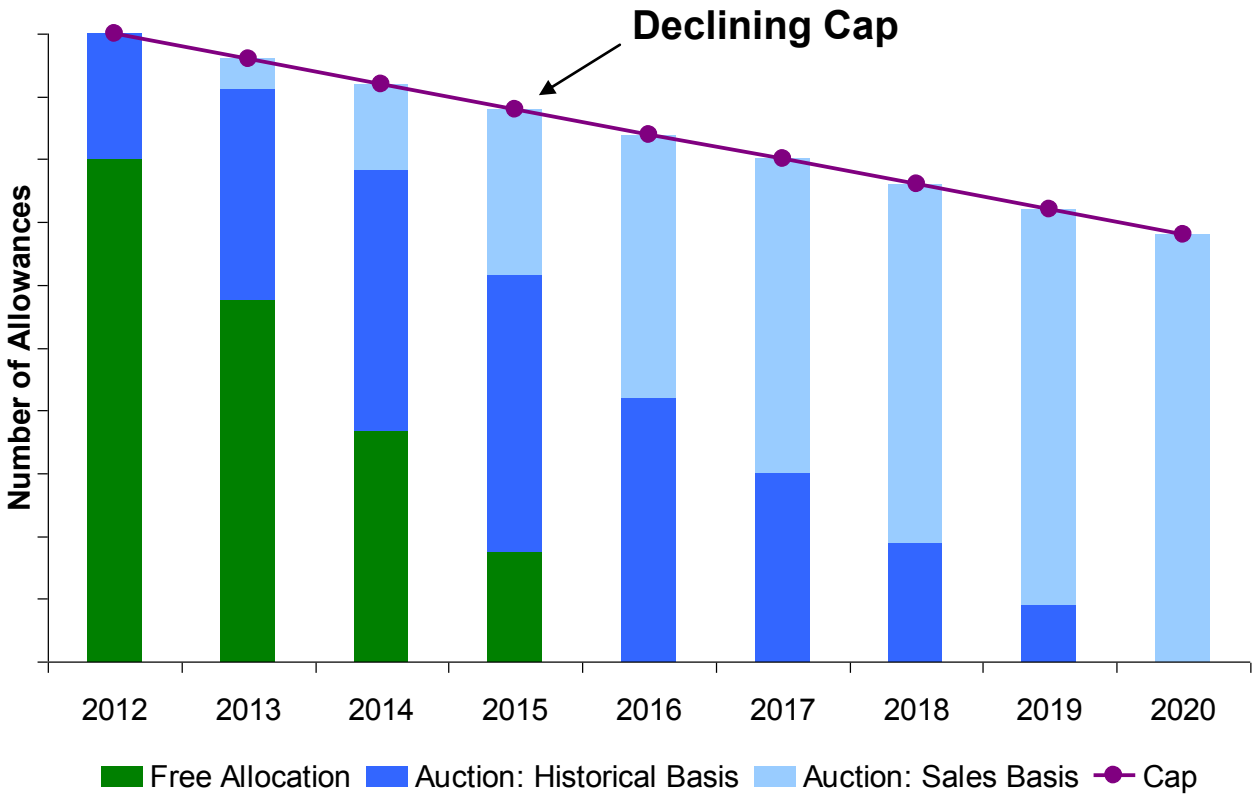
1. **Initially allocate the majority of allowances on an updated, fuel differentiated output-basis to deliverers.** Under an output-based allocation, allowances would be allocated based on each facility's portion of the total generation sold in the state. The generation levels used to determine each facility's allocation would be based on a prior year(s) generation level and would be updated on an annual basis. Generation amounts would be weighted by a predetermined factor associated with each major fossil fuel source, a method referred to as 'fuel differentiation'. Fuel differentiation would reduce transfers between deliverers of coal and gas-based electricity. During the 5-year transition to auctioning, output-based allocation would decrease from 80% to 0% of the total allocation. Non-emitting generation would be excluded from this allocation, to ensure that deliverers with compliance obligations receive all available free allowances.

2. **Transition to full auctioning of allowances by 2016.** Auctioning will avoid windfall profits to independent generators, while still allowing low-emission generators to receive clean generation rents. Gradually transitioning to full auctioning over a 5-year period would provide some protection and stability as the cap and trade market develops. The Commissions did not find that auctioning would raise reliability concerns or lead to price volatility.

3. **Return most of the auction revenue from electricity sector allowances to retail sellers.** Funds from auction revenue would support the cost of complementary GHG policies, such as energy efficiency and renewable energy portfolio requirements. Failure to ensure that electricity (or energy) sector allowance auction revenues flow back to the electric sector would remove funds now anticipated to support the expansion of efficiency, CHP, and renewable investments that AB 32 seeks to stimulate.

4. **By 2020, return all auction revenue to retail sellers on the basis of total sales, after initially using historical emissions as the basis for revenue return.** Allocating allowance revenue during the early years of the program based on historical emissions will help support carbon-intensive retail sellers' carbon mitigation efforts and will partially offset the high compliance cost facing end users. Following an 8-year transition, auction revenue would be returned to retail sellers on a sales-basis. Transitioning to a sales-basis would provide an incentive for all retail sellers to reduce their use of high emission generation.

The chart on the following page depicts the set of CEC-CPUC recommendations.


Declining Cap
Number of Allowances
2012
2013
2014
2015
2016
2017
2018
2019
2020
Free Allocation
Auction: Historical Basis
Auction: Sales Basis
Cap