BEFORE THE
AIR RESOURCES BOARD
OF THE
STATE OF CALIFORNIA

SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY COMMENT ON ARB WORKSHOP ON JUNE 22, 2010: COST CONTAINMENT OPTIONS IN A CALIFORNIA CAP-AND-TRADE PROGRAM

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I. INTRODUCTION AND SUMMARY

The Southern California Public Power Authority ("SCPPA")[1] respectfully submits this comment on the issues discussed at the workshop conducted by the California Air Resources Board ("ARB") on the morning of June 22, 2010, entitled *Cost Containment Options in a California Cap-and-Trade Program* ("Workshop"). SCPPA will separately provide comments on the workshop on offsets and linking that took place on the afternoon of June 22, 2010.

Effective cost containment will play a key role in ensuring the proposed California cap and trade program is successfully implemented and remains supported over time. SCPPA supports the ARB's suggestions that a price collar, an allowance reserve, and relaxation of the offset limit can help to contain costs. Of course, the devil is in the details. In order to help ensure that the cap and trade program can be implemented without excessive costs to consumers and to help ensure a smooth transition to a low-carbon economy, SCPPA makes the following recommendations, in summary:

- A price collar with a price floor and price ceiling should be established.
- An allowance reserve should be established as the primary method of implementing the price collar. An independent non-profit entity should be appointed as the reserve operator.
- The allowance reserve should initially be filled with allowances equal to the difference between pre-recession emissions and the higher of either expected 2012 emissions or the

[1] SCPPA is a joint powers authority. The members are Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles Department of Water and Power, Imperial Irrigation District, Pasadena, Riverside,

number of allowances administratively allocated to utilities, industry and others. These reserve allowances should be administratively allocated to the reserve operator by the ARB.

- If bids submitted at an auction result in a clearing price that is lower than the price floor, the pool of allowances for auction should be reduced until the auction clears at the price floor. Unsold allowances should be moved to the allowance reserve, except for allowances that were administratively allocated to utilities and subsequently consigned by utilities for auctioning. Unsold consigned utility allowances should be returned to the utilities.
- If bids submitted at an auction result in a clearing price that is higher than the price ceiling, the pool of compliance instruments for auction should be increased until the auction clears at the price ceiling by moving compliance instruments from the reserve to the auction pool.
- Covered entities should be able to purchase compliance instruments from the allowance reserve at any time at the ceiling price.
- The reserve operator should use the proceeds from auctioning reserve compliance instruments to purchase offsets to refill the reserve.
- Offsets auctioned from the reserve should not count towards an entity's offset use limit.
- If allowance prices remain at the ceiling for several successive auctions, the offset limit should be increased permanently in reasonably small increments.
- If allowance prices remain at the price ceiling despite the use of the allowance reserve and increases in the offset limit, future vintage allowances should be made available to be

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and Vernon. This comment is sponsored by Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Imperial Irrigation District, Pasadena and Riverside.

used for compliance in the current compliance period.

SCPPA's proposal for operation of a price collar is set forth schematically in the appended flow chart. Issues are discussed below in the order in which issues are raised in the PowerPoint slides presented by the ARB staff at the Workshop ("PowerPoint").

II. IMPLEMENTING A PRICE FLOOR.

The PowerPoint proposes that allowance prices under the cap-and-trade program be subject to a soft price collar (slide 6), consisting of a price floor and a price ceiling. SCPPA supports the use of a price collar. Studies have shown that a price collar can significantly reduce program costs compared to a cap and trade program without a price collar.[2]

A. Implement the price floor by reducing the pool of allowances for auction.

SCPPA agrees that a price floor (for example, $10 per allowance, increasing with the CPI) should be implemented by means of a reserve price below which allowances would not be sold at auction (slide 7).

SCPPA supports the type of allowance auction proposed by the Economic and Allocation Advisory Committee: a single-round, sealed-bid, uniform price, double-sided auction. If the bids presented in the auction would result in a clearing price lower than the price floor, the number of allowances to be sold at that auction should be reduced until the clearing price increases to the price floor.

B. Return unsold utility allowances to utilities, not the allowance reserve.

The ARB proposes that allowances remaining unsold at the reserve price would be held in a reserve holding account or allowance reserve (slide 7). This is appropriate for allowances that the ARB has not administratively allocated to entities prior to the auction ("unallocated

[2] See for example H. Fell and R.D. Morgenstern, "Alternative approaches to cost containment in a cap-and-trade system", Resources for the Future Discussion Paper, April 2009, available at http://www.rff.org/rff/documents/rff-dp-09-14.pdf.

allowances"). However, a number of allowances are proposed to be administratively allocated to utilities in each compliance period ("utility allowances"). The utilities accept the need to auction all utility allowances with the utilities receiving the proceeds from the auction of utility allowances. If utility allowances remain unsold at the reserve price, they should not be transferred to the allowance reserve but should be returned to the utilities to be put up for sale again at a subsequent auction.

A method of determining whose allowances remain unsold – the utilities' allowances or unallocated allowances – would have to be established. This could be done according to the proportion of the auction pool that each entity contributed. Alternatively, all unsold allowances at a particular auction could be transferred to the allowance reserve until the total number of unallocated allowances in that auction pool has been taken up. Then any remaining unsold allowances, which must be utility allowances (assuming no other entities submit allowances to be sold through the double-sided auction), would be returned to utilities on a proportional basis. This second option may be the preferable approach. It would ensure that the allowance reserve receives allowances and utilities receive the auction revenue they need for their emission reduction activities.

Returning allowances to utilities may not have quite the same effect on the market as moving unsold allowances to the allowance reserve, as the returned allowances would be available at a subsequent auction whereas the reserve allowances are only available at the ceiling price (as discussed below). Nevertheless, the price dampening effect of making the utility allowances available through a subsequent auction would be limited by the price floor.

III. IMPLEMENTING A PRICE CEILING: OFFSET LIMIT AND FUTURE ALLOWANCES.

A soft price ceiling (for example, $25 per allowance, increasing with the CPI) can be implemented by increasing the supply of compliance instruments. The PowerPoint notes three

categories of mechanisms to increase the supply of compliance instruments:

- Relaxing the quantitative use limit for offsets;
- Allowing limited use of future vintage allowances from next compliance period;
- Releasing allowances from a reserve (slide 8).

These options are not mutually exclusive. It would be beneficial to have more than one tool available to maintain the price ceiling. SCPPA supports the use of all three methods in various circumstances.

A. Relax quantitative use limit for offsets if allowance prices remain at ceiling.

Slide 9 of the PowerPoint proposes temporarily increasing the offset limit from 4 percent up to 8 percent when allowance prices reach a certain level, returning the limit to 4 percent when allowance prices abate.

Even if an allowance reserve (discussed in detail in section IV below) is chosen as the primary cost containment mechanism, increasing the limit on the use of offsets may play a valuable secondary role. Studies show that allowing increased use of offsets is a very effective way to control the costs of a cap and trade program.[3] Increasing the percentage limit on the use of offsets by covered entities would contain costs and reduce the demand for allowances from the allowance reserve without affecting the emissions cap.

If the ceiling price is reached frequently and allowances from the allowance reserve are in constant demand, for example, at three or four successive auctions, there could be a systemic problem with the cap and trade program. In these circumstances, the supply of compliance instruments should be increased by permanently increasing the percentage of offsets that covered entities can use for compliance. The permanent increase need not be large – for example moving

[3] See for example the Charles River Associates report dated March 24, 2010 "Analysis of the California ARB's Scoping Plan and Related Policy Insights, at 2: "If offsets expand to about 15% levels, costs decline by over 40% from programs at the 4% offset level."

from 4 percent to 5 percent. If one small increase is not sufficient to avoid the constant use of the reserve account, another small increase could be granted.

A permanent increase in the offset limit is required to address a systemic imbalance that is indicated by a repeated need to call upon the reserve to contain allowance prices. Furthermore, as the ARB staff acknowledges in slide 9, offset projects need assured future access to the market to be viable. Increasing and then decreasing the offset limit creates an uncertain level of demand for offsets. A permanent increase avoids this problem.

Under the price collar approach, the ARB need not be concerned that a greater use of offsets might lead to a plunge in allowance prices. The price floor will always prevent the price of allowances at auction from dropping too low.

As a separate issue, the use of offsets for cost containment will be ineffective unless the ARB's offset program rules ensure a sufficient number of offsets are available. It is vitally important to ensure that offsets from a range of different sources are available from the start of the cap and trade program. Please see SCPPA's separate comments on the ARB workshop on offsets and linking conducted on the afternoon of June 22, 2010.

If it is not deemed to be acceptable to provide for controlled increases in the offset limit, the ARB should take this into account when setting caps and administrative allocation levels. For example, it may be appropriate to commence the cap and trade program with a higher cap or to have a slower cap reduction trajectory in the early years of the program.

B. As a backup, allow use of future vintage allowances.

On slide 10, the ARB proposes allowing future vintage allowances that have already been auctioned to be used for compliance in the current compliance period if price triggers are reached. This constitutes a limited form of borrowing allowances from future compliance periods.

Given the potential disadvantages of borrowing as noted on slide 10, this option should not be pursued as a primary cost containment mechanism. However, it may be resorted to as a backup mechanism if the allowance reserve and substantially increased offset limits have failed to keep allowance prices below the price ceiling.

IV. ALLOWANCE RESERVE SHOULD BE ESTABLISHED FOR COST CONTAINMENT.

The PowerPoint discusses the establishment of an allowance reserve for cost containment purposes. SCPPA supports an allowance reserve as the primary cost containment mechanism for the cap and trade program.

Allowance prices can be effectively moderated with the release of a relatively small number of allowances from an allowance reserve. The economic analysis of AB 32 by Charles River Associates ("CRA") stated that:

> CRA and the ARB both find that even the 4% offsets significantly reduce costs of meeting an emissions target: lowers permit prices by between 33% (CRA) and 80% (ARB).[4]

A similar result can be expected from the release of allowances from an allowance reserve, as the mechanism is the same: the supply of compliance instruments is increased.

However, the design of the reserve and the levels of the price floor and price ceiling are key details which will strongly influence the effectiveness of these mechanisms in containing the costs of the cap-and-trade program.

A. Reserve should not be filled with allowances from within the emissions cap.

Slide 12 of the PowerPoint notes that an allowance reserve could be filled with:

- Allowances unsold when an auction resolves at the reserve price (the price floor);
- Allowances directly allocated from an annual budget;

[4] Charles River Associates, "Analysis of the California ARB's Scoping Plan and Related Policy Insights", at 3. March 24, 2010.

- Future vintage allowances allocated from future annual budgets.

SCPPA agrees that allowances unsold at the reserve price should be placed in the reserve, as discussed above. However, it is possible that no allowances will remain unsold at the reserve price. This method of filling the reserve must be supplemented with additional mechanisms.

The allowances allocated to an allowance reserve should not be drawn from within the emissions cap. This would reduce the number of allowances available for immediate use (if the allowances are taken from the allocation for the current compliance period) or the allowances available for future use (if the allowances are taken from the allocation for a future compliance period). This is likely to increase allowance prices rather than containing them. It only "mov[es] stringency from one year to another. This approach cannot protect against unexpectedly high costs over the long term."[5]

B. Fill reserve with allowances between pre- and post- recession budgets.

A different approach should be taken to filling the allowance reserve to ensure that creating the allowance reserve does not merely move stringency from one year to another.

A "pre-recession" allowance budget should be set. This budget would start at the level of emissions estimated for covered sectors in 2012 if the recent economic recession and early emission reductions had not occurred. In 2015 the pre-recession budget would increase to reflect the emissions estimated for the transport sector in 2015 if the recent economic recession and early emission reductions had not occurred. The pre-recession allowance budget should decline annually to reach the 2020 emissions target.

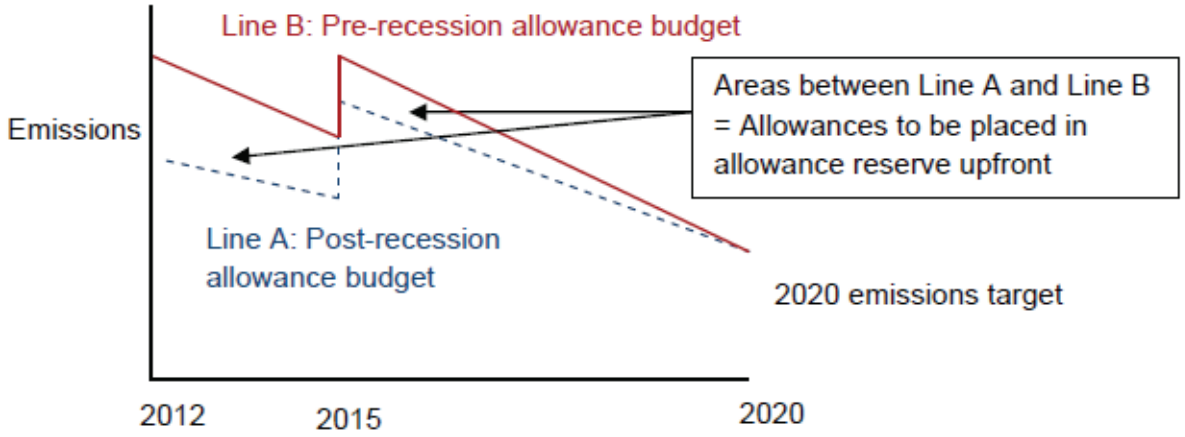
The cap or "post-recession" allowance budget should be set at either the expected 2012 covered-sector emissions or the total number of allowances that is administratively allocated in

[5] A. Morris, W.J. McKibbin, P.J. Wilcoxen, "Controlling costs while controlling emissions – a price collar approach to cap and trade", page 6, Brookings Institute, 2009, available at

2012 to covered entities, whichever is higher.

At the start of the cap and trade program, the number of allowances representing the sum of the difference between the pre-recession allowance budget and the post-recession budget for each year 2012-2020 should be placed into the allowance reserve. This is represented graphically below (not to scale).

Filling the allowance reserve:



This approach has been discussed by environmental economists as follows:

> A fundamental issue is whether permits in the reserve fund should be pulled from inside or outside the cap. A conceptual reframing would be to think of two caps – a stringent, aspirational cap that is met if no reserve allowances need to be accessed, and a less stringent but acceptable cap that reflects the possibility that all reserve allowances could be necessary to meet the price containment objectives. ... [T]he reserve fund would comprise the difference between the two caps.[6]

This approach to filling the reserve appropriately recognizes the hardships of the economic recession and the valuable emission reduction activities that entities are voluntarily undertaking before the start of the cap and trade program. Importantly, it would also provide a

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http://www.brookings.edu/~/media/Files/rc/opinions/2009/0724_carbon_morris_wilcoxen_mckibbin/price_collar_factsheet.pdf.

[6] P. Maniloff and B. Murray, "Allowance price containment options for cap-and-trade legislation", page 3, Nicholas Institute for Environmental Policy Solutions, Duke University, October 5, 2009.

reasonably large supply of allowances to the reserve at the start of the cap and trade program without reducing the number of allowances available under the cap in current and future compliance periods. To ensure that an allowance reserve is an effective cost-containment mechanism, the reserve must be of a reasonable size. The greater the number of allowances in the reserve, the "harder" the price ceiling becomes, more effectively containing the costs of the cap and trade program.[7]

C. Appoint an independent non-profit entity as the reserve operator.

An independent body, preferably a non-profit body subject to ARB oversight, should be appointed as the reserve operator. It could be the same entity that runs the quarterly allowance auctions, if the ARB does not run the auctions itself.

One suitable option for reserve operator is the California Independent System Operator Corporation ("CAISO"). CAISO has relevant experience in the complex electricity market and would certainly be able to run allowance auctions and operate the allowance reserve. The legislation establishing CAISO, Assembly Bill 1890, would not prevent CAISO from carrying out such a function, though CAISO's articles of incorporation and by-laws may need to be amended. The ARB should administratively allocate the allowances for the reserve to the reserve operator.

D. Use the allowance reserve to maintain the price ceiling by increasing the number of allowances for auction.

Slides 13 and 14 of the PowerPoint discuss conditions or "triggers" for releasing allowances from the reserve and options for release mechanisms:

- Release parts of reserve to auction when a series of price triggers are reached;
- Make reserve available for direct purchase by covered entities at a "window";

[7] H. Fell, D. Burtraw, R. Morgenstern, K. Palmer, and L. Preonas, "Soft and hard price collars in a cap-and-trade system: A comparative analysis", Resources for the Future Discussion Paper, April 2010, available at

- Directly allocate reserve to covered entities.

These options are not necessarily mutually exclusive. However, the first option should constitute the primary release mechanism. If the bids presented at a single-round, sealed-bid, uniform price auction would result in a clearing price that is higher than the price ceiling, the reserve operator should move compliance instruments from the allowance reserve to the pool of allowances to be sold at that auction until the clearing price drops to the price ceiling. This method of using the reserve to implement a price ceiling is simple, fair, and effective. It ensures that no more allowances are released from the reserve than are needed to keep auction prices at the ceiling.

E. Covered entities should also be able to access the reserve at a window.

The second release mechanism outlined above – accessing the reserve through a "window" – may be a useful additional option. Covered entities would be able to purchase compliance instruments from the reserve at any time at the ceiling price. The fact that the reserve "window" would always be open so that compliance instruments could always be purchased at the ceiling price would assist in controlling the prices of compliance instruments on the secondary market. This is important for the electricity sector, as power is bought, sold, and hedged constantly, not just quarterly, and each such transaction will be priced to include the cost of compliance instruments.

If the reserve is continually refilled as outlined in section IV.F below, there should be no concern that the reserve would become depleted to the extent that the demand for reserve instruments from the "window" will outstrip supply. No rationing should be needed.

F. The reserve operator should purchase offsets to refill the reserve.

As noted in slide 15 of the PowerPoint, it is important to determine an appropriate way to refill the allowance reserve to ensure that it remains available to contain costs in the current

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http://www.rff.org/RFF/Documents/RFF-DP-10-27.pdf.

compliance period without causing shortages and price rises in future compliance periods. Slide 16 proposes to:

- Increase the direct allocation of current or future vintage allowances to the reserve; and
- Increase the supply of offsets equal to the number of allowances (current or future) allocated to the reserve, to prevent the allocation to the reserve from increasing market prices.

One way to implement the slide 16 proposal would be through the use of coupons, as suggested by the ARB staff at the Workshop. Suppose, for example, in 2014 a bundle of 100,000 vintage 2018 allowances were taken from the 2018 budget and placed in the reserve. Then 100,000 "coupons", each allowing the bearer to use an offset for compliance over and above the 4 percent offset limit, would be made available for use in 2018. The bearer would be responsible for obtaining the offsets. The method of allocating these coupons is yet to be determined. The coupons would presumably be valued at the difference between the market price of allowances and the market price of offsets.

This approach aims to maintain the supply of compliance instruments (assuming the ARB rules result in a sufficient supply of offsets) and makes covered entities rather than the ARB responsible for purchasing offsets.

SCPPA appreciates the ARB's concern that, as an offset issuer, the ARB is not the appropriate body to purchase offsets for the reserve (slide 17 of the PowerPoint). However, the proposed coupon solution may be awkward to implement and raises the issue of determining an appropriate allocation method for the coupons.

Rather than constantly borrowing future (or current) allowances, allocating coupons, and reconciling offset use with coupon holdings, the ARB could appoint an independent reserve operator to purchase offsets to refill the reserve. The operator would purchase offsets with the

revenue from selling compliance instruments from the reserve. This use of funds would not require legislative authority insofar as the reserve operator would hold administratively allocated allowances and, accordingly, would have a right to the revenue from the auction or sale of those allowances in the same way utilities would receive the revenue from the sale of allowances that are administratively allocated to the utilities. If the reserve is refilled with offsets and the offsets are subsequently sold from the reserve, the offsets should not count towards a covered entity's offset limit.

Allowing the reserve operator to use the proceeds from the sale of allowances allocated to it to buy offsets to refill the reserve would ensure that the reserve's supply of compliance instruments is maintained and that the reserve continues to operate effectively without the ARB needing to purchase offsets.

V. CONCLUSION

SCPPA urges the ARB staff to consider these comments in developing the cost containment provisions of the cap and trade regulation. SCPPA appreciates the opportunity to submit these comments.

Respectfully submitted,

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Appendix: Summary of SCPPA allowance reserve proposal

Establish allowance reserve

- Set "pre-recession" 2012 allowance budget based on estimated 2012 emissions without taking into account the recession or 2007-2011 early action; straight-line decline to 2020 AB 32 target (with increase in 2015 when transport sector is included).
- Set "post-recession" 2012 allowance budget based on forecast 2012 emissions taking into account both the recession and 2007-2011 early action; decline to 2020 target.
- In 2012, allowances equal to the cumulative difference between "pre-recession" budget and the higher of the "post-recession" budget or the administrative allocation of allowances for each year are allocated to an independent entity acting as reserve operator. See graph.

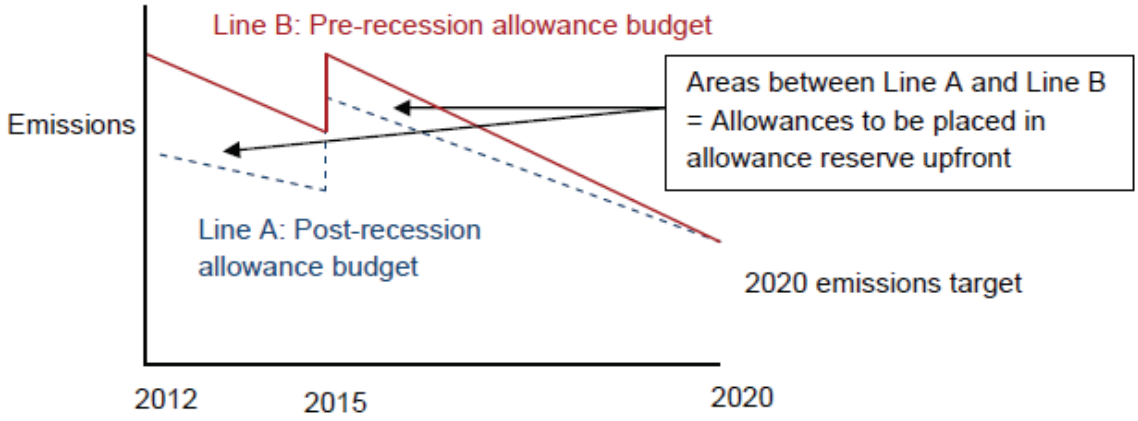
Using allowance reserve

- Set allowance price floor, price ceiling, and rate of annual increase (e.g., CPI).
- If bids submitted in a uniform price, sealed bid, single round auction result in a clearing price lower than the price floor, remove allowances from the auction pool until the clearing price increases to the price floor. Tender the removed allowances to the reserve operator for inclusion in the allowance reserve. However, if any of the unsold allowances came from LDCs, those unsold allowanced would be returned to the LDCs.
- If bids submitted in an auction result in a clearing price higher than the price ceiling, the reserve operator shall move compliance instruments from the allowance reserve to the auction pool until the auction clears at the price ceiling.
- Allow compliance entities to purchase reserve instruments at the ceiling price from an "always-open window".

Refilling allowance reserve: offsets

- The reserve operator receives proceeds from the sale of reserve compliance instruments in the same way that LDCs receive proceeds from the auction of allowances that are administratively allocated to them.
- The reserve operator uses the proceeds to buy offsets to refill the reserve.
- Offsets from the reserve that are sold at auction should not count toward an entity's 4% offset limit.
- If allowances that were placed in the reserve at the beginning of the cap-and-trade program remain in the reserve at the conclusion of the program, they shall be retired.

Filling the allowance reserve:



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