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Via Email
Kevin Kennedy
California Air Resources Board
1001 I Street, P.O. Box 2815
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Subject: CARB Proposed Regulation to Implement the California Cap-and-Trade Program

Dear Kevin:

BP America, Inc submits these comments on the draft cap and trade regulation. BP supports the implementation of cap and trade as a component of California's comprehensive plan to reduce GHG emissions. However, the Proposed Regulation contains several design elements that are of great concern to us – and that need to be addressed either before the adoption of the regulation or before the start of the cap and trade program.

In summary, BP's recommendations are as follows:

- Trade Exposure – Incremental emissions and employment leakage will occur from any amount of allowances auctioned to trade-exposed industry. The trade exposure of the refining industry is well documented. Refiners and other industrial sectors will face a significant cost disadvantage with competing businesses outside of California. Until a critical mass of states and countries adopt carbon policy that results in a similar cost of carbon, California should freely allocate 100% of allowances to trade exposed industry.
- Market Rules – Many of the regulation's market and trading rules combine to create serious issues around allowance availability, liquidity and market confidence. Holding limits should not apply to compliance entities, there should be no annual surrender obligation for most market participants, and the use of allowance vintages from the year in which allowance surrender is made should be permitted. Non-compliance entities should not be allowed to carry allowances across a compliance period.
- Sector Equity – There are serious problems in the regulation regarding differential treatment of sectors that lead to unacceptable market distortions. The cap and trade program should treat all emissions and energy consumers equally. There can be no

justification for carbon price mitigation for certain fuel types and not others – as is the case in the regulation's treatment of electricity and power sector emissions.

- Transportation Fuel Emissions – The regulation does not contain sufficient design information on this important issue. More detail is needed. The regulation should consider and adopt a linked fee for transportation fuel emissions.
- Combined Heat and Power (CHP) – As the regulation bases allowance allocation for exported power from CHP on an assumption of carbon price cost recovery, the regulation must put in place provisions to monitor and ensure cost recovery.
- Linkage – The regulation needs to demonstrate a greater sense of urgency on linking with other programs, including a specific timeline for evaluation and decision, as well as consideration of other cost control measures should significant and timely linkage not be accomplished.
- Offsets – Because climate change is a global problem that requires a global solution – and because California will continue to be negatively impacted if regions outside the state do not act, CARB should re-evaluate the restrictive quantitative limits on the use of offsets while hastening and widening the approval of offset protocols to ensure adequate supply. The regulation should be designed to ensure introduction to the market of the full allowed quantity of offsets.
- Untimely Surrender – The severity of the penalty for untimely surrender of allowances should be re-evaluated and a monetary penalty beyond the first allowance should replace the surrender of additional allowances. A 3-1 penalty is more appropriate.
- Auction Bid Guarantee- Compliance entities should be able to use the value of in-state physical assets and/or credit rating as bid guarantees.
- Allowance Reserve – The prices of the allowance reserve tiers should be more closely tied to actual market allowance prices.
- Periodic Review of the Regulation – The regulation should include a requirement for periodic review and update.
- Reconciliation of Updated Emission Reduction Goals and Measure Contributions – The regulation should contain a clear updated summary and accounting of emission reduction goals and contributions from various measures.

Detailed comments:

Trade Exposure, Leakage and Allowance Allocation

The regulation correctly acknowledges the reality that California industry will be subjected to trade exposure as a result of the cap and trade program. California industry will be competing against global and interstate competition that are not similarly regulated – and therefore not subject to the same costs. U.S. Energy Secretary Steven Chu acknowledged the impact of carbon costs on trade exposure during recent testimony before a House science panel, "If other countries don't impose a cost on carbon, then we will be at a disadvantage", he said.[1] Competitive pressure resulting from trade exposure to unregulated parties can be especially acute in state or regional programs in the form of both neighboring states *and* international competition – particularly in coastal states such as California where there is ready access to international trade infrastructure like the California Ports facilities.

[1] Wall Street Journal online, March 18, 2009

If not properly and adequately mitigated, this trade exposure can and will result in leakage of both emissions and jobs from California to unregulated areas.

While acknowledging the need to address trade exposure through free allocation – the regulation includes a very quick path to auction of some 50% of refinery allowance needs by 2018 – a mere six years into the program. CARB staff appear to use a simplistic, static model that assesses market dynamics before the imposition of a carbon price – and assumes little or no change in behavior resulting from the carbon policy. This static model also ignores the cumulative impact of other regulations and other differences in operating cost between California industry and its competitors. CARB's analysis also fails to consider the competitive effects of California produced product that is exported to neighboring states. This is an inadequate and deeply flawed method for informing a critical part of the design of the regulation.

A recent study evaluated the leakage potential for the U.S. refining industry resulting from a carbon policy. The EnSys study[2] models the impact on the refining industry of the allocation scenario contained in the federal Waxman-Markey (WM) proposal – a proportion of free allocation that approximates the 50% in 2018 contained in the CARB cap and trade regulation. Rather than taking a static look at behavior before and after the imposition of a carbon price, the EnSys model projects how industry is likely to operate under a given scenario.

The EnSys study concludes that because this sector operates as part of and interacts within the global refining industry, "the impacts of WM on US refining and US petroleum imports dependency would be substantial" in that it "delevels" the playing field in the global refining sector. The study concludes that "the underlying reason the potential impact on US refining is so severe is that allowance costs substantially raise operating – and also capital costs of US refineries, rendering them less competitive versus non-US refiners in regions that do not bear any carbon costs". The impact on coastal refineries, such as those in California, is especially pronounced.

Projected results of the study include:

- Reduced throughputs at US refineries of 1 million - 2 million barrels per day (mbpd) by 2015 and 1.5 - 4.4 mbpd by 2030. Falling US throughput would be largely offset by increased refining activity in the rest of the world.
- US import of refined product would increase from approximately 14% in the baseline case to 18% - 20% in 2015 and from about 10% in the 2030 baseline case to between 14% -19% (a near doubling).
- An increase in US refining variable operating costs of 20% - 50% in 2015 and 100% to approaching 300% in 2030.
- Consequently, while WM would reduce US refinery CO2 emissions by 12 million - 36 million tonnes CO2e (5 -15%) by 2015, and by 57 million - 118 million tonnes by 2030 (20 - 41%), these reductions would be largely offset by increased emissions from non

[2] EnSys Energy, Waxman-Markey (H.R. 2454) Refining Sector Impact Assessment, October 2009

US refineries, resulting in net global refining emission reductions of just 0.4% in 2015 and 3% in 2030.

The regulation seems to conclude through use of a very simplistic analysis, that industry can be subjected to a significant level of additional cost and trade exposure before leakage will occur. When a sector operates in a global market, against global competition, where the prices are set by global supply and demand – the only way to fully mitigate trade exposure (short of a global GHG policy) is through 100% free allocation. Any less free allocation exposes California industry to incremental costs to which their competitors (both international and other states) are not exposed. So, really it is a matter of how much trade exposure – and how much leakage of jobs and emissions - California policymakers are willing to accept and impose on California industry.

The trade exposure of the refining industry is well documented. Until a critical mass of states and countries adopt carbon policy that results in a similar cost of carbon – California should freely allocate 100% of allowances to trade-exposed industry.

Market Issues

A broad, deep and liquid trading market is vital to the success of the cap and trade program. All entities that participate in the cap and trade program, but especially those with large compliance obligations, must have a reasonable level of assurance and certainty that they will be able to satisfy an allowance obligation in the market. As a party that expects to have a large allowance obligation, and will likely need to utilize the market to satisfy this obligation, BP is deeply concerned by several of the regulation's market rules that will combine to severely reduce the availability of allowances, reduce market liquidity and effect the ability to obtain the most efficient carbon pricing.

Perhaps the best metaphor to illustrate liquidity is the oil in an automobile engine. If the oil just collects in the bottom of the engine pan, even if there is plenty of oil, the engine seizes up. The oil needs to move freely through the engine.[3] Allowances, and their ability to flow through the market freely, are what will keep the California carbon market operating smoothly and give compliance entities confidence in the market. If allowances are not able to flow through the market freely, there will be a serious crisis of confidence in the market. Unfortunately, several of the regulation's design elements result in allowances being pre-maturely and unnecessarily removed from the market (akin to engine oil collecting in the engine pan) in a way that brings a high potential for grave consequences for liquidity, allowance availability and market confidence. These troubling design elements include very restrictive and unnecessary allowance holding limits, corporate associations, compliance accounts, annual surrender of allowances, and overly restrictive rules on use of allowance vintages.

First is the allowance holding limit described in the regulation. The holding limits described in the regulation are irrespective of a compliance entity's allowance obligation – meaning that an entity with a very small allowance obligation is subject to the same absolute holding limit as an entity with a multi-million allowance obligation. The result is

[3] Smick, "The World Is Curved", Portfolio, 2008

restrictive holding limits that represent a small fraction of the allowance obligation of compliance entities with large allowance surrender obligations.

Any holding limit must take account of a compliance entity's full compliance period allowance obligation (i.e. not only annual compliance obligation) *plus* the need to bank and hedge allowances. A holding limit that does not consider compliance obligation and banking/hedging, removes important compliance flexibility from those who most need it – i.e. those with large allowance surrender obligations.

It is important to understand that the existence of a holding limit does not assure the avoidance of market manipulation – nor does the absence of an arbitrary holding limit allow for market manipulation. The largest carbon market in the world (the EU ETS) operates without an allowance holding limit, and we are unaware of any demonstrable manipulation issues in that market. Likewise, other major commodity markets operate with general prohibitions on market manipulation that do not require the imposition of arbitrary or across-the-board holding limits to help detect or enforce.

BP strongly recommends the removal of holding limits on compliance entities and instead recommends the imposition of plans/rules to monitor for potential market power. If holding limits are imposed they (and any rules around monitoring of market manipulation) must account for and accommodate a compliance entity's full compliance period allowance obligation, plus an appropriate cushion to allow for banking and hedging.

An element of the regulation that exacerbates the already troubling holding limits is the language on corporate associations. The language here is very broad and results in associated entities with no practical means to jointly hold or manage allowances, subjected to a joint, unworkably low holding limit. Again, the solution here is to avoid the use of holding limits on compliance entities – or to impose a limit that accounts for full compliance obligation and needed flexibility to bank and hedge.

The regulation introduces the concept of compliance accounts as an apparent means to mitigate the effect of the very low holding limits. It appears that once an allowance is deposited in this account, it can not be removed for trading or future use. The use of a compliance account in this manner very closely resembles the example of engine oil collecting in an engine pan. These allowances would be removed from the market, unable to flow freely to provide market liquidity and confidence. For entities with large allowance surrender obligations, this essentially removes any flexibility from a multi-year compliance period and results in essentially a real-time allowance surrender obligation.

Annual surrender obligations also greatly reduce the flexibility of a three-year compliance period. CARB staff have asserted that this design element is necessary in the event that certain compliance entities declare bankruptcy during a compliance period. We have never seen a case made that demonstrates that this assertion by staff warrants such a drastic solution that is so potentially harmful to the operation of the market and to other compliance entities – or that other means, such as bonding or credit rating tests can be used to satisfy staff's concern. Mitigation of this risk, to the extent it exists, should be targeted at those who actually present a risk. The annual surrender obligation, for all but those with

a demonstrated risk of insolvency, should be removed in order to allow the full flexibility provided by a multi-year compliance period.

Finally, the treatment and use of vintage allowances, combined with the aforementioned market rules greatly increase concerns around liquidity and market confidence – especially at the end of a compliance period. As written, a significant percentage of allowances will be unavailable for trading in closing months of a compliance period due to the compliance accounts, holding limits and annual surrender. In the months preceding final true-up, compliance entities will be aware of the fact that they must hold enough of the proper vintage allowances in order to meet their final true-up (for this first compliance period, this will mean vintages 2012, 2013 and 2014). This will cause many compliance entities to conservatively bank the proper vintages, leading to little allowance availability, greatly reduced liquidity and a potential crisis in market confidence during the 2015 true-up period. These problems could be exacerbated by non-compliance entities that bank and carry-over allowances.

During this time, compliance entities will have in hand 2015 vintage allowances, allocated early in 2015. Unfortunately, the regulation as written prohibits use of these allowances for use in 2015 true-up for the 2012-2014 compliance period. In order to increase allowance availability, liquidity and market confidence, the regulation should prohibit non-compliance entities from carrying allowances across compliance periods and should allow use of vintages that correspond to the year in which the surrender must be made – as well as earlier vintages.

Section 95856 (b) (2) should read:

To fulfill any compliance obligation, a compliance instrument must be issued from an allowance budget year within or before the year during which the compliance obligation is <u>to be surrendered</u> ~~calculated~~, unless:

Sector Equity
A primary objective of a market-based, GHG-reduction program, such as a cap and trade program should be to establish a broad, <u>consistent</u> price for carbon across the widest segment of the economy as is practicable. A broad, consistent carbon price will result in the fairest, most effective and most efficient reduction of GHGs and will best distribute the economic burden and increasing opportunities for low-cost abatement measures.

A cap and trade system that distinguishes emissions from different sectors for differential treatment does not result in market consistency, does not equitably distribute economic burden and opportunity, and is a serious violation of the intent of a cap and trade program. This is the case when it comes to the regulation's treatment of the electricity sector – with the most egregious example being the use of auction revenue to mitigate the price impact of carbon costs in this sector – and in this sector only.

A clear example of the market distortion created by this inequity is a consumer faced with the choice of running a device, appliance or vehicle on either electricity or another fuel (i.e. diesel, gasoline, natural gas). All other factors being equal, the choice to operate the device, appliance or vehicle on electricity will be influenced by the fact that the use of

electricity comes with a monthly rebate check (or other mechanism to mitigate the cost of electricity), while the use of other fuels will not. This is a clear and unacceptable market distortion and a divergence from the intent of a cap and trade system. This picking of winners and losers distorts the effect of decisions that actually should influence energy choices and consumption. Emissions and consumers must be treated equally in order to provide the proper incentive for reductions and for energy consumption choices.

In order for the cap and trade program to be successful and equitable, the criteria for allocation must be consistent amongst sectors – and the use of auction revenue should not result in arbitrary, differential price signals amongst energy types.

Transportation Fuels Emissions

For such an important element of the program, the regulation contains very little detail as to how emissions from transportation fuels will be treated and included in the cap and trade program, including the expected contribution to the state emission reductions goals. There is also, as stated previously in the discussion about Sector Equity, the potential for significant market distortions in the different treatment of allowance allocation and use of allowance revenue amongst the various sectors. This treatment must be made consistent.

As the rules around the treatment of transportation fuels in the cap and trade program are developed, BP strongly urges CARB staff to consider use of a fee on transportation fuels linked to the price of carbon in the cap and trade system. This design for the inclusion of transportation fuels was contained in the federal Kerry-Graham-Lieberman draft bill from early 2010. This approach brings many benefits in its simplicity, carbon price transparency, economic efficiency, energy security and environmental certainty. A linked fee approach to transportation fuel emissions would: 1) maintain a market-based price signal to consumers, 2) improve the transparency of that price signal for consumers, 3) eliminate the need to compensate refiners for unrecovered costs associated with consumer emissions, and 4) provide a mechanism for transitional relief to fuel consumers and funding of transportation-related technology and infrastructure investment.

Each quarter, or other prescribed period, allowances equivalent to the emissions from the amount of transportation fuel consumed, would be withheld from the cap and trade market. Auctioning of allowances would then proceed as planned and would establish an average clearing price per ton of CO2e for the period. This clearing price would then be used by the state to determine the "linked fee" on transport fuels for the prospective period. The fee would be based on the amount of CO2e combustion emissions produced from each fuel type (determined by the carbon content of the fuel). The fee would be applied to transportation fuels and would be collected at the current point of collection for federal excise taxes or fees, which for transportation fuels is generally the terminal rack. The fee would be applied equally to imported and domestic finished products. Revenue generated from the fee could be directed toward low carbon transportation technologies, or to consumer benefit (as is planned in the electricity and natural gas sectors).

Treatment of Combined Heat and Power (CHP)

Without proper incentives, a CHP facility and its thermal host are disadvantaged because they take on additional GHG emissions obligations for power produced on-site that otherwise would be the obligation of the utility. The regulation's allowance distribution

scheme for CHP must be designed to ensure that the infrastructure required to promote the addition of 4,000 MW of new CHP exists.

Existing CHP is threatened and further CHP development in California is discouraged unless CARB addresses the disincentive that exists for the larger on-site carbon footprint that comes with production of power at an industrial facility. But for the on-site power production, the facility's emission allowance obligation would be limited to thermal emissions such as those from a (potentially less efficient) boiler. As a result, an industrial facility producing and exporting CHP power must have certainty in its ability to recover this additional carbon cost in the market. California regulators universally seem to have taken the position that recovery of carbon costs in the market price of electricity is a theoretical "given", however industrial facilities whose core business is not electricity generation will not make or maintain capital investments in CHP on market theory alone. CARB must take action to ensure that CHP can recover its carbon costs for power generation in the market price of electricity.

Specifically, CARB should provide the following language in the ISOR rationale for §§ 95891(a) and (c):

While allowances will not be allocated to industrial cogeneration to cover emissions associated with electricity exports to the grid, this limitation is based on the assumption that these entities will be able to fully recover their costs in the market.

In addition, the final regulations should provide the following language as §95891(d):

To ensure that industry assistance through allowance allocations meets the objectives of maintaining competitiveness and avoiding leakage, the Executive Director shall annually review electricity market prices to examine the extent to which these prices permit full carbon cost recovery for efficient cogeneration facilities serving industrial facilities. If the prices do not permit full carbon cost recovery, the Executive Director shall take action to ensure full recovery following consultation with the Public Utilities Commission.

Placing this language in the cap-and-trade regulation will substantially increase investors' confidence in new or expanded CHP economics and increase the likelihood of new development – consistent with the CHP goals contained in the Scoping Plan.

Linkage

The regulation acknowledges the important role of linkage in providing for a broad market, additional opportunities for low-cost emission reductions, and the ability for global management of GHG emissions. Linkage with other GHG programs is identified as a critical cost-containment mechanism. Even though the importance of linkage is acknowledged – the regulation states there are no current plans to link with *any* other GHG programs – and even points out serious hurdles with linking to other WCI entities. There appears to be no sense of urgency to create these linkages, and the very strict criteria for linkage may actually preclude linkage with most or all other GHG programs.

CARB should state in a Resolution (or elsewhere before adoption of the regulation), what specific programs will be considered for linkage, as well as the timeline by which decisions

on specific linkages will be rendered. Consideration must be given to linkage with the EU trading system – the largest GHG trading program in the world, and the one with the largest potential to bring linkage benefits to the California market. Moreover, given the acknowledged importance of linkage when it comes to cost control, CARB must accept that if no linkage is attained by a date certain early within the first compliance period – that a reconsideration of linkage criteria should occur and/or other, additional cost-control measures (such as additional use of offsets) should be implemented.

Offset Limits/Protocols/Rules

BP has previously commented on the importance of the role of offsets. Given the unquieting concerns about the potential economic impact of AB32, the state of California's economy, the fact that significant emissions reductions in an already very efficient California energy production system will require long-term transformation, and the likelihood that California will be linking with few or no other cap and trade programs over the near term, we believe it is more important than ever that CARB seriously reconsider the enforcement of strict quantitative limits on offsets. Instead, because climate change is a global problem that requires a global solution, and because California will continue to be negatively impacted if others don't act, CARB should look to incorporate the maximum use of design elements that control costs while maintaining the environmental integrity of the emission reduction goal. The use of offsets is a clear example of such a design element.

The very restrictive quantitative limit on the use of offsets is compounded by what appears to be an incomplete, bureaucratic and potentially very exclusive offset-approval process. CARB staff should move expeditiously toward completion of an offset-approval process that ensures an adequate supply of offsets (especially early in the program), does not impose geographic limits (either explicit or implicit – through limited scope of approval), and that utilizes as much as possible existing offset protocols in use within California, the United States and globally.

In order for offsets to provide cost control, they must be available to the market. In addition to the previously mentioned concerns about quantitative limits and a bureaucratic approval process, there is also the potential that even if offsets are available, some regulated entities may not be inclined or able (for whatever reason) to make use of offsets – a development that can affect all market participants. CARB should monitor the quantity of offsets used as compared to the allowed limit, and create a system to carry over to new compliance periods and distribute amongst all market participants, the ability to use offsets unused in a previous compliance period. For example, if offsets make up only 6% of compliance instruments in the first compliance period (due to a lack of offset supply, use, or for other reasons), the unused 2% should allow for all regulated parties to use 10% (i.e. 8% plus 2%) offsets in the next compliance period.

With respect to potential offset reversals that are caused through no fault of the compliance entity who surrenders them as compliance instruments - there should be no penalties for untimely surrender imposed on compliance entities. The regulation should state that these reversals, if and when they occur, come only with a requirement to replace the original compliance instrument.

Untimely Allowance Surrender Penalty
It is appropriate to levy a penalty on untimely surrender – to both encourage compliance and remove any incentive/gain from non-compliance. However, a 4 - 1 penalty is excessive and diverges from well-established legal and regulatory precedent of treble damages. Staff have cited a WCI decision as precedent – although there does not seem to be any particular logic or rationale behind any WCI decision. We recommend a standard 3 - 1 submittal.

In addition to the amount of the penalty, we strongly recommend against imposing a penalty in terms of allowances – beyond submittal of the original allowance. In other words, the additional penalty should be equal to the monetary value of two allowances. To require the submittal of the penalty in additional allowances tightens the market and penalizes all market participants (even if the allowances are put into the highest price allowance reserve tier as contemplated).

The regulation is unclear as to whether untimely submittal would result in daily health and safety code violations and penalties beyond the 3 - 1 (or 4 - 1) submittal. Discussion with CARB staff has clarified that the intent is not to subject untimely submittal to both 3 - 1 and daily fines – but rather that daily fines would only be imposed if the 3 - 1 penalty is not complied with. The regulation requires clarification on this point.

Auction Bid Guarantee
The regulation contains a requirement to provide the auction administrator with assurances in the form of bonding, cash, or a letter of credit. This requirement is really unnecessary and burdensome for compliance entities with large physical assets in the state and/or who may be investment-grade, credit-rated companies. Bid guarantees should allow demonstration of sufficient physical assets or investment-grade credit rating.

Allowance Reserve
If properly designed, the allowance reserve can play an important role in containing costs in the cap and trade system. However, the price of allowances in the various reserve tiers is far too high, especially given CARB's estimate of allowances prices of $10 in 2012 and $20 in 2020. It would be more appropriate for the tiered pricing to be tied more closely to the actual price of allowances in the market.

Periodic Review of the Regulation
AB32 requires a review of the Scoping Plan in 2013, but it is unclear whether this requirement includes a review of the very important and complex cap and trade regulation. Given the importance and complexity of the cap and trade regulation, and the fact that it has never been done to this degree anywhere in the world, we strongly support inclusion, in the regulation, of a required periodic review of the cap and trade regulation – similar to the concept included the in the low carbon fuel standard (through Resolution). In addition to the requirement for periodic reviews, Resolution language should include examples of issues to be included in the review.

Reconciliation/update of reduction requirements, contribution from various measures
As there have been updates to emissions forecasts, necessary emission reductions to get to 1990 levels, and the contribution from various measures – it would be useful to see all

these numbers reconciled and summarized in a single place in the regulation. This would include an update to Table 2 of the Scoping Plan.

Please don't hesitate to contact me should you have questions regarding this correspondence.

Sincerely,

Ralph J. Moran
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BP America, Inc.

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