



August 2, 2013

Dr. Steve Cliff
Chief, Climate change Program Evaluation Branch
California Air Resources Board
1001 "I" Street, Sacramento, CA, 95812

Subject: Environmental Defense Fund comments on the July 18, 2013 Workshop Regarding Proposed Amendments to the Cap-and-Trade Program

Dear Dr. Cliff,

On behalf of Environmental Defense Fund ("EDF"), please accept these comments regarding the July 18, 2013 workshop and staff proposed amendments to the Cap-and-Trade Program. We appreciate the opportunity to submit comments on this cornerstone piece of California's AB32 legislation to spur innovation, promote investment and job growth, and reduce greenhouse gas pollution. From our standpoint, the cap-and-trade program is off to a great start and we are supportive of this programmatic review and amendment process that the California Air Resources Board ("CARB") has led to engage the public in a dialogue to revise and strengthen the regulation.

By way of introduction to this letter, EDF must first express support for the majority of regulatory amendments proposed by CARB, including, but not limited to, the proposed two new offset protocols, new CITSS functionality, revising cost containment and "legacy contracts", and the new section for natural gas suppliers. We furthermore support the continued commitment to including transportation fuels in the cap-and-trade regulation - a critical part of the overall program success. We offer comments on some of these changes in this letter.

However, in addition to commenting on various proposed amendments in this letter, we also have serious reservations on the proposed amendment to shift transition assistance factors for the state's largest point sources of pollution: oil refineries. While we fully agree that ARB should take the necessary steps to minimize leakage, as required by AB 32, new research on the topic is not completed and cannot justify a continued level of 100% assistance factor for industry classifications in the second compliance period. EDF recognizes that California businesses face the real challenge of figuring out how to comply with climate change regulations and compete with out of state businesses that don't have similar requirements, but certain sectors like the petroleum refineries simply don't need continued assistance.

Our comments fall under the four topic areas below:

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## 1. Inclusion of New Offsets Protocols and Aggregation of Offset Projects

### Consideration of New Offsets Protocols: Rice cultivation and mine methane

Offsets are a critical piece of a cap-and-trade market. They can deliver vast economic and environmental benefits for landowners, farmers, foresters and other project developers who participate in the offsets market by documenting emissions reductions and generating sellable credits. Offsets have tremendous potential to inspire innovation in these and other sectors of the economy that are large sources of climate pollution yet lack the necessary emissions measurement systems for inclusion in the program.

In addition to inspiring additional reductions outside capped sectors, offsets allow regulated companies to take advantage of cost effective reductions being made elsewhere in the economy. Thus, even at limited quantities, offsets can reduce the overall compliance costs of cap-and-trade by a significant amount. Reputable projections suggest that a California cap-and-trade program that includes offsets will likely cost less than \$20/ton of emissions, while a program without offsets may cost more than \$100/ton of emissions. Based on these scenarios, even offsets limited to 8% of obligations can reduce statewide program compliance costs by more than \$200 billion between 2013 and 2020.

Although CARB has adopted four compliance protocols to date, these protocols are not expected to be able to generate enough credits to ensure full availability under the program. Furthermore, information obtained through rigorous scientific efforts indicates that other high-quality accounting protocols for offsets exist and can generate investments in un-capped sectors. Accordingly, EDF supports CARB's pursuit of the protocols for rice cultivation and mine methane and look forward to completion of the workgroup process for each. When completed, EDF looks forward to full consideration of the protocols by the Board, using the best available science to determine eligibility and appropriateness under AB 32.

### Creation of Mechanism for Offsets Aggregation in the Agricultural Sector

As the largest uncapped sector of California, agriculture presents a significant opportunity to generate valuable greenhouse gas emission reductions. As stated above, EDF applauds CARB's development of the rice protocol and we look forward to seeing a draft in the upcoming weeks.

For agricultural offset projects to be effective though, farm-level reductions need to be aggregated into larger, multi-landowner projects. Aggregation is one of – if not the most important – factors in the development of agricultural offset projects that are cost-effective and will allow for the engagement of the agricultural sector in voluntary GHG mitigation efforts.

EDF supports the proposed edits to the cap-and-trade regulations developed by the Coalition on Agricultural Greenhouse Gases (C-AGG), to which EDF is a member. In addition to an added definition, the edits are based on language from ARB's Mandatory Reporting Regulation, which is included by reference in the cap-and-trade regulations' accreditation requirements for offset verifiers and verification bodies (Section 95978).

Suggested C-AGG modifications are proposed in redline format (see appendix A), and are intended to provide the necessary framework for the unique role aggregators can play to bring valuable agricultural offset projects into California's cap-and-trade market. While the language suggested is to prepare the structure for the rice offset protocol rulemaking, the proposed language is applicable for other land-based agricultural practices. We recognize that these edits will require additional changes to the cap-and-trade regulations for conformity, and EDF welcomes the opportunity to work with ARB to incorporate any additional necessary changes.

## 2. Cost Containment

On the issue of cost containment in California's cap-and-trade program, we'd first like to emphasize – as we have in previous letters to CARB and to the Emissions Market Assessment Committee (EMAC)<sup>1</sup> – that the program currently includes an array of well-designed cost containment provisions. Nevertheless, we understand CARB's interest in considering additional options given concerns over the possibility (even if that possibility is remote) of the program prices rising unexpectedly. To this end, we support CARB's proposed regulatory change to allow borrowing of allowances from future vintage years at the highest price tier of the Allowance Price Containment Reserve (APCR, or Reserve). As designed in the recent modifications, the cost containment proposal will help address price concerns, while still ensuring that the overall environmental integrity of the program remains intact.

While CARB's current proposal maintains environmental integrity, if additional or alternative cost containment provisions continue to be considered, EDF stresses that maintaining the environmental integrity of the program must remain the paramount consideration. Utmost attention to environmental performance means that any new changes considered by CARB should be implemented such that disruption to the program, and its progress toward meeting reduction goals, is kept to a minimum, given the importance of regulatory certainty to the program's success.

### Importance of maintaining existing cost containment provisions

As effectively laid out in CARB's June 25, 2013 paper,<sup>2</sup> California's cap-and-trade program currently includes numerous cost-containment features including provisions for allowance banking, multiyear compliance periods, a broad program scope, an auction price floor, emissions offsets, administrative allocation of allowances, direct complimentary regulations that reduce emissions in capped sectors and an APCR.

Even with these features, it is true that there exists a possibility that external or otherwise improbable circumstances may transpire that can cause program costs to rise beyond expected price ranges, even if those market conditions are unlikely to occur. However, based on our analysis of the market conditions and cost containment features in AB32 cap-and-trade regulation as well as lessons derived from other cap-and-trade programs, features currently embedded in the program make it highly unlikely that allowance prices will escalate towards the extreme scenarios where experts are concerned that political pressure could force programmatic modification.

In support of the notion that it is highly unlikely that allowance prices will escalate towards the extreme scenarios are several data points.

First, in 2011 EDF conducted economic modeling<sup>3</sup> that found, as designed, there is an 85% chance that the APCR will not be needed at all, and that even if needed, it is highly unlikely the

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<sup>1</sup> See EDF letter to CARB Re: Cost Containment of the AB 32 Cap-and-trade regulation, dated July 9, 2013; Also see EDF letter to EMAC Re: EDF's response to EMAC's September 20, 2012 issue papers and recommendations concerning AB 32 cap-and-trade regulation price containment and linkage, dated November 16, 2012.

<sup>2</sup> CARB "Policy Options for Cost Containment in Response to Board Resolution 12-51," June 25, 2013. <http://www.arb.ca.gov/cc/capandtrade/meetings/062513/arb-cost-containment-paper.pdf>

<sup>3</sup> See EDF's "Cost Containment through Offsets in the Cap-and-Trade Program under California's Global Warming Solutions Act," July 2011.

reserve would ever be exhausted. Even if only half of allowable offsets are available, we estimated that there is only a 1/10 of a percent chance that prices would rise above \$40 per ton.

Second, CARB's own modeling<sup>4</sup> predicts that the current program design will result in the environmental goals being met at low cost – and that it is only under unlikely sensitivity scenarios where either offsets are highly limited or complimentary measures achieve significantly less reductions than anticipated that additional cost containment measures could be needed.

Third, recent analysis<sup>5</sup> from Severin Borenstein of UC Berkeley and EMAC shows that the probability is small of triggering and exhausting the APCR– and in fact, it is much more likely that prices remain low: at or near the price floor.

Fourth, examples provided by other trading programs such as the European Union Emissions Trading System (EU-ETS), the Regional Greenhouse Gas Initiative, and the U.S. Acid Rain program show that allowances prices tend to be much lower than expected<sup>6</sup>; meaning reductions have occurred faster and more cheaply than many thought possible prior to the program start. For the foregoing reasons, based on the existing design of the program, we expect the allowance prices in the California program to remain in check– a product of a well-designed market based regulation.

*Proposed regulatory change to allow borrowed allowances to replenish the Allowance Price Containment Reserve and the importance of maintaining environmental integrity*

While we believe additional price containment measures are unnecessary, we understand that there are concerns over unexpectedly high prices, and a push towards including additional cost containment provisions. As outlined in the July 2013 Discussion Draft<sup>7</sup> and July 18<sup>th</sup> Workshop presentation<sup>8</sup>, CARB's proposal would make available an additional source of allowances for the APCR.<sup>9</sup> Starting in 2015, 10% of future vintage allowances would be made available at the

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[http://www.edf.org/sites/default/files/EDF%20AB%2032offsetsmodelingmemo%20final2\\_updated\\_3Jan2012\\_v2.pdf](http://www.edf.org/sites/default/files/EDF%20AB%2032offsetsmodelingmemo%20final2_updated_3Jan2012_v2.pdf)

<sup>4</sup> See Case 1 of Updated Economic Analysis of California's Climate Change Scoping Plan: California Air Resources Board, March 24, 2010. See Case 1 of Updated Economic Analysis of California's Climate Change Scoping Plan: California Air Resources Board, March 24, 2010.

[http://www.arb.ca.gov/cc/scopingplan/economics-sp/updated-analysis/updated\\_sp\\_analysis.pdf](http://www.arb.ca.gov/cc/scopingplan/economics-sp/updated-analysis/updated_sp_analysis.pdf)

<sup>5</sup> Borenstein, Severin. "Resource Shuffling, Complementary Measures and Competitiveness under California's Cap and Trade Market," <http://www.rff.org/Documents/Events/MISTRA-2013-May-7/BorensteinRFFconf130507.pdf>

<sup>6</sup> See Ellerman, A. Denny, Frank J. Convery, Christian De Perthuis. 2010. *Pricing Carbon: The European Union Emissions Trading Scheme*. Cambridge University Press.

See also Keohane, Nathaniel and Gernot Wagner, Judge a carbon market by its cap, not its prices, July 16, 2013 <http://www.ft.com/cms/s/0/de783c62-ee23-11e2-816e-00144feabdco.html>

See also Rob Stavins, Low Prices a Problem? Making Sense of Misleading Talk about Cap-and-Trade in Europe and the USA, April 25, 2012 <http://www.robertstavinsblog.org/2012/04/25/low-prices-a-problem-making-sense-of-misleading-talk-about-cap-and-trade-in-europe-and-the-usa/>

See also U.S. Environmental Protection Agency, Clean Air Market Programs, Cap and Trade: Acid Rain Program Results <http://www.epa.gov/capandtrade/documents/ctresults.pdf>

<sup>7</sup> CARB Proposed Amendments to the California Cap-and-Trade Program Discussion Draft, July 2013 [http://www.arb.ca.gov/cc/capandtrade/meetings/071813/ct\\_reg\\_2013\\_discussion\\_draft.pdf](http://www.arb.ca.gov/cc/capandtrade/meetings/071813/ct_reg_2013_discussion_draft.pdf)

<sup>8</sup> CARB Proposed Changes to the California Greenhouse Gas Cap-and-Trade Regulations, July 18, 2013 <http://www.arb.ca.gov/cc/capandtrade/meetings/071813/workshoppresentation.pdf>

<sup>9</sup> The value of an allowance reserve in a cap and trade program has been well documented.

highest price tier of the Reserve if needed to satisfy demand. These allowances would first be drawn from the latest vintage(s) (furthest in the future) – 2020, then 2019, etc as the regulation currently stands. Further, the regulatory change as written would automatically allow for borrowing from even later periods once new future emission reduction targets are put in place.

Generally speaking, allowing for increased borrowing as a cost containment measure is aligned with provisions included in the EU-ETS as well as with cost containment provisions suggested by EDF (as alternatives to a price cap) for California’s program in previous letters.<sup>10</sup> The provision as proposed to allow borrowing to replenish the Reserve has several advantages to other options like hard price caps.

First, the proposal places high priority on ensuring the environmental integrity of the program (as directed by the Board’s Resolution) by maintaining its core feature: the hard declining cap. While this provision allows for additional allowances in particular years if needed, by replenishing the Reserve with borrowed allowances, it ensures the same cumulative limit on emissions defined by the cap over the length of the program.

Second, by allowing borrowing only at the highest price tier of the APCR, the proposal ensures that this provision is used only when absolutely needed – during conditions of unusually high price spikes or unexpected market conditions.

Of course, there is an inherent tradeoff associated with allowing for increased borrowing since while it can help contain costs in the years when borrowed allowances are used, it increases the stringency of the cap in future years, which may mean pushing higher prices (and emission reductions) down the road. However, to minimize this tradeoff, the provision as proposed in the recent amendments allows for increased borrowing only at the highest price tier of the APCR (making it unlikely that these allowances would be used). Furthermore, the proposed modifications allow for borrowing of only 10% of each future year’s allowances, reasonably limiting the extent to which future years’ cap stringency would be increased. Finally, as California approaches the future years (2015-2020), a post-2020 program may be put in place, making borrowing from even later years possible. In other words, this provision provides important regulatory certainty early on even as it anticipates and remains flexible to potential extension of the program.

Two additional considerations CARB should take into account with respect to the proposed cost containment mechanism involve the post-2020 program. First, if these future allowances are in fact borrowed, it should not impact the stringency of the longer term cap – and any borrowed credits must be deducted from the economy wide cap. Second, if emission reductions are borrowed from future compliance periods past 2020, interest should be required (particularly for those of vintages farther into the future) and additional credits should be surrendered at some point in the future. Interest on borrowing was envisioned as part of the House-passed Waxman-

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See Murray, Brian C., Richard G. Newell, and William A. Pizer. Resources for the Future (RFF) Discussion Paper: “Balancing Cost and Emissions Certainty: An Allowance Reserve for Cap-and-Trade,” (RFF DP 08-24), July 2008.

<http://www.rff.org/documents/RFF-DP-08-24.pdf>

<sup>10</sup> See Letter from EDF to Richard Cory and Steve Cliff dated July 9, 2013: Cost Containment of the AB 32 Cap-and-trade regulation. July 9, 2013, <http://www.arb.ca.gov/lists/com-attach/25-reportcostcontain-ws-Wj8BYwFmAg5QNQBv.pdf>

Also see Letter from EDF to the AB 32 Emissions Market Assessment Committee (EMAC) dated November 16, 2012: EDF’s response to EMAC’s September 20, 2012 issue papers and recommendations concerning AB 32 cap-and-trade regulation price containment and linkage.

Markey cap and trade legislation in 2009 (at an 8% interest rate for allowances borrowed several years into the future).<sup>11</sup>

Although EDF supports the proposed regulatory modification for cost containment because it maintains the same overall quantity of allowances in the program, we understand that some will argue that it might not be sufficient to contain costs - especially if unexpected market conditions occur such that prices stay high for sustained periods of time. Again, such a situation seems highly unlikely due to the cap and trade program's numerous existing cost containment features and that this new provision will further serve to contain costs while maintaining the environmental integrity of the program, which is of the utmost importance.

If CARB continues to consider additional cost containment provisions, such as a price ceiling, it is essential that provisions be put in place to manage and monitor that process – in particular to record exactly how many tons are emitted over the cap, and to develop plans to recover those tons in the future. If such provisions are developed, any price ceiling must also be sufficiently high – such as not below the highest price tier of the Reserve– to ensure it is only utilized during true emergencies and unusual price spikes.

### **3. Allowance Distribution to the Natural Gas Sector**

EDF generally supports the proposed hybrid approach for inclusion of natural gas in the cap-and-trade regulation. As designed, allowances are allocated to the natural gas sector (wherein utilities receive a free allocation), but those utilities must consign some of those allowances to auction. The proceeds of the auction must then go to benefit rate payers subject to oversight from the California Public Utilities Commission (CPUC). In addition to the general program design, EDF strongly supports the requirement that “any revenue returned to ratepayers must be done in a non-volumetric manner” Sec. 95893(d)(3).

However, although EDF supports the staff proposal to use a consignment auction, we urge CARB to consider whether the level of consignment should be increased from currently proposed escalating level – meaning natural gas utilities and rate payers receive less transition assistance in the early program years and a stronger carbon price signal in later years. As proposed, the ramp up starts at 25% and increases to 50% in 2020. As an alternative, EDF recommends CARB consider an escalating consignment that starts at 50% in 2015, escalating to full auction (100%) in 2020.

We believe that this approach is consistent with the policy objectives outlined by staff at the natural gas allocation workshop, including encouraging GHG emission reductions, maintaining equity and consistency among participants and sectors under the cap, and ensuring consistency with California's long-term climate and clean energy goals.

As discussed in a prior joint letter to CARB, the approach has several benefits which include:

*Providing allowance value to customers in a manner that rewards ongoing energy efficiency improvements and conservation to reduce GHG emissions*

Both the consignment of some allowances to auction and the requirement that revenue is not returned to ratepayers volumetrically are important factors in incentivizing energy efficiency and GHG reductions. The requirement to consign some allowances to auctions ensures that

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<sup>11</sup> H.R. 2454 in the 111<sup>th</sup> Congress 1<sup>st</sup> Session; Section 725(c)(2)

rates will reflect a carbon price signal. This signal is critical to incentivizing energy efficiency and GHG reductions. It is also critical that every cap-and-trade sector, including natural gas, sees a price signal in order to ensure a fully functioning market that efficiently invests in the most cost effective reductions. Similarly, returning revenue volumetrically to rate payers could reduce the incentive to conserve. When any revenue return to customers is independent of natural gas usage, the incentive to conserve is preserved even as the impacts of any rate increases are mitigated.

*Managing customer bill impacts by providing transition assistance and reducing customer exposure to price volatility*

The need to incentivize reductions through a price signal is appropriately balanced against the need to provide transition assistance to natural gas customers at the beginning of the program. We recognize that investments in energy efficiency that lead to GHG reductions do not necessarily occur overnight. Providing a gradual ramp up in carbon price can leave customers with the resources they need to make these investments early. Ensuring that utilities have a pool of free allowances to utilize directly for compliance in the early years of the program can also ensure that they are buffered from any allowance price swings and can provide a consistent rate to customers that increasingly reflects the full price of carbon emissions.

*Ensuring oversight, transparency, and accountability with regard to the allocation of allowance value to natural gas customers*

As in the electricity sector, consigning allowances to auction ensures that there is a pool of revenue that can be used for the benefit of natural gas ratepayers. Since the Public Utility Commission will provide guidelines for the use of this revenue, there will be an opportunity for stakeholders to weigh in on the important decisions involved in utilizing the revenue to benefit rate payers while maintaining important incentives for reducing GHG emissions. Similarly, the revenue from consigned allowances provides an additional opportunity for protecting low-income rate payers who must spend a disproportionate amount of their income to meet their energy needs.

#### **4. Extending Transition Assistance: Table 8-1 - Increasing the Assistance Factor for Petroleum Refineries**

On the issue of leakage in California's cap and trade program, we'd like to note— as we have in a previous joint letter to CARB<sup>12</sup> – that economic and emissions leakage is a very important issue and we commend staff for its commitment to conducting a more thorough leakage assessment. However, we do not support CARB's proposed regulatory change to shift the assistance factor and maintain 100% assistance for all leakage risk classifications for the second compliance period. Specifically, we do not believe that this assistance is needed for the petroleum refinery sector. We believe that if adopted, this proposal will create windfall profits to the state's largest polluters at the expense of California consumers. The below sections further explain our reasoning for why we urge CARB to reconsider this proposed amendment.

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<sup>12</sup> See [GWAC letter](http://www.arb.ca.gov/lists/july-30-leakage-ws/13-083012_gwac_comments_to_carb_on_leakage.pdf) to CARB Re: Comments on Cap-and-Trade Program: Emissions Leakage Research and Monitoring, August 30, 2012 [http://www.arb.ca.gov/lists/july-30-leakage-ws/13-083012\\_gwac\\_comments\\_to\\_carb\\_on\\_leakage.pdf](http://www.arb.ca.gov/lists/july-30-leakage-ws/13-083012_gwac_comments_to_carb_on_leakage.pdf)

*Shifting of the assistance factors should be based on sound scientific data and observations of market opportunity. Until that analysis is available, CARB should not increase assistance factors in later compliance periods.*

As was stated in the aforementioned submitted letter by GWAC, results of the leakage research analysis commissioned by CARB are still pending. Without justifiable results, shifting of assistance factors is premature. Waiting for the new research to inform the best path forward on leakage assistance, whether it be increasing, decreasing or keeping assistance factors the same is more prudent than the proposed approach.

As previously explained, the increased transition assistance is "intended to provide additional certainty and time to industry to successfully transition to lower-carbon production methods."<sup>13</sup> While we understand that some California businesses face the real challenge of complying with California's climate change regulations and competing with out of state businesses that do not have similar requirements, extending the transition assistance does not reward those companies who took early action in the time the law was passed seven years ago. Instead, this extension benefits companies that may have chosen to use delay or obstructionist tactics. This is an inequitable approach to the distribution of allowances.

*Providing free allocations in the second and third compliance periods is especially unnecessary to protect the petroleum refineries against economic and emissions leakage, and instead will likely lead to unfair profits at the expense of California consumers.*

EDF supported the programmatic market design of transition assistance for the first compliance period; however, continued full distribution of free allowances in this second compliance period is not necessary to prevent leakage, particularly for the petroleum refinery sector, for several reasons.

**First**, petroleum refineries are at little risk of leakage because the costs of transportation and adapting to California standards make it very difficult for out-of-state producers to compete with in-state refineries.<sup>14</sup>

**Second**, as admitted in a written memo produced by the Analysis Group for the Western States Petroleum Association (WSPA), even refining sector experts admit free allocation is not necessary for reducing leakage.<sup>15</sup> The memo examines economic and emissions leakage in California and offers several recommendations to minimize leakage including linkage, banking/borrowing, multi-year compliance periods, offsets, limiting costly complementary measures and border adjustments. Notably missing is the direct recommendation that distribution of free allowances would prevent leakage. On the contrary, the memo says:

*“Free allowance allocations that are fixed or independent of sources’ decisions can compensate sources for reductions in asset values from GHG reductions policies, but they are unlikely to appreciably affect the extent of leakage....”*

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<sup>13</sup> See CARB Notice and Summary of Proposed Changes, July 18, 2013.

<http://www.arb.ca.gov/cc/capandtrade/meetings/071813/ctnotice0713.pdf>

<sup>14</sup> Economic Allowance Allocation Committee. 2010. Allocating emissions allowances under a California cap-and-trade program. Recommendations to the California Air Resources Board and California Environmental Protection Agency. March, p. 46.

<sup>15</sup> See Analysis Group Comments on Leakage Memo, May 28, 2009.

<http://www.arb.ca.gov/cc/capandtrade/meetings/041309/apr13pcanalgrp.pdf>

*Free, regularly updating allocation of allowances based on output levels can reduce leakage, but it can also distort incentives and increase the total costs of achieving GHG reduction goals....”*

**Third**, although the guarantee of emissions reductions under AB 32 is achieved by the declining overall emissions limit and not by auction of credits, it is well documented that auctions have an important role in making the overall program work effectively and protect Californians. The grant of free allowances to refineries undermines this, while also allowing California’s biggest point sources to retain unfair / windfall profits. A letter sent to Governor Jerry Brown by a group of 56 well respected economists clarifies this point:

*“Whether an industry operates in a perfectly competitive market or otherwise, there is always the potential for windfall profits from free allocation. In most situations businesses are able to pass the market value of allowances through to consumers, even though they themselves received allowances for free. This is what happened in the EU’s wholesale electricity market<sup>16</sup>. Short of fundamental market reform, the easiest step to reduce the potential for such undue profits is to auction allowances, a step the EU has since taken.”<sup>17</sup>*

While the electric utilities must buy their allowances and return revenues to the benefit of their ratepayers, under this proposed amendment, oil companies will continue to receive allowances for free, paid for by taxpayers, and can therefore pass costs along to their customers while simultaneously pocketing the profit. Furthermore, by getting this free pass, refineries will have little incentive to invest in pollution reducing measures.

**Fourth**, several pieces of evidence exist to support the idea that the dominant position of California refineries means that they are likely to be able to pass on a substantial portion of any cost increases incurred by the cap and trade regulation – even if those costs are small because of existing cost containment mechanisms included in the regulation. Accordingly, giving these facilities additional free allowances will have little, if any, effect on their competitiveness or decision making for leakage considerations – because they won’t experience reduced profits.

For example, a well circulated analysis prepared for ConocoPhillips uses a demand elasticity of -0.5 to support a finding that the cost pass-through rate is 50% for refined petroleum products.<sup>18</sup> Another report by analysts at the Federal Reserve Bank of Cleveland estimated that 96% of the variation in oil prices is passed on to consumers in gas prices at the pump.<sup>19</sup> Further, comments in this rulemaking record submitted by Dr. Charles Mason argue that:

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<sup>16</sup> Sijm, Jos, Karsten Neuhoff, and Yihsu Chen, 2006. “CO2 cost pass-through and windfall profits in the power sector,” Climate Policy, and Ellerman, Denny, and Paul L. Joskow. 2008. “The European Union’s Emissions Trading System in perspective,” Pew Center on Global Climate Change working paper (now: Center for Climate and Energy Solutions).

<sup>17</sup> Joint Letter of Economists and Economic Experts to Governor Brown Relating to the Allowance Allocation Design of the California Cap-and-Trade Regulation, August 26, 2012. Available at: <http://www.docstoc.com/docs/153572422/Joint-Letter-of-Economists-and-Economic-Experts-to-Governor-Brown>

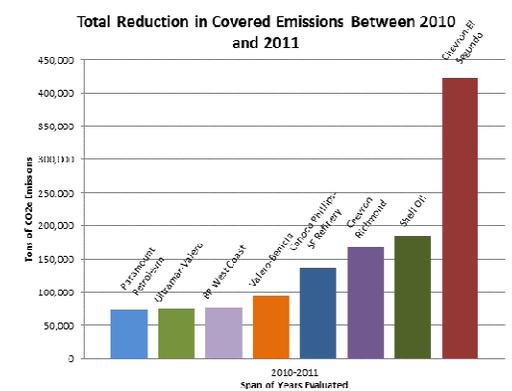
<sup>18</sup> NERA Economic Consulting, "Market Conditions and the Pass-through of Compliance Costs in a Carbon Emission Cap-and Trade program," 2009.

<sup>19</sup> Andrea Pescatori and Beth Mowry, "The Pass-Through of Oil Prices to Gasoline Prices," Economic Trends, Federal Reserve Bank of Cleveland, February 2008. Available at <http://www.clevelandfed.org/research/trends/2008/0208/04ecoact.cfm>

*“policy adjustment under consideration is unlikely to be effective at preventing California refiners from shutting down any refinery – and therefore not an appropriate or effective mechanism for transition assistance”<sup>20</sup>*

**Fifth**, recent petroleum refinery emissions data and energy efficiency audit data do not demonstrate a need for continued assistance in the second compliance period - transition is already occurring.

EDF analyzed CARB’s recently released 2011 emissions data showing that 11 of the state’s refineries logged significant reductions in their greenhouse gas pollution between 2010 and 2011 (see figure 1).<sup>21</sup> These reductions were not a result of facilities suspending or cutting production through voluntary or involuntary action, but rather investment in and upgrading equipment.



In support of EDF’s analysis, a recently released CARB report shows the major energy efficiency investments are being pursued across the state’s largest refineries. <sup>22</sup> In the report, ARB identified 401 energy efficiency opportunities that are completed, ongoing, scheduled or currently under consideration at the state’s biggest polluters. In total these projects would reduce GHG emissions from the 12 facilities studied by about 2.78MMT CO<sub>2</sub>e annually, about 9% of their statewide total for climate change pollution. In addition, these improvements would create individual net savings of up to \$25 million annually. What’s more, these savings estimates do not include the benefit these companies get from having to secure fewer allowances in state’s landmark cap-and-trade market – worth another \$ 50 million annually at a forecasted carbon price of \$18 / ton of carbon.

A prime example of the type of investment being made can be seen at Valero's refinery in Benicia, CA, which decreased covered GHG emissions by over 95,000 metric tons from a recent project. As reported in the Benicia Herald, this decrease was the direct result of a new flue gas scrubber put into use at the refinery in 2011.<sup>23</sup> According to Sue Fisher Jones, public affairs manager for the Benicia refinery, the Valero installation,

*"...will let the refinery retire existing furnaces, allowing new, energy-efficient furnaces to operate and reduce the refinery's greenhouse gas footprint."*

<sup>20</sup> Letter to Steve Cliff from Dr. Charles Mason, August 2, 2013, Proposed Amendments to the AB 32 Cap-and-Trade Program: The Relative Size of Increased Allowance Gifts to Refineries and the Effect on Emissions and Economic Leakage, Available at <http://www.arb.ca.gov/lists/com-attach/57-cap-trade-draft-ws-B2pTNFEjUGxVPVcI.pdf>

<sup>21</sup> Koehler, Larissa, “Major California Refineries Logging Big Pollution Reductions Under AB 32” Available at: <http://blogs.edf.org/californiadream/category/global-warming-solutions-act-ab-32/page/2/>, February 12, 2013.

<sup>22</sup> CARB, Energy Efficiency and Co-Benefits Assessment of Large Industrial SO<sub>2</sub> Sources, Refinery Sector Public Report, June 2013. Available at <http://www.arb.ca.gov/cc/energyaudits/eeareports/refinery.pdf>

<sup>23</sup> Weilenman, Donna Beth. "Refinery to Test New Scrubber." The Benicia Herald. N.p., 4 Dec. 2010. Web. 01 Aug. 2013.

Another prime example of the lack of need for transition assistance to refineries can be seen in corporate documents released by Tesoro related to the purchase of the nearby BP Wilmington refinery for \$1,175 million. In support of the sale, Tesoro released the following statements, prior to any transition assistance modifications”

*“Tesoro has a proven track record on the West Coast, and we understand the business climate and the challenging, but manageable, regulatory environment in California... Tesoro has invested over \$1.7 billion in our West Coast facilities over the last five years... The transaction is expected to reduce stationary source air emissions, lowering AB 32 compliance costs...Reconfiguration of the refineries will increase transportation fuels production while decreasing Wilmington’s CO2 emissions by 30%...”<sup>24</sup>*

In sum, CARB’s justification for extending transition assistance to allow for additional certainty and time for industry to invest in the low carbon production processes simply does not hold for refineries. Major investments are ongoing, emissions reductions are taking hold, and extra free allowances are unlikely to have any impact on business decision making or consumer prices.

## **Conclusion**

We appreciate the fact that CARB continues to strengthen the program in both big and small ways. Continued monitoring and improvement of the program is important in ensuring California achieves our desired economic and environmental goals. We look forward to continuing to work with the board and the staff to create the most robust market as possible. Thank you for your consideration of the comments on the proposed changes to the cap-and-trade regulation.

If you have any questions or concerns regarding the comments made in this letter, please do not hesitate to contact us.

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<sup>24</sup> See Tesoro Investor Summary: Tesoro Purchase BP’s Southern California Refining And Marketing Business, Also See: Thomson Reuters Streetevents Edited Transcript TSO - Tesoro Corporation to Purchase BP’s Fully Integrated Southern California Refining and Marketing Business - Conference Call EVENT DATE/TIME: AUGUST 13, 2012.

## APPENDIX A –C-AGG proposed modifications

### **§ 95802. Definitions**

“Aggregator” means a body which intends to serve as an Offset Project Operator for a Rice Offset Project, and meets the requirements of section 95xxx, and meets the requirements of the Rice Offset Project Protocol.

(179) “Offset Project Operator” means the entity(ies) with legal authority to implement the offset project. An “Aggregator,” as defined in Section 95802xx, may serve as an Offset Project Operator for Compliance Offset Protocols where aggregation is permissible, based on the legal authority to implement the offset project as defined in that protocol.

### **§ 95xxx132. Accreditation Requirements for ~~Verification Bodies, Lead Verifiers, and Verifiers of Emissions Data Reports and Offset Project Data Reports~~Aggregators.**

- (a) The accreditation requirements specified in this subarticle shall apply to all aggregators of offset projects~~verification bodies, lead verifiers, and verifiers that wish to provide verification services~~ under this article ~~and under the cap and trade regulation.~~
- (b) The Executive Officer may issue accreditation to ~~verification bodies, lead verifiers, and verifiers that meet the requirements~~aggregators specified in this section.
1. ~~Verification Body Accreditation~~Aggregator Accreditation Application. To apply for accreditation as an aggregator~~verification body~~, the applicant shall submit the following information to the Executive Officer:
    - A. A list of all ~~verification~~ staff and a description of their duties and qualifications, ~~including ARB accredited verifiers on staff.~~ The applicant shall demonstrate staff qualifications by listing each individual’s education, experience, professional licenses, and other pertinent information.
      - ~~1. A verification body shall have and retain at least two verifiers that have been accredited as lead verifiers, as specified in section 95132(b)(2);~~
      - 2.1. A verification bodyAn aggregator shall have and retain at least ~~five~~three total full-time staff.
    - B. The applicant shall provide a list of any judicial proceedings, enforcement actions, or administrative actions filed against the body within the previous 5 years, with an explanation as to the nature of the proceedings.
    - C. The applicant shall provide documentation that the proposed ~~verification body~~aggregator maintains a minimum of ~~four~~two million U.S. dollars of professional liability insurance and must maintain this insurance for three years after the last crediting period of the offset project developed by the aggregator~~completing verification services.~~
    - ~~D. The applicant shall provide a demonstration that the body has policies and mechanisms in place to prevent conflicts of interest and~~

to identify and resolve potential conflict of interest situations if they arise. The applicant shall provide the following information:

1. Identification of services provided by the verification body, the industries that the body serves, and the locations where those services are provided;
2. A detailed organizational chart that includes the verification body, its management structure, and any related entities;
3. The verification body internal conflict of interest policy that identifies activities and limits to monetary or non-monetary gifts that apply to all employees.

The applicant shall provide a demonstration that the body has procedures or policies to support staff technical training as it relates to verification. This training shall include participating in ARB verifier training on an ongoing basis.

E.D. The verification body aggregator shall notify ARB within 30 days of when it no longer meets the requirements for accreditation as a verification body in section 95132(b)(1). The verification body aggregator may request that the Executive Officer provide an additional time to hire additional staff to meet the requirements of this section.

~~F.—If the applicant is a California air pollution control district or air quality management district, the requirements of section 95132(b)(1)(A)(2) and 95132(b)(1)(B)–(D) do not apply, except that the applicant shall provide a demonstration that the district has policies and mechanisms in place to prevent conflicts of interest and resolve potential conflict of interest situations if they arise.~~

~~2.—Lead Verifier Accreditation Application. To apply for accreditation as a lead verifier, the applicant shall submit documentation to the Executive Officer that provides the evidence specified in section 95132(b)(2)(A), and section 95132(b)(2)(B), or (C):~~

~~A.—Evidence that the applicant meets the criteria in 95132(b)(3); and,~~

~~B.—Evidence that the applicant has been an ARB accredited verifier for two continuous years and has worked as a verifier in at least three completed verifications under the supervision of an ARB accredited lead verifier, with evidence of favorable assessment by ARB for services performed; or,~~

~~C.—Evidence that at the time of the verification training examination, the applicant has worked as a project manager or lead person for not less than four years, of which two may be graduate level work:~~

~~1.—In the development of GHG or other air emissions inventories; or,~~

~~2.—As a lead environmental data or financial auditor in the private sector.~~

3.2. Verifier Aggregator Accreditation Application. To apply for accreditation as an aggregator verifier, the applicant shall submit the following documentation to the Executive Officer:

- A. Evidence demonstrating the minimum education background required to act as an aggregator verifier for ARB. Minimum education background means that the applicant has either:

1. A bachelors level college degree or equivalent in science, technology, business, statistics, mathematics, environmental policy, agriculture or economics, ~~or financial auditing~~; or
  2. Evidence demonstrating the completion of significant and relevant work experience or other personal development activities that have provided the applicant with the communication, technical and analytical skills necessary to conduct offset project aggregation verification.
- B. Evidence demonstrating sufficient workplace experience to act as an aggregator verifier, including evidence that the applicant has a minimum of two years of fulltime work experience in a professional role involved in emissions data management, offset project development, data management systems, the application of emissions and/or biogeochemical process models, emissions technology, emissions inventories, environmental auditing, or other technical skills necessary to conduct offset project aggregation verification.
- ~~4.—The applicant must take an ARB approved general verification training and receive a passing score of greater than an unweighted 70% on an exit examination. If the applicant does not pass the exam after the training, they may retake the exam a second time. Only one retake of the examination is allowed before the applicant is required to retake the ARB approved general verification training course. Training under the previous version of the regulation does not qualify an applicant to retake an exam under this version without first taking the training for this revised regulation.~~
- ~~5.—Sector Specific and Offset Project Specific Verifiers.~~
- ~~6.—Sector Specific Verifier. The applicant seeking to be accredited as a sector specific verifier as specified in section 95131(a)(2) must, in addition to meeting the requirements for accredited lead verifier or verifier qualification, have at least two years of professional experience related to the sector in which they are seeking accreditation, take ARB sector specific verification training and receive a passing score of greater than an unweighted 70% on an exit examination. If the applicant does not pass the exam after the training, they may retake the exam a second time. Only one retake of the examination is allowed before the applicant is required to retake the ARB approved sector specific verification training.~~
- ~~B.—Offset Project Specific Verifier. The applicant seeking to be accredited as an offset project specific verifier as specified in section 95977.1(b) of the cap and trade regulation must, in addition to meeting the requirements for accredited lead verifier or verifier qualification, meet one of the following requirements:~~
- ~~1.—Have at least two years of professional experience related to developing emission inventories, conducting technical analyses, or environmental audits of the offset project type, and take general ARB offset verification training and ARB offset project specific verification training for an offset project type, and receive a passing score of greater than an unweighted 70% on an exit examination. If the applicant~~

~~does not pass the exam after the training, they may retake the exam a second time. Only one retake of the examination is allowed before the applicant is required to retake the applicable ARB approved offset verification training; or,~~  
2. ~~Be a verifier in good standing for the Climate Action Reserve prior to October 28, 2011, taken Climate Action Reserve project specific verifier training, have performed at least two project verifications for a project type by October 28, 2011, and have taken general ARB offset verification training, and receive a passing score of greater than an unweighted 70% on an exit examination. If the applicant does not pass the exam after the training, they may retake the exam a second time. Only one retake of the examination is allowed before the applicant is required to retake the ARB approved general ARB offset verification training and offset project specific verification training.~~

6. Nothing in this section shall be construed as preventing the Executive Officer from requesting additional information or documentation from an applicant after receipt of the application for accreditation as an an aggregator verification body, lead verifier, or verifier, or from seeking additional information from other persons or entities regarding the applicant's fitness for qualification.

(c) *ARB Accreditation.*

1. Within 90 days of receiving an application for accreditation as an an aggregator verification body, lead verifier, verifier, sector specific verifier, or offset project specific verifier, the Executive Officer shall inform the applicant in writing either that the application is complete or that additional specific information is required to make the application complete.
2. Upon a finding by the Executive Officer that an application for accreditation as an an aggregator verification body, verifier, lead verifier, sector specific verifier, or offset project specific verifier is complete, meets all applicable regulatory requirements, and passes a performance review by ARB which may include a review of applicable past voluntary or compliance offset projects, conflict of interest submittals, and additional information or documentation regarding the applicant's fitness for qualification as defined in section 95102(a), the prescreening requirement is met ~~and the applicant will be eligible to attend the verification training required by this section.~~
3. Within 45 days following completion of the application process ~~and all applicable training and examination requirements~~, the Executive Officer shall act to issue an Executive Order to grant or withhold accreditation for the verification body, lead verifier, sector specific verifier, offset project specific verifier or verifier aggregator.
4. The Executive Order for accreditation is valid for a period of three years, whereupon the applicant may re-apply for accreditation as an an aggregator verifier, lead verifier, sector specific verifier, offset project specific verifier, or verification body if the applicant has not been subject to ARB enforcement action under this article. ~~All ARB approved general, sector~~

~~specific, or offset project specific verification training and examination requirements applicable at the time of reapplication must be met for accreditation to be renewed by the Executive Officer.~~ In addition, the performance review requirement set forth in section 95~~xxx132~~(c)(2) must be met for accreditation to be renewed by the Executive Officer.

5. All ~~verification body aggregator~~ requirements in section 95~~xxx132~~(b)(1) must be met for the Executive Officer to renew the ~~verification aggregator~~ body accreditation.
6. The Executive Officer and the applicant may mutually agree to longer time periods than those specified in subsections 95~~xxx132~~(c)(1) or 95~~xxx132~~(c)(3), and the applicant may submit additional supporting documentation before a decision has been made by the Executive Officer.
7. Within 15 working days of being notified of any corrective action in another voluntary or mandatory GHG program, an ARB accredited ~~verification body, lead verifier, sector specific verifier, offset project specific verifier, or verifier aggregator~~ shall provide written notice to the Executive Officer of the corrective action. That notification shall include reasons for the corrective action and the type of corrective action. The ~~verification body or verifier aggregator~~ must provide additional information to the Executive Officer upon request.
- ~~8. Verifiers shall take ARB approved training to continue to provide verification services after January 1, 2012. The verifier must receive a passing score of greater than an unweighted 70% on the exit examination.~~

(d) ~~Modification, Suspension, or Revocation of an Executive Order Approving an Aggregator Verification Body, Lead Verifier, or Verifier.~~ The Executive Officer may review and, for good cause, including any violation of subarticle 4 of this article or any similar action in an analogous GHG system, modify, suspend, or revoke an Executive Order providing accreditation to an ~~aggregator verification body, lead verifier, or verifier~~. The Executive Officer shall not revoke an Executive Order without affording the ~~verification body, lead verifier, or verifier aggregator~~ the opportunity for a hearing in accordance with the procedures specified in title 17, California Code of Regulations, section 60055.1 et seq.

1. ~~During suspension or revocation proceedings, the verification body, lead verifier, or verifier may not continue to provide verification services.~~
2. Within five working days of suspension or revocation of accreditation, an ~~verification body aggregator~~ must notify all ~~parties reporting entities, offset project operators, or authorized project designees~~ for whom it is providing ~~verification aggregation~~ services, or has provided ~~verification aggregation~~ services within the past 6 months of its suspension or revocation of accreditation.
- ~~3. A reporting entity, offset project operator, or authorized project designee who has been notified by a verification body of a suspended or revoked accreditation must contract with a new verification body for verification services.~~

(e) *Subcontracting.* The following requirements shall apply to any ~~verification body aggregator~~ that elects to subcontract a portion of ~~aggregation verification~~ services.

~~1. All subcontractors must be accredited by ARB to perform the verification services for which the subcontractor has been engaged by the verification body.~~

~~2.1. The verification body aggregator must assume full responsibility for verification aggregation services performed by subcontractors verifiers.~~

~~3.2. An aggregator verification body shall not use subcontractors to meet the minimum staff total ~~or lead verifier requirements~~ as specified in section 95~~xxx132~~(b)(1)(A)1. ~~and section 95~~xxx132~~(b)(1)(A)2.~~~~

- ~~• A verifier acting as a subcontractor to another verification body shall not further subcontract or outsource verification services for a reporting entity.~~

~~4.3. An aggregator verification body that engages a subcontractor shall be responsible for demonstrating an acceptable level of conflict of interest, as provided in section 95~~xxx133~~, between its subcontractor and the reporting entity for which it will provide verification aggregation services.~~

- ~~• A verification body may not use a subcontractor as the independent review er.~~