



## ENVIRONMENTAL DEFENSE FUND

finding the ways that work

April 30, 2009

VIA E-MAIL: [baguila@arb.ca.gov](mailto:baguila@arb.ca.gov)

Brienne Aguila

California Air Resources Board

1001 "I" Street, Sacramento, CA 95812

### **Re: Offsets Limits in AB32 Cap and Trade Program**

Dear Ms. Aguila,

Please accept this letter in response to a March 23, 2009 request for comments about enforcing a quantitative limit on offsets within the AB32 cap-and-trade program. Environmental Defense Fund thanks CARB staff for requesting input on these and other important questions, and we look forward to the public discussion which will follow.

As context for our overall comments, we will begin with a discussion of the general role of offsets in a robust, multi-sector cap-and-trade program. Our comments are drawn from our experience with cap-and-trade program design elsewhere, our participation in CARB's Market Advisory Committee (MAC)<sup>1</sup>, and our leadership role in the U.S. Climate Action Partnership (USCAP)<sup>2</sup> that culminated in a "Blueprint" for a national cap-and-trade climate policy representing the consensus of a coalition of business and environmental leaders. Combined, the USCAP and MAC recommendations coalesce into a set of criteria that we use to guide our recommendations. An effective cap-and-trade market must:

- Ensure the integrity of the emissions cap
- Engender public confidence in the program
- Be designed to be simple and transparent
- Achieve cost-efficiency
- Minimize potential for market manipulation
- Ensure the environmental integrity of offsets quality
- Allow for linkage to other programs
- Provide incentives to invest in reductions in non-capped sectors

---

<sup>1</sup> Market Advisory Committee. Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California. June 30, 2007. Page V, "Emission reductions by sources not included in the cap-and-trade program (called "offsets") can be used to reduce costs, increase flexibility, and assist in meeting the 2020 emissions-reduction requirement."

<sup>2</sup> US Climate Action Partnership. A Blueprint For Legislative Action: Consensus Recommendations for U.S. Climate Protection Legislation, January 2009, page 9, "Economic modeling and experience in other markets indicates that less restrictive limits on the use of offsets for compliance will tend to result in lower allowance prices, while more stringent emission targets tend to result in higher allowance prices. Since USCAP is recommending a stringent emission target, we also recommend generous limits on the use of offsets to help moderate compliance costs, especially during the period when low carbon technologies are still achieving the economies of scale and commercial maturity that many currently lack."

Using these criteria, the following table summarizes our responses to CARB's questions:

<b>CARB Question</b>	<b>EDF Response</b>
Interpretation of "49% of reductions" language?	<ul style="list-style-type: none"> <li>• Encourage an interpretation of the 49% limit in a manner that broadly allows offsets into the AB32 cap-and-trade program.</li> <li>• Due to inherent uncertainties, do not define "reductions" in terms of non-AB32 business-as-usual emissions.</li> <li>• Consider evaluating the limit as the difference between the cap at the beginning and the end of each compliance period, but also consider allowing entities to use offsets to meet 49% of the emissions reductions compounded across all prior compliance periods starting in 2012.</li> </ul>
Should the limit be applied to usage, supply, or a hybrid of both? Are there other options?	<ul style="list-style-type: none"> <li>• Base the limit on usage, but consider that both usage and supply limits will undermine investment in offsets projects and potentially result in market perturbation or perverse incentives.</li> </ul>
How is the limit applied across jurisdictions in WCI?	<ul style="list-style-type: none"> <li>• Send a clear message to offsets providers that high quality credits are important, in demand, and welcomed.</li> <li>• Design offset policy with an expectation of linking it to other programs within the WCI and elsewhere.</li> <li>• Work with WCI to create a unified offsets program, focused on rigorous qualitative criteria and allowing for broad use of offsets throughout the region.</li> <li>• It is imperative that offset quality criteria be consistent across WCI jurisdictions.</li> <li>• Non-uniform offset policy within WCI will increase potential for political conflicts and "shuffling" of emissions or offsets credits.</li> </ul>
How is the limit divided among compliance periods? Is it more critical to have a greater supply of offsets early or later in the program?	<ul style="list-style-type: none"> <li>• Offsets may be an important cost containment tool in both the near term and in the future as stringency of the cap increases.</li> <li>• Offsets should be a bridge tool that generates needed reductions while setting the stage for broader inclusion of sources under the cap.</li> <li>• Following MAC recommendations, any quantitative or geographic limits on offsets should be made with "a view to gradual relaxation or removal [of these constraints] once other policy considerations have been adequately addressed."</li> <li>• To facilitate enforcement, equity and transparency, consider making offset policy adjustments for all overlapping compliance periods at the same time.</li> </ul>

## **1. The General Role for Offsets**

Independent of each other and in agreement with many scholars, both the USCAP and the MAC acknowledge the important role that offsets will serve in smoothing and containing the costs of our transition to a clean energy economy. Environmental Defense Fund urges CARB to weigh recommendations of these two groups for guidance on limiting offsets.

### **a. USCAP**

Within the USCAP Blueprint is a valuable discussion on the tradeoff between generous use of offsets, especially in the near term, and the establishment of a stringent cap. Environmental Defense Fund looks to a stringent economy-wide cap on emissions as the first essential step toward avoiding the worst effects of global warming. To allay concerns that aggressive caps will

result in economic hardships, Environmental Defense Fund recommends allowing regulated entities to use high-quality, verified offsets to help meet their compliance obligations.

Within the USCAP Blueprint, a discussion of offsets as a core tool for achieving several cost containment objectives identifies the following benefits of using offsets:

- Protect the economy while allowing a long-term price signal that stimulates the development and deployment of new technologies;
- Drive investments in energy efficiency;
- Maintain the integrity of the cap for each compliance period, and
- Reduce atmospheric concentrations of greenhouse gases.<sup>3</sup>

In relation to the use of offsets to control allowance prices, inspire innovation, and promote *in situ* actions by large emissions sources, the USCAP Blueprint recommended an overall offset limit of 2 billion tons and a market construct that ensures allowance prices to be sustained above minimal levels. The Blueprint suggests an initial allowance price of no less than \$10 per ton rising at rates slightly higher than inflation. Further, the Blueprint recommends that “annual limits on offsets be implemented in a manner that ensures easy and efficient access to offsets by all covered firms while providing flexibility and limiting the potential for speculation by, for example, using the ratio of a given year’s offset limit to the cap on emissions in that year to define each covered firm’s limit on the use of offsets for compliance purposes.” Within this construct, the Blueprint strives to find the balance between allowance scarcity and generous use of offsets such that allowance prices send strong, long-term signals to investors without overburdening regulated entities with unnecessarily high compliance costs or threatening to erode public support due to high program costs.

#### **b. California Market Advisory Committee**

Similar to the USCAP, the MAC acknowledges the role that offsets will play in achieving AB32 emissions reduction goals in a cost-minimizing manner. In addition, the MAC acknowledged the balance needed between public confidence in the overall program and achieving reductions at lowest possible cost. Therefore, within the MAC report were recommendations that California's cap-and-trade offset program should:

- Ensure the environmental integrity of offset projects,
- Obtain emission reductions from and drive innovation in sectors of the economy that are difficult to include initially in a regulatory program, and
- Provide a model for other programs.<sup>4</sup>

In response to the high value that offsets bring for cost-containment purposes, the final MAC report recommended that offsets be limited by neither quantity nor jurisdiction.<sup>5</sup>

---

<sup>3</sup> USCAP Blueprint, page 8.

<sup>4</sup> MAC Report, Page 62.

<sup>5</sup> MAC Report, page 68, "The sense of the Committee is that California should reject geographic or quantitative limitations on offset credits so as to maximize the opportunity to reduce GHG emissions at the lowest cost."

### **c. Environmental Defense Fund General Views on Offsets**

Environmental Defense Fund, like the USCAP and MAC, recommends a framework that allows for the broad use of offsets within greenhouse gas emissions cap and trade programs. Broad inclusion of offset projects will increase the likelihood that low-cost projects will be identified and implemented to provide valuable program cost containment and generate local emissions reductions.

Similar to the MAC, Environmental Defense Fund observes that an offsets program will be successful when it inspires public confidence, ensures environmental integrity, and minimizes administrative costs.<sup>6</sup> In particular, to create a successful program in California, CARB's consideration of localized impacts (from offsets projects themselves or from avoided reductions by major sources) may necessitate limiting the availability of offsets for meeting AB32 reduction requirements. Within this construct to obtain local benefits, we recommend guiding offsets toward the types (i.e., projects that achieve co-pollutant reductions) and locations (i.e., communities already suffering a disproportionate impact) desired by society. Creating local benefits in an offsets program reduces the impetus to limit offsets quantitatively.<sup>7</sup>

In addition to creating local benefits, Environmental Defense Fund believes strongly that the use of offsets should not result in backsliding on air quality goals, particularly in already disadvantaged communities, as this would clearly violate the community protections language in AB32. While we consider the need to ensure air quality protections, we also observe that extensive use of offsets contributes to minimizing economic harm to low-income communities that may result from price increases for GHG-intensive goods and services. There is no strong reason to believe that the lowest cost offsets will be identified first, so quantitative limits are likely to raise the cost of meeting GHG reduction goals by impairing the development of the most cost-effective offsets projects.

Environmental Defense Fund looks forward to continuing our participation in the ongoing discussion on qualitative standards for offsets. However, we must take this opportunity to strongly agree with both the MAC and USCAP that no offsets should be credited for use in a domestic cap-and-trade program (i.e. AB32) unless they meet rigorous standards for quality. While there may be unresolved questions surrounding the justification for limiting offsets by quantity, there is little disagreement that only high quality offsets should be allowed in regulatory cap-and-trade programs. It is also of paramount importance that quality criteria be consistent across jurisdictions intending to link cap-and-trade programs. Building upon this consensus, California can and should play a leading role in defining and demonstrating an institutional structure that produces offsets of only the highest quality. In this respect, Environmental Defense Fund does not support the availability of project credits from large emitting countries that have not committed to significantly reducing their overall greenhouse gas emissions.

---

<sup>6</sup> MAC Report, page 63, "A successful set of standards will generate public confidence, ensure environmental integrity, and minimize administrative costs."

<sup>7</sup> The MAC acknowledges concerns that the co-benefits of greenhouse gas reductions are important for California, especially so in urban areas with relatively high pollution. But rather than calling for limiting offsets spatially or quantitatively, the MAC recommends "tighter restrictions on emissions of the relevant local pollutants (as opposed to greenhouse gases) is the most direct way to address this problem. Pg. 65."

Although Environmental Defense Fund generally concurs with the MAC recommendation that offsets be limited by neither quantity nor jurisdiction,<sup>8</sup> we are concerned that inclusion of credits from the current CDM or Joint Implementation regime under the Kyoto Protocol might lead to perverse incentives for large emitting countries without caps to continue increasing their emissions. For this reason, Environmental Defense Fund recommends that only high quality, verified emission reduction projects from large emitting jurisdictions that have committed to controlling their emissions (e.g. through an emissions cap) should be considered as potential offsets credits in the California market. This requirement largely excludes CDM and JI credits in the prevailing European cap-and-trade program.

We also agree with the MAC that Memorandums of Agreement, or some other enforceable commitment, is needed before the California program accepts offsets credits from other jurisdictions. These agreements, like those facilitated by the Governor at the Governor's Global Climate Summit in late 2008, provide the framework to ensure certainty in emissions reductions achieved outside of California's borders. Ultimately, Environmental Defense Fund sees the long term benefit of embracing offsets from other jurisdictions as two-fold: (1) demonstrating (and measuring) emissions from hard to reach sectors or places, and (2) developing monitoring and verification systems that are necessary precursors to inclusion as a capped sector in a cap-and-trade program .

While we do not believe that CDM and JI credits, under the current system of verification and originating in jurisdictions that have yet to commit to caps, should be qualified offsets for the California cap-and-trade program, we do agree with the MAC that, "Allowing offsets from outside the state, in particular, will ensure that global emission reductions are obtained at the lowest possible cost and may also encourage other states to follow California's lead on climate change".<sup>9</sup>

## **2. Answers to specific questions posed by CARB**

### **a. How to interpret the Scoping Plan offsets limit of "49% of reductions"?**

Given that a significant benefit of high quality offsets is a reduction in overall program costs, we encourage an interpretation of the 49% limit in a manner that broadly allows offsets into AB32, thereby avoiding undue economic harm from excessively high allowance prices while also encouraging technology transformation. In so doing, we recommend CARB counterbalance maximizing the amount of offsets under various interpretations of 49% with the importance of limiting the potential for speculation and creating transparent accounting rules and calculation methods. Steadfast transparency and ease of understanding will generate public confidence and reduce the chance of regulatory delays which can undermine the entire AB32 program.

Due to uncertain emissions forecasts and the need for overall transparency, Environmental Defense Fund cautions against using hypothetical business-as-usual emissions calculations as the metric to determine either the amount of allowable offsets or how they can be used by regulated entities under the term "49% of reductions." Evaluating reductions with respect to business-as-usual (BAU) is an inherently uncertain exercise and can lead to both uncertain compliance obligations and difficult market implementation. Further, since economy-scale estimates of

---

<sup>8</sup> MAC Report, page 68, "The sense of the Committee is that California should reject geographic or quantitative limitations on offset credits so as to maximize the opportunity to reduce GHG emissions at the lowest cost."

<sup>9</sup> MAC Report, page 64.

avoided emissions are very difficult to defend, offsets limits based on BAU forecasts may create regulatory delays if ex-post administrative review becomes necessary.

As an alternative to BAU calculations to determine the 49% limit, Environmental Defense Fund recommends CARB evaluate the limit in terms of an economy wide compliance obligation calculated by the difference between the levels of the cap at the beginning (or immediately preceding) and the end of each compliance period. This will ensure that each compliance period delivers at least half of the reductions expected through direct emissions reductions in entities under the California (or WCI) cap. For example, as shown in Slides 1 and 2 on page 10, if the emissions of entities covered by the cap at the start of the first compliance period are 30 million tons greater than the emissions cap at the conclusion of the compliance period, an amount just under 15 million tons of reductions (i.e., 49% of 30 million tons) would be able to be achieved through offsets.

In addition to offering the preceding example for interpretation of the 49% limit in the first compliance period, it is also important to understand how successive compliance period rules will allow entities to use offsets. With this said, placing quantitative offsets limits on prior compliance period reductions may cause unintended consequences like attempts at market manipulation, perverse incentives or lower offsets limits. For example, as shown in Slides 3 and 4 on page 11, if an entity is allowed to utilize offsets for 49% of its required reductions in the first period, and in the second period is only allowed to use an offsets amount equal to 49% of the difference between the first compliance period cap and the second compliance period cap, that entity will be allowed to use an amount that is far less than 49% of the total reductions caused by the AB32 cap. Put another way, CARB should consider allowing entities to use offsets to meet 49% of the emissions reductions compounded across all compliance periods since the start of the program, as shown in Slides 3 and 5 on pages 11 and 12.

**b. Should the limit be applied based on the use of offsets, the supply, or a hybrid of both? Are there other options?**

As a starting point, Environmental Defense Fund recommends CARB look to the USCAP Blueprint and create an offsets limit that is based on the total amount available for use by covered entities. This method ensures flexibility and limits the potential for speculation.

An example given in the USCAP Blueprint to create a use limit is to define each covered firm's offsets limit by the ratio of the given year's economy wide offsets limit and the emissions cap in that year. If this were used in California, a 49% offsets limit could amount to each entity having a 49% limit on the amount of offsets they could use to meet their compliance obligation. That is, under the USCAP scenario, CARB could base the allowable amount of offsets used by each entity on an evaluation of the difference between their theoretical individual emissions cap at the start of the compliance period and the allowance obligation at the end of the compliance period. Once this difference is characterized, the allowable offsets quantity would be translated into a quantity relative to their particular compliance obligation.

In support of a limit based on use rather than other metrics, Environmental Defense Fund agrees with CARB staff that supply limits will suppress the development of offsets projects, thereby undermining the search for and achievement of reductions in sectors outside of the cap-and-trade program. However, similar to supply limits, we also observe that usage limits pertaining to capped entities will suppress demand for offsets, which in turn will undermine investments in

offsets projects. Compared to supply limits though, use limits offer a more transparent approach to constructing an economy wide offsets limit and appear to be most easily defended when confronted by claims that the agency determination was arbitrary. Furthermore, when compared to an overall supply limit, a usage limit based on compliance obligation would do less to hinder the development of a large pool of offsets projects.

Notwithstanding the discussion above, EDF maintains overall concerns about the role of quantitative offsets limits in depressing the offsets market, undermining investment in non-capped sectors, and diminishing the utility of offsets for cost containment and asserting a stringent cap.

**c. How should the 49% limit be applied across jurisdictions in the Western Climate Initiative?**

Environmental Defense Fund recommends that CARB work with the WCI partners to send a clear message to offsets providers that high quality credits are important, in demand, and welcomed. If California's or other WCI member state's offsets limitations (to the extent those limits exist) significantly reduce the opportunity for offsets credits to be used for compliance obligations, or to flow from state to state, the desirable goal of linking programs can be severely impaired.

CARB should work with the WCI to implement a unified offsets program, focused primarily on rigorous qualitative criteria that is consistent across jurisdictions and that allows for broad use of offsets throughout the WCI region. A unified approach will engender the myriad of benefits described in the general discussion above.

Offsets are anticipated to provide important cost-containment benefits. If limits on offsets in California are not harmonized with other linked jurisdictions, a likely consequence will be that other jurisdictions will have lower allowance prices than in California. Furthermore, some of those low-priced allowances outside of California may be from offsets projects within California. This is likely to raise a political red flag amongst regulated entities, unless they can simply acquire out-of-state allowances for complying with AB32. CARB should therefore work with the WCI partners to avoid these political issues since they may tend to create administrative delay after the market is up and running.

To the extent that regulated entities have compliance obligations in multiple WCI jurisdictions, (i.e. utilities, oil refiners, large manufacturing firms, etc.) different offsets limits in different WCI jurisdictions may create competitiveness issues and result in allowance or emissions "shuffling" from one WCI jurisdiction to another.

As documented in existing cap-and-trade programs, such as the sulfur dioxide program created under the 1990 Clean Air Act, the majority of emissions reduction credit transfers are likely to take place within individual companies that own multiple facilities within the regulated area.<sup>10</sup> CARB should therefore seek to minimize shuffling within businesses in multiple WCI partner states.

---

<sup>10</sup> Ellerman, D. et al., *Markets for Clean Air: The U.S. Acid Rain Program*. New York: Cambridge University Press, (2000).

**d. How should the limit be divided among compliance periods? Is it more critical to have a greater supply of offsets early in the program or later in the program?**

Although the staff presentation on this issue identified several core issues, Environmental Defense Fund believes other issues merit mention as well.

In general, Environmental Defense Fund views offsets as an important tool for managing compliance costs, especially where capped sources' reductions activities take awhile to be developed or to be implemented at full scale. A paramount feature of the flexibility afforded by cap-and-trade is to allow regulated parties to choose what investments make the most sense for their business. This choice should include when and where to invest in reductions or allowance purchases (from offsets or other regulated entities) as long as these decisions do not violate the community protections requirements of AB32.

In addition to current cost containment, offsets may be an important future cost containment tool as the stringency of the cap increases over time. However, while we may look to offsets in some fashion to help our economy transition to lower emissions, they should be seen as a bridge tool that generates needed reductions while increasing emissions accounting and setting the stage for wider inclusion of sources within the cap-and-trade program. As more sources are included under the cap and the trajectory towards a low carbon economy steepens, the need for offsets may diminish because more reductions will be achieved through direct reductions efforts and new technology.

On the issue of allowing more or less offsets in the near or long term, EDF concurs with the MAC recommendation that, to the extent that quantitative or geographic limits are imposed on offsets for use in California's cap-and-trade program, it should be done so with "a view to gradual relaxation or removal [of these constraints] once other policy considerations have been adequately addressed."<sup>11</sup> This position supports the recommendation offered in response to the question above on interpreting the 49% limit: that CARB should consider allowing entities to use offsets to meet 49% of the emissions reductions compounded across all compliance periods since the start of the program, rather than limiting it to the difference between compliance periods (see attached slides 3 and 5 on pages 11 and 12).

USCAP recognizes the important role that offsets can play in maintaining cost control as well as allowance price floors. Like the MAC, USCAP recognizes the importance of a long term price signal but suggests using an allowance reserve pool for this purpose.

On the issue of how to change the offsets limit over time within a staggered compliance period structure, Environmental Defense Fund sees that CARB may need to avoid translating allowable offset percentages into economy wide numerical limits on the amount of allowable offsets. Further, for ease of enforcement, equity and transparency, CARB may also need to consider making any adjustments to the allowable offsets limit for all overlapping compliance periods at the same time. By utilizing an offsets percentage basis and treating all entities the same in terms of allowable offset use, CARB can retain flexibility to change the market system without impairing overall transparency.

---

<sup>11</sup> MAC Report, page 65.



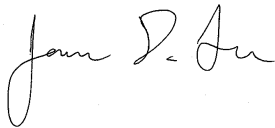
### 3. Conclusion

In summary, similar to USCAP Blueprint and the MAC recommendations, Environmental Defense Fund believes the most cost-effective cap-and-trade design will quantitatively limit offsets only as needed to buoy allowance prices. As with the USCAP framework, Environmental Defense Fund recommends that CARB focus its offsets policy on the need to balance cost containment and community benefits, manage allowance price volatility, ensure a long term carbon price signal, avoid adverse signals to high-quality offsets providers (where possible), and assert the primacy of quality over quantity as a boundary-setting metric.

While a limit on offsets availability may achieve these goals, CARB should be continually mindful of the range of benefits that offsets bring while also balancing the potential for offsets to aid California's transition to a low carbon future.

Thank you for your consideration of our recommendations.

Sincerely,



James Fine, PhD  
Economist  
Environmental Defense Fund



Timothy O'Connor  
Attorney, Climate Change Policy Analyst  
Environmental Defense Fund



## Slide 3 – Calculating AB32 Cap-and-Trade Offsets Limit Using 2 Scenarios

Compliance Period 1 - Emissions reductions = 30 MMT  
 (Approx 15 MMT direct)  
 (Approx 15 MMT offsets allowed)

Compliance Period 2 - Emissions reductions = 60 MMT

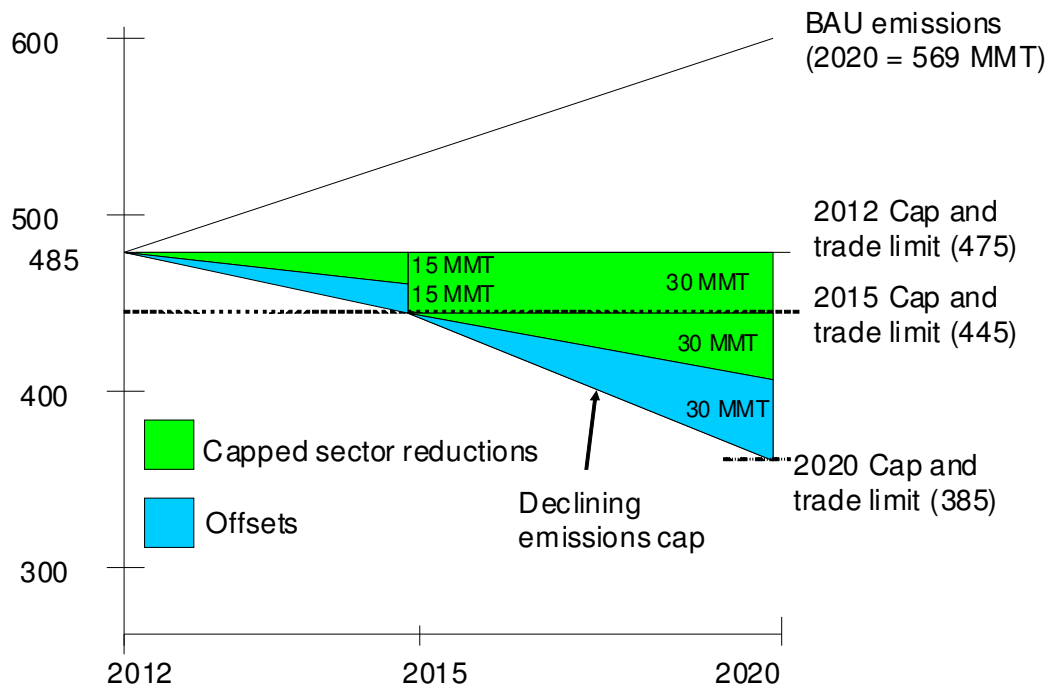
### Limit based on individual compliance periods

- In 2020 – total reductions from 2012 = 90 MMT
  - Approx 30 MMT direct reductions
  - Approx 30 MMT offsets allowed
  - Approx 30 MMT reductions carried over from Compliance period 1, assumed direct reductions
- Total offset limit =  $30/90 = 33\%$

### Limit based on compounded emissions reductions

- In 2020 – total reductions from 2012 = 90 MMT
  - Approx 45 MMT direct reductions
  - Approx 45 MMT offsets allowed
- Total offset limit – Approx 49%

## Slide 4 – Calculating AB32 Cap-and-Trade Offsets Limit Based on Individual Compliance Periods



## Slide 5 – Calculating AB32 Cap-and-Trade Offsets Limit Based on Compounding Compliance Periods

