

Benefits of Offset Inclusion in a California Cap-and-Trade: An Environmentally and Economically Strategic Transition

As US climate policy discussions and regional rulemaking processes continue to move forward, key policy decision makers consistently tout the value of incorporating greenhouse gas (GHG) offsets into mandatory cap-and-trade schemes. **Aleka Seville** sheds light on the current discussion.

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Both the international compliance and voluntary carbon markets have showcased the many benefits of strategic offset incorporation to meet near term emission reduction goals. Offsets enable capped entities and consumers to benefit from the speed and agility with which the private sector has moved in these markets to create innovative solutions to reduce emissions from smaller, un-capped sources. Within a regional or national US cap-and-trade scheme, it is imperative that the inclusion of both domestic and international offsets be structured to permit the use of only high quality offsets that create real, verifiable and additional emission reductions. Furthermore, limits on offset use within a cap-and-trade scheme should prioritize incentivizing internal, domestic reductions from capped sources while also realizing the full cost-containment potential that offsets can provide. The environmental integrity of the offset projects that are accepted should meet stringent guidelines that ensure that the many co-benefits derived from the development of these projects be realized along with the valuable emission reductions. Offsets should complement a cap-and-trade scheme by providing carbon cost-containment, socio-economic benefits, job creation, clean energy production and incentives for new and innovative sustainable infrastructure development. This complementary role is especially essential in the early years of a cap-and-trade program as a transitional tool that enables capped entities to drastically lower overall compliance costs.

Regionally, California maintains the leadership role it secured in the US by passing comprehensive climate change legislation, the California Global Warming Solutions Act (AB 32) in 2006. Statewide, California has showcased its ability to increase GDP while simultaneously decreasing emissions per capita through measures like stringent energy efficiency regulations and aggressive renewable portfolio standard requirements. The AB 32 rulemaking process is now well underway with important discussions currently taking place regarding the use of both domestic and international offsets within the larger cap-and-trade scheme. While California has illustrated its ability to successfully implement environmentally and economically sustainable policies, it is important to now apply lessons learned from the EU ETS and the voluntary carbon market to realize the full potential of offset incorporation into both regional and future national cap-and-trade schemes.

Offset Use in Cap-and-Trade Schemes and the Voluntary Market

The cost-containment function of international offsets has been proven effective in the EU-ETS as, for the majority of Phase 1 and 2, primary CERs have been trading at a considerable discount to EUAs. There are multiple examples of new and innovative emission reduction projects which have been realized through the Clean Development Mechanism (CDM) which the US can now look to as protocols and offset criteria are discussed and developed. Additionally, legislation for Phase 3 envisions the possibility of including domestic offsets in addition to international projects. While much has yet to be determined regarding the use of domestic offsets, it's important to note that the value of their incorporation is highly anticipated.

The US voluntary carbon market has emerged, thrived and increased in the absence of a mandatory national GHG reduction program. The voluntary market is a prime example of how offsets can create real environmental benefit and stimulate

A greenhouse gas (GHG) offset represents a reduction in emissions that is real, permanent, additional and beyond "business as usual". The climate is affected by the net amount of emissions created worldwide and therefore equally affected by a reduction of emissions, regardless of its location. Offsets are an effective and important tool by which US policy makers can incentivize local and international carbon reduction projects and technology. Used within a compliance cap-and-trade scheme, offsets can provide multiple benefits, including effective carbon price cost containment, enabling companies, regions and countries, to meet necessary aggressive carbon reduction goals.

the development of clean technology and sustainable infrastructure while offering companies, organizations and individuals, low cost carbon management solutions. The California Climate Action Registry (CCAR), formed by the state of California is a success story that further illustrates the value of this market. CCAR now has over 300 of the world's largest corporations, government agencies, universities, and environment organizations voluntarily measuring, monitoring, and publicly reporting their GHG emissions using the California Registry's protocols. As the US moves forward, both at the regional and federal level, key policy decision makers see the value in incorporating offsets into a mandatory cap-and-trade scheme.

The AB 32 Scoping Plan

The AB 32 Scoping Plan defines capped entities for the first compliance period of 2012-2014 as in-State electricity generation facilities which emit greater than 25,000 metric tons CO₂e per year and large industrial facilities that also emit greater than 25,000 metric tons CO₂e per year. The second compliance period, 2015-2020, will expand capped entities to include upstream treatment of fuel combustion where fuel enters into

commerce covering small industrial fuel use for facilities which emit less than 25,000 metric tons CO₂e per year, residential and commercial fuel use and transportation fuel use.

Under AB 32, an offset is a GHG emission reduction that:

- Is beyond what otherwise would have happened via regulation and common practice and therefore additional.
- Generates a credit that can be used to meet a regulatory compliance obligation or a voluntary commitment.
- Addresses emissions from sources not included in a cap-and-trade program.

Further, AB 32 requires that the reductions from offsets must be real, additional, quantifiable, permanent, verifiable and enforceable (H&S Code §38562(d).

The California Air Resources Board (CARB) has outlined a short list of benefits that would be achieved by including offsets in the California cap-and-trade scheme as follows:

Cost-containment

Mitigating the cost of meeting emission reduction requirements for capped entities is one of the key benefits incorporation of offsets can provide. Allowing capped sources to meet a portion of their emission reduction requirements through the use of offsets would allow these entities to take advantage of the lowest cost reductions available and would therefore mitigate energy cost increases for both capped entities and consumers. These benefits result in increased value for shareholders of entities that can show they have prioritized low cost internal reductions while investing in cost effective emission reduction projects.

Temporal considerations

Achieving on-site emission reductions is often a lengthy and costly process for capped entities depending upon the extent of early action taken to implement emission reduction measures. GHG offset projects can often come online and achieve emission reductions sooner than other forms of reductions and

therefore can greatly contribute to capped entities ability to meet emission reduction targets within early compliance periods.

Sources and sinks of emissions that are difficult to include directly in the cap. Although the Scoping Plan for AB 32 sets a stringent cap on large industrial and electricity providers in the first compliance period, even a wide-ranging cap-and-trade program cannot address all sources of GHG emissions. Incorporating offsets into California's cap-and-trade scheme creates opportunities to incentivize emission reductions for sources and sinks above and beyond the cap at the individual project level.

While this list outlines key benefits achieved through the incorporation of offsets under a cap-and-trade scheme, it's important to note multiple additional benefits that have been illustrated through the use of offsets:

Co-Benefits

Socio-economic benefits derived through the development of GHG offset projects in developing countries are one of the primary reasons behind the deployment of the Kyoto Protocol's Clean Development Mechanism (CDM). Under the CDM, Certified Emission Reductions (CERs) are created, verified, bought and sold to meet emission reduction targets. These projects have resulted in substantial socio-economic benefits ranging from technology transfer to job development and local economic stimulation.

Political Capital

If capped entities know that they will be able to meet a portion of their emission reduction requirements through the use of lower-cost options like offsets, it may lead to the acceptance of higher early emission reduction goals. Capped entities are more likely to accept more stringent reduction targets if they can ensure they will not be able to meet them cost effectively in early years while they work to incorporate internal emission reduction measures. As a result, the necessarily stringent emission reduction targets that need to be met in early years to avoid the catastrophic effects of climate change become much more viable, both politically and economically.

Sustainable Infrastructure Development

There are currently over 100 different project methodologies approved by the CDM Executive Board (EB), all of which meet high environmental and socio-economic standards. While this approval process has not been without criticism or conflict, California should adopt similar high standards for both domestic and international offset projects to encourage technology and knowledge transfer between states and countries. California and the US can also benefit by lessons learned within the CDM and can work to devise a project approval process that reflects these high standards while fast-tracking sustainable infrastructure development.

Environmental Innovation

GHG offset project development presents a valuable opportunity to address emissions from small sources not easily monitored under a larger cap-and-trade program. While smaller in size, these sources do add significantly to our overall emissions and, without a cap, will remain unregulated with the potential to grow and increase their negative contribution. We should take every reasonable opportunity to incentivize environmental innovation to meet aggressive emission reduction goals while strengthening our ability to transition to a clean energy economy.

Pros and Cons of Limiting Offset Use under AB 32

The AB 32 Scoping Plan states that offsets cannot meet more than 49 percent of the overall program emission reduction goals. Effectively incorporated, offsets should provide the above listed benefits while enabling capped entities to meet GHG emission reduction goals at the lowest cost to both their stakeholders and consumers. That said, incorporation of offsets is a rational transitional strategy, one that enables a carbon intensive society to transition to a low-carbon economy while incentivizing environmental innovation and stimulating sustainable infrastructure development and green collar job creation.

Therefore, within most cap-and-trade programs currently in development or

existence, offset use is limited quantitatively as a way to ensure that domestic, internal reductions at capped emission sources are achieved in conjunction with the development of emission reduction projects outside the cap. There is concern that offset inclusion will contain carbon prices to the extent that incentives to make the technological change needed to address climate change will be eliminated and GHG reduction goals will not be met. While this is a very real concern, setting an effective limit on the use of offsets can correctly define them as a transitional but environmentally and economically effective tool and can ensure that the multiple benefits derived, including cost-containment, are realized. This limit must be large enough to achieve full cost-containment potential and address temporal considerations and small enough to ensure that internal emission reduction measures are also incentivized.

There are many ways to effectively limit the use of offsets under cap-and-trade schemes but various Pros and Cons need to be examined and analyzed to ensure that these limits effectively enhance the potential benefits that offsets can provide.

CARB has also outlined various Pros and Cons of limiting the use of offsets.

Pros

- Ensures capped entities meet emission reductions targets largely through organizational and behavioral changes and on-site emission reduction measures. This also contributes to their ability to meet future, higher emission reduction targets.
- Addresses concerns about environmental integrity of offset credits

Cons

- Limits opportunities to reduce emissions at lower costs
- May discourage the creation of offset projects

These issues must be evaluated when setting an effective limit on the use of offsets; however, we feel that CARB can effectively

address concerns about the environmental integrity of offsets through the use of sound policy and reporting procedures to ensure that each and every offset represents real, verifiable and additional emission reductions. Additionally, the above list leaves out many key points when considering the “cons” of limiting the incorporation of offsets.

Additional “Cons” to consider are missed opportunities to:

- incentivize investment in, and development of, sustainable infrastructure both domestically and internationally
- realize full potential of domestic clean “green” job creation
- increase social and community co-benefits both domestically and internationally
- improve local environmental conditions both domestically and internationally (e.g. air and water quality)
- increase political and economic potential of achieving aggressive, near-term emission reduction goals

In conclusion, it is essential that California and Federal policy makers look to the experience of the EU-ETS and voluntary markets to ensure that the inclusion of offsets in US cap-and-trade schemes is strategic and effective. The many benefits derived through the use of offsets should be prioritized and incentivized to tackle both environmental and economic concerns. In the US, we have the valuable benefit of learning from past Phases of the EU-ETS and the ability to ensure that limits on offsets effectively contain carbon reduction costs while mandating the achievement of simultaneous domestic internal reductions. The many benefits derived from various types of offsets, ranging from socio-economic improvements to environmental innovation and sustainable development should play an important role in both California and the nation’s transition to a low carbon economy.

Contact

Aleka Seville

Manager Communications & Marketing
First Climate LLC
333 Pine Street, 3rd Floor
San Francisco, CA 94104
USA
E-Mail: aleka.seville@firstclimate.com
Phone: +1 (415) 433-1633 x104