



Carbon Offsets Overview

Americans recognize the need to reduce greenhouse gases (GHG) to protect the environment and foster economic growth. The cap and trade model can deliver this objective far more cost effectively than carbon taxes or command and control measures – as proven in the U.S. Acid Rain program and in the European Union Emissions Trading System. The best cap and trade design would include U.S. and international carbon offsets to guarantee that long-term climate protection goals are met at the lowest possible cost to the U.S. economy. This approach provides individual companies with the flexibility required to reduce GHG emissions while preserving economic competitiveness. Cap and trade with offsets will also stimulate technological innovation and economic growth.

What are Carbon Offsets?

When we drive our cars or switch on a light, often the source for that power generates carbon dioxide emissions. Climate legislation would reduce those emissions to a capped level. However, carbon offsets offer cheaper ways of reducing emissions in places and industries not covered by the cap, such as in forests, farms and ranches that can sequester carbon in plants and trees. Federal regulators must approve the offsets to be sure that real and permanent emissions reductions are achieved. The net environmental benefit is the same, but the cost savings can be tremendous. These investments will allow companies to lower emissions while building a new low-carbon economy in the U.S.

How are Carbon Offsets Created and Measured?

Reductions in carbon emissions are quantified by measuring the amount of GHG emissions emitted in a registered project and comparing those emissions to those that would have been emitted had the project not been implemented. Some of the most common carbon offset projects are methane capture, forestry and agriculture projects.

Methane, a powerful GHG, is emitted by landfills, coal mines, natural gas distribution networks and manure decomposition on farms and ranches. Unless laws require capture of this methane, it is typically considered eligible to produce offsets. Using proven techniques, the methane can be captured, sealed and extracted so that it does not escape into the atmosphere. Sometimes, it can also be used in small generators for electricity production. Methane emissions monitoring and measurement techniques provide the data for determining how many tons of emission reduction, or offsets, are achieved. An independent, government-licensed auditor then verifies the data. Finally, a government regulator reviews the project information and verification report before determining the quantity of offsets to be issued.

In forestry and agriculture projects, a similar process occurs. Project owners, such as foresters, farmers or ranchers, take action to prevent the cutting or degradation of forests or to improve the uptake of carbon dioxide in trees and plants. Approved sampling techniques and aerial photography can be used to determine the emission reduction or sequestration achieved. Sequestration projects reduce carbon in the atmosphere by removing it in the process of photosynthesis – and then storing it in wood or plant matter. Sustainable forest management maximizes the use of our renewable forest resources and provides huge offset potential at reasonable costs.

What types of projects may qualify as offsets?

Federal legislation will empower a federal agency to determine which projects will qualify. Potential carbon offset measures include:

- Capturing methane from non-regulated landfills and burning this gas to generate electricity.
- Forest management, such as extended rotations and thinning of dense, young forests, can improve forest productivity, increase the renewable resources used by society and store carbon in durable forest products while maintaining timber-related employment.
- Restoring previously forested lands and creating forests, called afforestation, on previously unproductive land such as degraded pasture, sequesters carbon from the atmosphere and offers economic, social, and ecological benefits.
- Changing agricultural practices to better manage animal waste or the release of carbon emissions from crop planting and harvesting.

What are the Benefits of Carbon Offsets?

As an important component of a cap and trade system for reducing GHG emissions, offsets provide companies with the flexibility to reduce GHG emissions while helping the U.S. transition to a new, clean energy economy. Offsets will control costs in the early years of the system, allowing the U.S. to seek more ambitious short-term goals while providing time to invest in the research, development and deployment of technologies that are not yet economically competitive but likely will be over the medium- and long- term.

Carbon offsets can also provide incentives for companies to take advantage of lower cost opportunities to reduce emissions in sectors not subject to the emissions cap. This can deliver valuable ancillary environmental and economic benefits. These benefits can include technology transfer among developed and developing countries; job development and local economic growth; reductions in deforestation of tropical forests, restoration of degraded forests, and adoption of sustainable forestry and agricultural practices.

What Role Do International Offsets Play?

International offsets can help integrate developing countries into the global effort to combat climate change and reduce potential competitiveness impacts for US businesses and their employees. They also provide US companies access to the lowest-cost carbon solutions during the transition to a clean energy economy.

For more information, please visit www.IETA.org