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Chapter 9: How are carbon credits used?

Carbon credits in the voluntary carbon market (VCM) are used to voluntarily offset greenhouse gas (GHG) emissions beyond any offsetting or GHG reductions and removals mandated by policy. Carbon credits may also be purchased and retired without offsetting, which drives reductions in overall GHG emissions and may enable buyers to claim other social and environmental contributions.

What is an offset and how are carbon credits used as offsets?

Most carbon credits are used to offset GHG emissions that are emitted by business, governing, livelihoods, and leisure activities. “Offsetting” counteracts the harm of GHG emissions by reducing or removing GHG emissions of equal proportion. In the case of GHG offsetting, carbon credits, which represent verified emission reductions or removals, are used by emitters to compensate for GHG emissions. Carbon credits are often referred to as “offsets,” although not all carbon credits are used to offset GHG emissions (as discussed on page 3).

Carbon offsetting can be part of regulated emissions trading systems. For example, under the Colombian Carbon Tax, VCM carbon credits can be used by liable entities to offset carbon tax obligations. However, most of the carbon credits generated in the VCM are used by companies to voluntarily offset emissions to meet corporate climate pledges or to offer ‘carbon neutral’ goods and services. As shown in figure 9.1, companies may use carbon credits toward net-zero targets to compensate for unabated emissions and neutralize residual emissions in alignment with the Paris Agreement or toward offsetting of unabated emissions toward carbon neutral goals that are not aligned with the Paris Agreement.

Figure 9.1 | Net-zero (Paris-aligned) and carbon neutral (non Paris-aligned) strategies

- **Net-zero**
  - Emissions
  - Paris-aligned net-zero abatement pathway
  - Compensate unabated emissions
  - Neutralize residual emissions

- **Carbon neutral**
  - Emissions
  - Company’s abatement pathway (not Paris-aligned)
  - Offset unabated emissions
What are corporate climate targets?

More and more companies are setting voluntary climate targets. Corporate climate targets are commitments to reduce some or all of a company’s emissions by a certain date in the future. As of September 2021, more than 3,000 companies had joined the United Nation’s Race to Zero campaign and more than 900 companies had set science-based emission reduction targets following the guidelines of the Science Based Targets initiative (SBTi). Companies buy carbon credits on the VCM to offset GHGs that have been emitted above their reduction target or to be able to claim carbon neutrality. Offsetting is often employed to compensate for those emissions that the company is not (yet) able to reduce internally. When a company has purchased enough carbon credits to offset all emissions generated over a given timeframe, it can claim to be carbon neutral for that period. The Taskforce on Scaling Voluntary Carbon Markets (TSVCM) estimated that for this growing demand for carbon credits to be met, the VCM should grow at least 15-fold by 2030 to USD 50 billion.

What are ‘carbon neutral’ goods and services?

Corporations use ‘carbon neutral’ statements to market their products and services. To market a product or service as carbon neutral, companies should comply with the requirements of a carbon neutrality standard such as the Carbon Neutral Protocol or Publicly Available Specification (PAS) 2060.

This typically involves reducing emissions as much as possible, and then buying enough carbon credits to offset the remaining emissions associated with delivering a good or service. Alternatively, companies can offer consumers the option to individually offset the emissions associated with the good or service they wish to purchase by paying a higher price. For example, airlines offer the option to buy carbon credits to offset GHG emissions from flying.

What are the advantages and limitations of carbon offsetting?

Offsetting an environmental harm with an equivalent good offers a compelling opportunity to compensate for harm done at a price that is lower than the cost of eliminating or abating the original source of harm. Where companies can invest in alternatives rather than directly reducing or removing GHG emissions in their operations or activities, they can save money in achieving environmental targets. In the case of the VCM, carbon offsetting has the additional advantage that verified carbon credits can channel finance to communities and projects where finance is needed, giving buyers a compelling social responsibility narrative to promote. Carbon offsetting through the VCM can contribute to the achievement of host countries’ Nationally Determined Contributions (NDCs) and Sustainable Development Goals (SDGs), a benefit that is recognized by some carbon standards. Governments can engage strategically with the VCM by encouraging the development of projects and programs that align with national priorities, channel finance where it is needed, and contribute to the achievement of SDGs.
Despite these benefits, there are important drawbacks to using carbon credits as offsets. First, carbon offsetting of GHG emissions with an equal quantity of carbon credits does not generate a climate benefit, unless the GHG reductions and removals generated through VCM activities are measured more conservatively than the original emissions. In the absence of strong VCM protocols and controls, the risk is that the opposite is the case and that offsets are not fully compensating for GHGs emitted.

Second, if companies can offset emissions for a cheaper price than it would cost them to reduce or remove GHG emissions in their own operations and supply chains, then companies may be disincentivized from taking climate action. In the same way, if carbon credits allow individuals to ease their guilt of doing carbon-intensive activities—such as flying—individuals may not change their behaviors.

Third, using VCM credits as offsets may come with a risk of double claiming. While opinions vary on whether VCM credits are at risk of being double claimed, in general, double claiming would displace corporate or government mitigation action.

**Corresponding adjustments** have been proposed as one way of addressing double claiming in the context of VCM credits and their relation to NDCs. There are also non-offset uses of carbon credits that can help to mitigate this risk, which are discussed below.

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**Are there any non-offset uses of carbon credits?**

Private actors, such as companies, non-governmental organizations (NGOs), and foundations, can avoid the pitfalls of offsetting and accelerate climate change mitigation if they do not use carbon credits as offsets. Instead of buying carbon credits to offset emissions, companies can buy carbon credits to contribute to broader climate finance, climate action goals, or corporate social responsibility goals. Non-offsetting carbon credits are acquired and canceled without being applied against carbon pledges or for the marketing of carbon neutral products.

Non-offset uses for VCM credits move away from the idea that some environmental harms could be permitted as long as they are offset by environmental goods. Instead, non-offset uses promote the achievement of environmental benefits. In addition, carbon credits that are not used as offsets can contribute directly to the achievement or overachievement of host countries’ climate commitments without any risk of double claiming. In this way, non-offset uses for carbon credits represent a paradigm shift in which the VCM delivers finance for climate change mitigation and sustainable development benefits in a way that truly reduces global emissions.
Further Reading


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