

How to De-Risk Your Carbon Credit Investment

A guide to purchasing high-quality carbon credits that protect the planet, your climate impact investment and your company's ability to achieve its climate goals

Contents

Introduction	3
The Importance of De-risking Your Carbon Credit Purchase	4
Understanding the Risks of the Voluntary Carbon Market	5
How to De-risk Your Carbon Credit Purchase	7
Conclusion	12



Introduction

There's a nagging worry for every company that has committed to achieve a certain carbon footprint or climate and sustainability goals: *What if the carbon credits they purchased aren't providing real climate impact? The integrity of their efforts to achieve these climate goals could be on the line, along with their company's reputation.*

Unfortunately, this scenario has been a reality for many companies. The problem stems, in part, from the wide variety of carbon credits on the market each with different quality and risk profiles. It's not a simple purchase decision. Added to that, the voluntary carbon market is relatively new and in flux. The systems needed to support it—and its sudden growth—have developed in an uncoordinated and fragmented way. The market is complex, underregulated and often opaque. Given this, buyers need to do their due diligence and choose carefully.

Fortunately, there are strategies and resources to help buyers achieve their climate goals, avoid unnecessary risks and mitigate unavoidable ones. This eBook explores how companies can approach a carbon credit purchase, how to evaluate carbon removal and reduction projects, providers and offset programs, and why companies need to look at their own goals and risk tolerance to make sound choices for their unique needs.





The Importance of De-risking Your Carbon Credit Purchase

Companies have many reasons for setting climate goals or becoming carbon neutral or net zero. Sustainability may be a core value. Employees, customers, the board of directors or investors may expect it. Sustainability can differentiate them from competitors, adding value to their products and services. When the carbon credits they purchased don't deliver what's promised, there can be a tangled mess of environmental, financial and reputational consequences.



Environmental Impact

First and foremost, climate commitments need to do what they promise in order to make real, positive impacts towards keeping global warming to less than 1.5°C. Experts agree: without integrity in the real reduction and accounting of carbon emissions, companies' purchases can actually be counterproductive and make climate change worse.

As Barbara Haya, research fellow at the University of California at Berkeley says, "We just don't have time for false offsets."¹

Reputational Damage

Most companies that set climate goals also measure their progress and report or publicize it. Making a bad carbon credit purchase can undermine the integrity of the company's climate commitments and lead to a number of reputational challenges. Companies can be accused of greenwashing, being part of the climate problem, lack of foresight or judgment, wasting money—and the list goes on.

For example, Bloomberg wrote an article, <u>These Trees Are Not What They Seem</u>, on how a number of well-known companies collectively paid millions of dollars for carbon credits to protect forests that were never in danger—the trees were already in well-preserved forests—thus providing no real climate impact.

Financial Loss

Companies that purchase low-quality or high-risk carbon credits may face financial consequences. They may have to buy additional carbon credits to make their climate goal status whole or they may have to hire lawyers to seek restitution from the provider and hire public relations firms for damage control. Reputational damage may result in a loss of customers or shareholder confidence that has additional financial impacts. They may even risk having their stakeholders sue them, similar to what happened when France's citizens took the country to court for not meeting its emissions targets.²



Understanding the Risks of the Voluntary Carbon Market

On the surface, carbon offsetting seems simple. For every ton of CO₂ that companies can't avoid, they purchase a carbon credit generated by another company that was able to avoid or remove the equivalent CO₂. But it gets complicated very quickly. As Jonathan Goldberg, CEO of CarbonDirect, a CO₂ management consultancy, says, "A ton is not a ton is not a ton."³

The first step in protecting your company is to recognize the complexity and be aware of the potential risks with carbon credits and how they are administered:

- **Legitimacy.** There are a number of ways that credits could be deemed illegitimate. Their impact in reducing CO₂ could be theoretical and grossly overestimated. The project could cause leakage, shifting emissions to another source or region with no net positive impact. Or they may not meet the criteria of providing additional carbon reduction or removal.
- Reversal. Carbon removal credits can have varying degrees of durability or permanence, from decades to centuries to millennia. Some pose a risk of reversal, negating the climate impact. This happens when the CO₂ that was reduced or removed is released back into the atmosphere either because of human activity, a natural disaster or some other catastrophic event. For example, a stand of forest protected through carbon credits may burn to the ground in a wildfire or be sold and logged. Whatever caused the reversal, companies need to make up for the credits lost to maintain their climate impact and the status of their climate goals.
- **Unsuccessful projects.** Some developers of carbon removal or reduction projects need seed funding, so they sell carbon credits in advance for future carbon reduction/removal. Carbon credits or carbon claims are issued exante, that is, based on forecasting rather than actual results. Companies can claim the climate benefit prior to the climate impact actually occurring. Unfortunately, there is an inherent risk that the technologies won't get off the ground or produce enough credits to match the purchase or claims.





- Creating harm. Projects can create negative impacts, such as other environmental or social harm while delivering the CO₂ reduction or removal. For example, a reforestation project could displace indigenous peoples farming on traditional lands. There have even been some highly questionable actions, such as companies exaggerating or making up threats about the potential for forests to be logged solely so they could generate credits!
- **Double counting credits.** Each verified registry system assigns unique serial numbers to individual offset credits, tracks and transfers their ownership and records the purpose of their use and retirement. Developers may also sell credits directly to buyers outside of any verified, publicly accessible registry. However, the market lacks the overarching governance mechanisms to detect if credits have been accidentally—or fraudulently—double-issued or double-claimed on different registries.



More Harm Than Good

In 2011, a controversial U.S. businessman went "rogue" and convinced investors to fund a geoengineering experiment. He seeded the Pacific Ocean off British Columbia's coast with iron sulfate to create an algae bloom, which theoretically can trap CO_2 and provide food for dwindling salmon stocks. As the Guardian reported, it violated two UN laws and may have put the ecosystem at risk. "Scientists are debating whether iron fertilisation can lock carbon into the deep ocean over the long term, and have raised concerns that it can irreparably harm ocean ecosystems, produce toxic tides and lifeless waters, and worsen ocean acidification and global warming."⁴



How to De-risk Your Carbon Credit Purchase

While there's no way to completely eliminate all risks, there are steps your company can take to balance the overall risk and to avoid certain risks altogether. Here are eight approaches that will help:

- **1. Manage your internal risk.** Be clear on your company's climate goals, values and risk tolerance so you can align your purchases to match.
 - Does your company want to support technological solutions that reduce or remove emissions? Or does your company lean more to nature-based solutions because of your brand or customer values?
 - Does your company prefer projects that produce additional environmental or social benefits beyond CO₂ mitigation? If so, what co-benefits are important to your organization? Maybe it's creating a circular economy and reducing waste, creating green jobs, decarbonizing the built environment, reducing fresh water usage or making an impact in the region where your company operates.
 - Is innovation a defining value for your business? If so, does your company have a higher risk tolerance for projects in the research and development phase? Or does it need the certainty of delivering highquality carbon credits?
- 2. Look for verified or verifiable credits. Verification ensures a certain threshold quality of carbon credits. It is conducted by an independent third-party that specializes in the verification of carbon credits, called a Validation/Verification Body (VVB). Often these VVBs are approved by entities called standards or registries. The verification process includes 1) auditing at the initial approval of a project, which is often referred to as "validation," and 2) ongoing monitoring of emission reductions/removal, which is often referred to as verification."⁵ Before a project is validated, the VVB assesses the project's plan for calculating or measuring the CO₂ avoided or removed to ensure it is scientifically sound and robust. Validation can also include determining additionality, screening out projects with negative impacts, assessing permanence and risk of reversal, and adjusting for leakage. Once a project is validated, the project is then in a position to have its carbon





savings verified and issued. With verified carbon credits, entities—such as Verra or Gold Standard—assign unique serial numbers to individual offset credits, track and transfer their ownership, and record the purpose of their use and retirement.⁶ These entities also regularly check the project data to ensure accuracy.

It's important to note that standards can have different quality thresholds and rigor in their assessments and auditing. Check to see if the standard has been endorsed by the <u>International Carbon Reduction and Offset Alliance</u> (ICROA). The two most popular and respected international standards are Verified Carbon Standard operated by Verra, and Gold Standard.

Some exchanges and retailers perform additional screening beyond that of the standard to assure even higher levels of quality, particularly for forestbased carbon credits, which are susceptible to the risk of overestimating climate benefits.⁷

- **3.** Focus on higher-quality credits. If your company needs to reduce risk as much as possible, focus on these verifiable attributes to make the greatest impact:
 - Additionality. This is one of the most important, but also hardest, criteria to prove. Certified credits will already be assessed for this, demonstrating that offset revenues are key to a project's financial viability. If you're trying to assess this on your own, keep in mind that the project may qualify for additionality by demonstrating that 1) it is not required by law or regulations, 2) the project's technology is not in common practice or 3) the project faces substantial barriers.
 - Measurability/Verifiability. Look for projects that can precisely measure the amount of carbon reduced or removed, thus enabling the carbon reductions and removals to be verified. These are technologybased solutions that eliminate the risk of overestimating.
 - Permanence. The longer the carbon removal is guaranteed against the risk of reversal, the higher the relative quality of the offset. Credits for projects that store carbon for hundreds of years (such as biochar) or thousands of years (such as <u>carbon mineralization</u>) have the lowest risk for their asset classes.





4. Research the developer. Nothing can replace doing your due diligence on the company developing the credits, even if their credits are verified. How long have they been in business? How long have they been selling carbon credits? Who are their customers and what are they saying? When and how do they deliver the carbon credits? If they are technology-based, is their technology in the R&D phase, or do they have projects that are up and running? What systems do they have in place for measurement and tracking? Is their project vulnerable to regulatory or operational changes that could put their credit delivery at risk? Do they have one small project or multiple projects?

Distribution

In addition to the overall trustworthiness of the developer, one of the most underrated ways to reduce risk is to purchase from developers who have a wide distribution of projects. This factor refers to the ability of a developer to reliably produce carbon reduction/removal through multiple projects in different regions. If for any reason one project shuts down, they have the ability to continue to provide a stable inventory of carbon credits through their other projects. They are also more likely to have existing, up-to-date inventory available for immediate purchase. There's no waiting on project development, permitting, financing or equity-raising.

5. Take a portfolio approach. It's almost impossible to completely eliminate risk in your purchase of carbon credits, especially if you don't have an unlimited budget. The most common and effective strategy is similar to one you'd employ for your own retirement savings: avoid deals that are "too good to be true" and diversify. Buy a range of carbon credits from different projects and asset classes. Understand the asset class—its pros and cons—and buy the highest-quality/lowest-risk carbon credits you can afford for the asset class. The pricing for carbon credits can have a huge range. While a high price doesn't always guarantee high quality and low risk, it's a safe bet that bargain-basement credits are low quality and high risk. If your company has a low risk tolerance, then you will want to buy a higher proportion of verified, low-risk credits that are highly durable and precisely measured.





6. Create a Buffer. You can create a buffer against the risks of non-delivery or reversal by purchasing more credits than you need, ideally from projects that don't have a reversal risk. If you purchase through an offset program, they may have buffer reserves to try to address this risk; however, even these buffer pools come with risk. For example, if you are invested primarily in forest-based carbon credits in a certain region and there's a catastrophic fire, your buffer provided by the offset program can also go up in smoke.

One option is to buffer your portfolio with technology-based carbon removal credits that are very durable, that have wide distribution and are in current production.

7. Keep an eye on the market. New technologies emerge, scientific standards evolve, regulations change. Certain types of credits become more attractive, while others decline in desirability.

For example, many companies are now avoiding carbon credits generated before 2016, primarily driven by the fact they are seen as not meeting the criterion of "additionality." While their pricing may be attractive, they may or may not meet today's standards.⁸ Conversely, there's been a rise in the popularity of carbon removal credits, which Bloomberg estimates to make up only 5% of the entire carbon credit market.⁹ High demand and limited supply of truly high-quality carbon removal credits will inevitably drive up prices.¹⁰

If your company doesn't have the time or expertise to watch market trends, you can research what other companies you trust are doing, or seek advice from trusted consultants, platforms or brokers.

Microsoft, Stripe and Shopify are examples of companies who are being transparent about their own carbon credit purchases in order to help other companies learn from them. Check out their resources:

- Microsoft carbon removal: Lessons from an early corporate purchase
- Stripe's first carbon removal purchases
- Carbon Offsets: A Field Guide to Shopify's Selection Process.





8. Seek Clarity in Contracts. Buyers often contract directly with developers to purchase carbon credits. While there have been some preliminary efforts to develop standardized contracts, there's no one-size-fits-all solution due to the massive variability in projects. In general, the contract will set out the quantity, price and time frame for delivery, roles and responsibilities, and consequences if expectations aren't met. It should outline how the project manager or developer is addressing any identified risks, and in what cases the developer is liable.

You may want a guarantee that credits are issued, sold and retired in a registry that tracks each credit using a unique serial number. You might also want to stipulate whether credits for removal are priced and tracked separately from credits for avoidance.

As past performance is often the best indicator of future performance, you might find it helpful to ask the developer these questions about their track record:

- Have they ever delayed or missed a delivery?
- Have they ever had to adjust (lower) the volume of carbon credits originally agreed upon?
- Have they ever had to backfill credits that were reversed?
- Have any third-party audits found errors in measuring, issuing or retiring credits?

If the prospect of negotiating a contract is unnerving, you can work with a broker or consultant who has experience in these types of contracts. Or you can search to see if a platform or a retailer carries the credits from a particular project you're looking for, so you don't have to make any long-term commitments.





Conclusion

The voluntary carbon market is complex and presents many different risks for buyers. De-risking your carbon credits is important to protect the environmental integrity of your company's carbon removal and/or reduction commitments, your financial investment and your reputation. It's not always easy, but it can prevent a lot of worries and future problems. And considering the urgent need to keep global temperatures from rising beyond 1.5°C, it's certainly worth the effort to find quality carbon credits from trustworthy sources.

Endnotes

- 1. Elgin, Ben. "These Trees Are Not What They Seem." Bloomberg.com, Bloomberg, 9 Dec. 2020, bloomberg.com/features/2020-nature-conservancy-carbon-offsets-trees/.
- 2. Bairin, Pierre, and Amy Woodyatt. "France Not Doing Enough to Tackle Climate Change, Court Rules." CNN, Cable News Network, 24 Apr. 2021, <u>cnn.com/2021/02/04/europe/paris-climate-inaction-court-intl-scli/index.html</u>.
- 3. Klein, Jesse. "In the Quest for Carbon Offsets, (Almost) Anything Goes." Greenbiz, 30 Nov. 2020, greenbiz.com/article/quest-carbon-offsets-almost-anything-goes.
- 4. Luckacs, Martin. "World's Biggest Geoengineering Experiment 'Violates' UN Rules." The Guardian, Guardian News and Media, 15 Oct. 2012, <u>theguardian.com/environment/2012/oct/15/pacific-iron-fertilisation-geoengineering</u>.
- 5. Schneider, Lambert, et al. "What Makes a High-Quality Carbon Credit?" WWF, World Wildlife Fund, 4 June 2020, worldwildlife.org/publications/what-makes-a-high-quality-carbon-credit.
- 6. "Concerns about Carbon Offset Quality." Carbon Offset Guide, Greenhouse Gas Management Institute and the Stockholm Environment Institute, 29 Dec. 2020, <u>offsetguide.org/concerns-about-carbon-offset-quality/</u>.
- 7. "Reforming the Voluntary Carbon Market: White Paper Q&A with Our Sustainability Experts." Compensate, Compensate, 19 Apr. 2021, <u>compensate.com/articles/white-paper-qa</u>.
- Naik , Gautam, and Esther Whieldon. "Carbon Offsets Prove Risky Business for Net Zero Targets." S&P Global, S&P Global, spglobal.com/esg/insights/carbon-offsets-prove-risky-business-for-netzero-targets.
- 9. Shankleman, Jess, and Akshat Rathi. "Wall Street's Favorite Climate Solution Is Mired in Disagreements." Bloomberg, Bloomberg, 1 June 2021, <u>bloomberg.com/news/features/2021-06-02/</u> carbon-offsets-new-100-billion-market-faces-disputes-over-trading-rules.
- 10. "Carbon Offset Prices Could Increase Fifty-Fold by 2050." BloombergNEF, BloombergNEF, 10 Jan. 2022, about.bnef.com/blog/carbon-offset-prices-could-increase-fifty-fold-by-2050/.







Invest in CarbonCure's Carbon Credits

Make a concrete impact to fight climate change

Hundreds of leading concrete producers around the world use CarbonCure's award-winning carbon removal technologies to decrease the carbon footprint of concrete, reducing and permanently removing tens of thousands of CO₂ each year, and generating high-quality carbon credits you can trust to deliver immediate, scalable, high-impact climate benefits.

Your carbon credit purchase will help us build a global network of concrete plants that also act as carbon removal factories and accelerate and scale the decarbonization of the concrete industry.

For more information about purchasing carbon credits from CarbonCure, visit <u>carboncure.com/carbon-removal</u>. To get in touch with a CarbonCure representative, email us at <u>sales@carboncure.com</u> or call us at +1 (902) 448-4100 (Worldwide) or +1 (844) 407-0032 (North America).