

Executive Tutorial: Voluntary CO2 compensation

This pdf is a collection of our three part blog article in 2020 “Executive Tutorial: Voluntary CO2 compensation”. Feel free to download it.

Produced by: greenclicks.co

Last updated: August 08, 2021.

[What's CO2 compensation?](#)

[What does CO2 offsetting mean?](#)

[How is CO2 measured?](#)

[How to compensate?](#)

[Who sells Compensation Certificates?](#)

[How is the price of a ton of CO2 set?](#)

[Is the location of Carbon projects relevant?](#)

[Is offsetting CO2 a fad or a credible solution?](#)

[What criteria must a CO2 project meet to be certified?](#)

[What are the most commercialized standards?](#)

[What does Vintage mean?](#)

[What kind of CO2 projects exist for voluntary compensation?](#)

[How to choose a project?](#)

[How much to invest?](#)

[What kind of options exist to offset CO2?](#)

[How to communicate it?](#)

[Closing comments](#)

What does CO2 offsetting or compensating mean?

Any human activity generates CO2. If all of the CO2 emissions were absorbed and naturally processed by the biosphere, the Carbon cycle would be in equilibrium; unfortunately, we are far from an even scenario. So what can companies and people do? Avoid and reduce their carbon emissions and/or pay those who are dedicated to removing and avoiding other CO2 emissions (=compensate).

How is CO2 measured?

CO2 is measured in tons. Like any gas, Carbon Dioxide has a mass, the mass has a weight and it occupies space. One ton of CO2 visually looks like a cube measuring approximately 8 meters on each side.

How to compensate?

A company may either finance its own projects to reduce or remove CO2 from the atmosphere or buy compensation certificates from 3rd party projects.

Who sells Compensation Certificates?

There are several organizations specialized in developing CO2 projects like planting trees, creating electrical energy from renewable sources or from waste in landfills or, improving cookstoves in rural communities. In order to market their CO2 certificates, these projects receive the endorsement of independent certifying entities. The objective of the certification is to verify and measure with scientific criteria, how many tons of CO2 they avoided or removed in a certain period of time. The certification gives some sort of right to the project developer to receive money in exchange for its atmosphere cleaning services. It is common for the certificates to be traded by intermediary agencies or wholesalers.

How is the price of a ton of CO2 set?

Overall, the price is determined by supply and demand. However, when comparing projects, there are several factors that must be considered. Labor-intensive CO2-projects are more expensive than technical CO2-projects. The price also increases when CO2-projects bring additional benefits to the community like fighting poverty, improving education and health conditions, employment opportunities, gender equality, etc. Similarly, the price depends as well on the size of the project and the sponsoring institution; smaller projects run by smaller organizations have higher costs per ton due to economies of scale. Finally, the price depends on the intermediary and the volume of purchase. Often large intermediaries ensure large orders to the CO2-projects and, thus, receive greater discounts.

Is the location of Carbon projects relevant?

CO2 emissions travel across the globe following the wind currents. It does not matter if a country emits a lot or very little CO2, the effects are shared by all humanity. Consequently, in strict terms of CO2 reduction, it doesn't matter where a project is located.

Is offsetting CO2 a fad or a credible solution?

Doing something, even small, for the environment should never be seen as a negative action. If a company voluntarily decides to compensate, it is infinitely better than not doing anything; and from then on the challenge is to deepen their commitment. It's like exercising and eating healthy; there is always room for improvement, but the big step is to get started and create habits.

What criteria must a CO2 project meet to be certified?

The compensation activity must be in addition to the regular activities of the project or company. It must be verified that without the donations, the CO2 compensation would not have been carried out. CO2 credits must be entered in a public registry to prevent the same ton of CO2 from being sold more than once. Finally, the project must guarantee permanence, demonstrating that the declared reductions will not get to the atmosphere at a later point in time.

What are the most commercialized standards?

The most renowned standards are: Verra (VCS): It is currently the most used voluntary standard in the market (Verra was previously the “Verified Carbon Standard”), it focuses mainly on ensuring that the emission reductions from CO₂ projects are real, measurable, verifiable and additional. Gold Standard (GS): Sets high standards to additionally measure the additional benefits for the local community involved in climate projects; their certified projects have comparatively higher prices on voluntary carbon markets. Climate Action Reserve (CAR): It has developed its own eligibility criteria, approved by the VCS. It only certifies projects located in the USA or Mexico. Plan Vivo: Focuses on supporting projects that provide additional benefits such as poverty reduction, conservation and restoration of ecosystems and biodiversity, or projects that help communities adapt to climate change. Clean Development Mechanism (CDM): It is a compensation mechanism defined in the Kyoto Protocol. CO₂ projects must be located in developing countries and are reviewed by auditors accredited by the United Nations. CDMs are traded in both voluntary and mandatory markets. Despite concerns about the effectiveness of some projects, CDM remains the role model for many methodologies to quantify greenhouse gas reductions. There is still no certainty what will happen with the CDMs due to the transition from the Kyoto Protocol to the Paris Agreement. American Carbon Registry (ACR): Founded in 1996 as the first private voluntary offset program in the US, ACR methodologies and protocols are based on the International Organization for Standardization (ISO) 14064. Climate, Community & Biodiversity Standards (CCB): The certified projects are high quality by providing significant benefits for local communities and biodiversity.

What does Vintage mean?

It is the year in which the emission reduction or removal actually occurred, regardless of the date it was issued. i.e. if a project issued credits in 2021 with a 2018 vintage, the credits issued mean carbon reductions in 2018.

Issued credits are added to a registry inventory when the issuance event has been verified by an accredited verification body, then issued credits can be sold and purchased.

What kind of CO2 projects exist for voluntary compensation?

In general, they can be classified into 5 categories: Renewable energies: They include hydroelectric, solar, wind and biomass projects; they substitute the use of fossil sources for renewable sources for the creation of energy. Renewable energy projects are normally located in small remote towns, which is why they are considered to have positive effects on employment and energy supply in rural areas. Destruction of methane: As organic waste decomposes, it releases methane, a greenhouse gas much more powerful than CO₂. There are two different types of methane projects; the first category aims to transform methane into a less harmful gas by burning it to decompose it into less harmful substances; the second category captures methane and burns it to generate electricity or heat. Energy Efficiency: The objective of these projects is to achieve energy savings, generally thanks to technological improvements, eg: change from wood-burning stoves in rural areas to more efficient stoves, with the consequent savings in burnt wood. Industrial gases: They are generated from industrial production. These projects are based on the argument that destroying their own gas emissions would not be profitable for

industries; therefore the sale of certificates allows them to finance this activity. There is much controversy around this type of project, since it is argued that they do not generate long-term benefits, their additional contribution to the environment or the local community is very low and there are doubts as to whether industries have the true motivation to reduce their gases because they earn income from their creation. Afforestation and forest protection: By planting trees and protecting forests, CO₂ is removed from the atmosphere. The main concern with forestry projects is that years later the trees could be cut down before their period of maturity and/or could be burned. The CO₂, thus, would be returned to the atmosphere. Or that the planted tree species destroy the natural diversity of a region or that the indigenous population is displaced to make land available for tree planting.

In the final part of the series: “Tutorial for CEOs: Voluntary CO₂ compensation”, we will talk about topics that will help you make decisions on “how to choose the best type of project to support”, “what kind third party solutions to compensate exist on the market” and “how to communicate a company’s environmental engagement to its community”.

How to choose a project?

In general, a project should transmit to you the confidence that it fulfills its role in reducing CO₂. When assessing projects, we recommend getting answers to the following questions: Which percentage of your contributions actually goes into the project? How will the money be used? How does the project ensure that it fulfills its promise? For how many years is the project going to be operated and how does it ensure its operation until it ends? What will happen when it ends? What is the

proportion of income from certificates versus other sources? What would happen if the project did not exist? Has 100% of the compensation been validated and verified by authorized external auditors?

Reputable third party certifications, such as those presented previously, are the basis for trusting a project. In theory, all certified projects are good candidates. However, you shouldn't blindly be guided by certifications; we advise inquiring deeply about two key criteria: additionality and permanence. That is to say, that the compensation would not happen anyway without the project and that the CO2 compensated would not return to the atmosphere afterwards.

Also, certifications say little about the laws, regulations or the political situation in which a project is subject. For example, imagine a forestry project that meets all the requirements to receive a certification, but the Government does not systematically support nor enforce forest conservation; therefore, the effort and investment made by your company to offset CO2 could be at risk.

Considering this, a practical way to choose a project is to delegate this task to a specialist, such as greenclicks, which is in charge of selecting the projects for you; specialists should answer all the previous questions.

How much to invest?

For the planet, the best answer is "as much as possible". Even if all companies were CO2 neutral, it would still be necessary to continue offsetting to achieve global CO2 neutrality. But, just as important – or even more important – than the investment itself is its continuity. If a company compensates once, the positive impact on the atmosphere is minimal. The individual compensation of a company is insignificant in

relation to what is required to solve the environmental problem. When a company influences its community or industry, the impact is greater, thus achieving structural changes in society.

When in doubt, we propose to start conservatively and increase your commitment in a financially sustainable way. Ideally, you should consider the CO2 compensation as an integral part of your service or product. Thus, a percentage of the sales margin or a fixed amount could be allocated for each sale, order or subscription.

What kind of options exist to offset CO2?

From our experience, we know the following options:

The company compensates individually: The goal is to compensate the emissions that cannot be reduced to achieve the company's CO2 neutrality. Normally, with the help of an external consultant or a software, business processes are analyzed to estimate how much CO2 is emitted.

Advantages: The company is aware of its emissions and makes a commitment.

Disadvantages: The financial risk, if big payments are made above all in advance to lower costs. And the risk of sacrificing quality by shopping for cheap compensation certificates to meet the sole goal of CO2 neutrality.

The client compensates: The goal is to raise awareness of the CO2 problem and make it easier for the client to compensate. Companies offer the client the option of paying an extra amount to offset CO2 emissions.

Advantage: The company is concerned about the environment and provides information about the damage to the environment when purchasing its products, without necessarily investing directly in compensation.

Disadvantage: Responsibility is transferred to the client, compensation is not offered as part of the product but as something optional; the company does not make a commitment to the environment itself.

The company compensates with its customers: The company incorporates compensation into its production costs. By purchasing a product, the customer knows that they are contributing to offsetting CO2. Compensation is not optional. CO2 neutrality is not necessarily the goal, companies rather seek to create the greatest possible impact.

Advantages: No calculations nor estimation are needed, the company only compensates if it is selling successfully, it can even compensate beyond neutrality. Customers are involved in the compensation process, they realize during the purchasing process that the company contributes to sustainability.

Disadvantages: A company could be tempted not to reduce its emissions and only offset them. Customers may perceive that consuming is positive for the environment.

How to communicate it?

In general, we think that it is always better to do something than to do nothing, even starting with small steps. To be consistent, the communication should explain to clients: Why did you decide to compensate, how are you compensating and what

impact do you expect to achieve with compensation. Also, sooner or later, discuss your own emissions and ask yourself how to avoid and reduce them.

On the other hand, the communication style should call to action, being it customers, competitors, the community. The company should avoid displaying itself as a “lone hero” and rather present itself as one of many actors confronting a global problem.

Closing comments

We hope we have given you a good foundation to understand the world of CO2 compensation and to be able to make your decisions now. We look forward to welcoming you to the community of CO2 offsetting companies.

We have to add that this tutorial obviously does not claim complete accuracy or completeness on the subject.
