

CO₂IN - A Benchmark for Voluntary Carbon Credits

Václav Vislous - 26.6.2023

Climate change is an increasingly urgent issue that touches every aspect of our lives. As we intensify our efforts to decarbonize our economies, we face a critical gap in the available tools to mitigate it: the voluntary carbon credit. While demand for these offsets has been growing quickly, there has been even more backlash regarding the quality and greenwashing claims by many issuers presenting reputational danger to buyers. This is where the idea behind CO₂IN was born. We founded CO₂IN to revolutionize the carbon credit landscape by addressing its two major shortcomings: quality and scalability.

CO₂IN leverages the robust framework of EU ETS allowances - a highly regulated and expansive mandatory carbon market - to create a new generation of carbon credit. This approach ensures that our solution has the credibility and scale to drive the global transition to a sustainable, low-carbon future.

Foundational context

A century measured by carbon

In the 21st century, carbon has become the defining metric of our age, as addressing climate change and transitioning to a sustainable future has become our primary imperative. Greenhouse gas emissions are becoming a key component across most dimensions, from energy consumption and product manufacturing to policy-making and investment decisions.

Accurate and detailed carbon data are vital to this process, enabling businesses and governments to make informed decisions and facilitate emission reductions. As carbon intensity data becomes ubiquitous, it will encourage organizations to adopt sustainable practices and set meaningful carbon reduction goals.

In order to make our decarbonization efforts as effective as possible, it is necessary to incorporate a carbon price throughout all value chains, i.e. introduce internal carbon pricing. This will enable optimal carbon-neutral choices, which will prioritize carbon

reductions in those sectors, where at the given time it is most effective to achieve them. Such a system requires a global benchmark carbon price that accurately represents the true cost of carbon emissions, aligned with the necessary climate objectives.

In search for the carbon benchmark

As we progress towards an environmentally sustainable future, the role of carbon markets is expanding. However, we currently lack a standardized measurement - a 'carbon benchmark' - to compare prices across these markets. This is a significant gap that needs to be addressed. The development and establishment of such a benchmark is a crucial task in our journey towards sustainability.

A good benchmark should work like a compass, guiding investment decisions and providing a basis for comparison. It should truthfully represent the desirable underlying value (expressed in GHG emissions), be investable in reasonable amounts at an accessible market, its price should be determined by the forces of demand and supply on the free market. The methodology and governance behind it should be transparent and understandable. Lastly, there should not be frequent changes behind the scenes in how it works and what it is composed of, allowing for consistent and fair comparisons over time.

The closest we can get to a carbon benchmark is the European Union Emissions Trading System (EU ETS), as it fulfills most of the necessary criteria. This is because of its cap-and-trade structure, large size, market based price discovery, strong regulatory governance and relative political stability.

As the world's largest and longest-running emissions trading system, the EU ETS covers a wide range of industries and greenhouse gasses. It provides a solid foundation for accurately representing the real cost of emissions across several sectors. As such it also serves as the largest trustworthy regulated mandatory carbon market in the world.

It operates as a cap-and-trade system. The regulator determines the supply side for allowances to be avai-

lable each year in line with her decarbonization goals, while the demand side is driven purely by market forces. This ensures dynamic price discovery and is a very efficient way to find which part of the economy should decarbonize first.

By limiting the number of emissions allowances available, the EU ETS creates a market incentive for companies to reduce their emissions in the most cost-effective way possible. The sectors where decarbonization is currently cheapest will be financially incentivized to invest in it first. Periodic revisions and updates to the system maintain its relevance often responding to the latest scientific, economic, and policy developments. At the same time they are not happening too often and there is always enough lead time to prevent any short-term market disruptions.

The EU ETS' emissions cap has been set to be largely in line with the EU's climate goals under the Paris Agreement. This ensures that the price of emissions allowances reflects the cost of reducing emissions at any given time that is in line with EU climate targets.

Stringent monitoring, reporting, and verification requirements ensure transparency, contributing to a robust price signal that better reflects the true cost of emissions.

On the flip side, participation in the EU ETS is limited. This makes it inaccessible to most people and corporations, because the minimum traded volumes (1 lot = 1.000 allowances = 1.000 tonnes) are too great to be a useful tool for the offsetting needs of individuals and most corporations. There is also some risk of political interference. However, by and large the direction has been towards more stringent targets.

Corporate approach for mitigating climate emissions

EU corporations play an essential role in global warming mitigation. They represent some of the largest emitters of greenhouse gasses and have a significant effect on our economies. Over the years, many corporations have acknowledged their responsibility to reduce their own carbon footprint and have set ambitious targets.

However, it is important to consider their impact beyond their direct emissions. It could be more beneficial to affect the pollution created not only within the company itself, but also in the businesses that supply it with materials and those that use its products. This includes promoting climate-friendly practi-

ces throughout their supply chains including the use of the tools described below among their business partners. A holistic, system-wide approach, rather than a narrow focus on one's own direct emissions, is necessary.

That being said, the most effective way in the efforts to minimize carbon emissions is to incorporate so-called internal carbon pricing into the decision-making processes across an organization. In fact, many top corporations such as Microsoft, Google, Disney and Danone have used such internal systems for years. Microsoft, in particular, is open to discuss its progress and growing scope and internal carbon price publicly¹.

Internal carbon pricing is a tool where companies assign a monetary value or „price“ to each ton of carbon dioxide they emit, helping them to account for the environmental impact of their operations and encourage investment in cleaner, more sustainable practices. At the same time, it directly incentivises management to prefer less carbon intensive solutions.

Even with this approach, it is not usually feasible to achieve carbon neutrality in the short and even medium term. For this reason climate conscious companies compensate their emissions through voluntary carbon credits.

Limitations of voluntary carbon credits

Voluntary carbon credits are an instrument for companies to compensate for their emissions by reducing or capturing emissions elsewhere. This typically includes projects like reforestation, renewable energy, and energy efficiency initiatives. These so-called offsets should provide companies with a way to mitigate their carbon footprint by making a positive carbon impact outside of their operations.

Voluntary carbon credits can be broadly categorized as:

- 1. Emission Reductions:** These are credits related to projects that reduce greenhouse gas emissions. Examples might include replacing a coal-fired power plant with a wind farm.
- 2. Carbon Sequestration:** These are credits related to nature-based projects that remove CO₂ from the atmosphere and store it in a different form. This includes projects like planting trees, protecting rainforests in direct risk of logging, or storing CO₂ in soil or the ocean (called blue car-

¹ [Microsoft \(2022\)](#)

bon sequestration) e.g. with marine algae.

- Carbon capture:** These are typically credits from storing CO₂ from either Carbon Capture and Storage (CCS) projects, where CO₂ emissions are captured at a power plant, or Direct Air Capture (DAC) projects, where CO₂ is captured from ambient air.

However, the voluntary carbon credits market has its limitations. The biggest of which is the lack of trustworthy and independent standardization and regulation. In recent years, numerous reports² have indicated that a significant portion of carbon credits purchased by companies do not deliver the intended emissions reductions, or have only a short-term effect. Such reports suggest that the carbon credits market has significant flaws, which threaten its integrity and the reputation of companies using these untrustworthy and ineffective tools.

EU corporations must exercise caution when using carbon offsets to avoid jeopardizing their reputation and should take steps to ensure that they invest in verified, high-quality offsets. The use of low-quality credits could compromise their environmental objectives and result in negative publicity. To address these concerns, there is a growing demand for a benchmark carbon credit that would serve as a standardized measure of both price and quality.

Carbon transparency as a catalyst for renewed decarbonization efforts

The EU's new Corporate Sustainability Reporting Directive (CSRD) approved in December 2022 requires companies to publicly report their carbon footprints. The first official reporting year for large corporations will be 2024 with other publicly traded companies and large foreign companies following suit in the following years. It is expected that emissions in 2023 will serve as a benchmark year for the first report and therefore cannot be ignored either, because as such they will also be made public.

With the CSRD in place, independently audited emissions data is disclosed, allowing stakeholders to monitor companies' decarbonization efforts and scrutinize their progress.

In order to maintain trust and avoid reputation damage, businesses are driven to increase focus on their

emission reduction strategies and away from carbon credits of unclear quality. By enhancing transparency and emphasizing the importance of specific reporting standards, the CSRD fosters a more sustainable and environmentally responsible corporate landscape.

The market for voluntary credits is growing exponentially

The voluntary carbon credits market has seen significant growth in recent years, with this upward trend expected to persist over the next five years³. This surge can be attributed to various key factors, such as the rise in corporate net-zero commitments, increased transparency spurred by the CSRD, and growing pressure from stakeholders.

A primary driver behind the expansion of the voluntary carbon credits market is the escalating commitment of companies worldwide to adopt stringent net-zero policies. As climate change concerns intensify, businesses are pledging to achieve carbon neutrality within the coming decades. These commitments necessitate investments in renewable energy, energy efficiency, and other decarbonization measures, as well as the purchase of voluntary carbon credits to offset any residual emissions.

Another contributing factor is the enhanced transparency in corporate carbon footprints, driven by regulations like the EU's CSRD or Directive on empowering consumers for the green transition (anti greenwashing legislation). This will bring along increased pressure from stakeholders, including investors, customers, and regulators.

Access to detailed transparent corporate carbon footprint data will further empower all stakeholders to hold companies accountable for their environmental impact. Subsequently, this will lead to increased corporate climate commitments, as well as purchases of carbon credits. In addition, there will be a drive towards offsets with a genuine impact, a growing trend which has been confirmed by recent analytical reports and industry players⁴.

The quality jungle

Voluntary carbon credits are typically created when a quantifiable impact on the amount of greenhouse gasses in the atmosphere is calculated according to

² [SourceMaterial \(2023\)](#), [Fitch \(2023\)](#), [Frontiers in forests and climate change \(2023\)](#), [Bloomberg Green \(2022\)](#), [Yle \(2022\)](#), [Greenpeace \(2021\)](#), [IOSCO \(2022\)](#), [BCG & GFMA \(2021\)](#), [LSE \(2021\)](#), [Global Change Biology \(2021\)](#), [Prof. Andrew Macintosh \(ANU\)](#)

³ [McKinsey \(2021\)](#), [Shell \(2023\)](#)

⁴ [BCG \(2023\)](#), [DGB Group \(2023\)](#)

some methodology. At present there are no comprehensive international standards. Most of the projects are certified by one of four major players - Verra, Gold Standard, American Carbon Registry and Puro.Earth.

Voluntary carbon credits created in these projects face a complex set of challenges that undermine their effectiveness and credibility in combating climate change. To be truly effective, a carbon credit must show to fulfill a host of requirements. Among others, it needs to show that the impact is additional (would not happen otherwise), permanent (last at least a century), accurate (impact not overestimated), counted only once (no double counting) and there are no negative ethical, or certification issues⁵. Fulfilling all of these criteria is a tall order. Given the sheer scale of demand (and its growing vector) this has led to many projects and certification authorities to cut corners, as well as well-documented issues across most types of voluntary carbon credits.

The conservationist nature-based projects have been found to often certify areas already under legal protection⁶, offering limited additional environmental benefits. Others have failed to protect their woodland areas from logging⁷, wildfires⁸, or overestimate their impacts⁹. There is also the element of time. Afforestation projects take decades to realize meaningful impact with many risks along the road. However, most tree planting projects count their impact immediately and in full.

Renewable energy projects also often fail to generate long-term, additional reductions in greenhouse gas emissions. In many cases, renewable energy sources are already the cheapest alternative¹⁰. In others, the displacement effect of fossil fuel is calculated over the whole lifespan of a given renewable plant, when in reality, thanks to lowering costs it would have been built anyway, even if a few years later¹¹.

There are also many alternative approaches, with their own shortcomings. One of the most popular are cookstove replacement initiatives. These however also do not have the claimed effect on emission reductions. Despite the distribution of improved cookstoves to reduce emissions and fuel consumption, studies into the subject found that recipients often continue using traditional stoves alongside the

new ones, a practice that earned the nickname “stove stacking”, resulting in minimal total emissions reduction¹².

One promising technology for the future is direct air carbon capture and storage (DACCS), which is probably the most promising type of technology within the carbon capture and storage (CCS) sector. It holds great promise in removing carbon dioxide from the atmosphere and storing it securely underground. It has, however, not yet reached maturity as a technology. Many companies struggle to capture more emissions than they release and the recovered gas is often used to help with more fossil fuel extraction (CCUS, CCU), or is being recycled back into other products offering no permanent removal. Not to mention the current limits on their scalability and high costs.

This is not to say that there are no effective solutions, or that all of the carbon credits do not deliver what they say. With no way to distinguish between the good and the bad, with even the most respected certification authorities such as Verra and American Carbon Registry falling prey to many of these issues¹³, there is an urgent demand for a credible, effective and scalable solution.

In search of quality by design

The team behind CO₂IN has analyzed the current offset landscape and outlined the main criteria for a voluntary carbon credit that must be fulfilled in order for it to be a useful and effective tool:

- 1. Trustworthiness and verifiability:** These credits must guarantee a tangible reduction in (locked-in) carbon emissions, equivalent to at least their nominal value, to instill confidence in their effectiveness
- 2. Quality Carbon Credit Criteria:** Credits must adhere to stringent standards, fulfilling all typical requirements of a quality offset such as additionality, permanence, no delayed impact, no double counting, absence of ethical concerns
- 3. Scalability:** There must be a way to generate a sufficient volume of credits in a timely manner to satisfy any reasonable demand, thus ensuring

⁵ E.g. ICVCM, *Carbon Offset Guide*, ICAO “CORSIA Emissions Unit Eligibility Criteria”

⁶ UNIFI (2022), El Pais (2022), Bloomberg (2020)

⁷ ABC (2023)

⁸ *Frontiers in forests and climate change* (2022)

⁹ Bloomberg (2023), Nikkei (2021)

¹⁰ Bloomberg (2022), Cesifo (2021)

¹¹ *Nature Climate Change* (2022)

¹² CCQI (2023), *Energy Policy* (2020), *Environ. Sci. Technol.* (2016)

¹³ *Guardian* (2022), Bloomberg (2020)

market availability, liquidity and accessibility

4. **Price Benchmark:** The credit pricing should reflect the most robust and reliable information available in the carbon markets about the cost of carbon mitigation in real life circumstances at a given time, providing a transparent and accurate benchmark for its users

The CO₂IN Solution

Based on the aforementioned criteria, we created CO₂IN, a trustworthy, effective and scalable carbon credit solution available to everyone. Its role is not to compete with the well-meaning and helpful current climate solutions, but to complement and empower them, as climate change is too big of an issue to be solved by any one of them.

How it works

CO₂IN credits are created using the European Union Emission Allowances as their underlying asset in a 1:100 ratio and are traded on a proprietary platform (iOS, Android, Web Portal). CO₂IN credits can be bought, sold and sent (to other CO₂IN users) as needed, providing great flexibility to its users.

The process for CO₂IN credits creation works as follows:

1. First, EU emission allowances are purchased from the world's largest mandatory carbon market (EU ETS) to serve as the underlying asset for the voluntary carbon credits¹⁴.
2. There are 2 accounts for emission allowances held by CO₂IN - client and reserve. Purchased EU emission allowances always go to the reserve account, which constitutes the supply side of how many CO₂INs can be created and enter circulation at any given time.
3. CO₂IN credits are created only when a user acquires them and cease to exist if they are ever sold back.
4. At the end of each day, there is a process which checks the total amount of CO₂IN credits in circulation and (if necessary) moves an appropriate amount of emission allowances between the reserve and client accounts, so that the allowances in the client account fully cover CO₂IN credits in circulation.

5. In this way, CO₂IN credits in circulation are fully backed by physical emission allowances at all times at a ratio where 1 emission allowance corresponds to 100 CO₂INs; 1 CO₂IN therefore corresponds to 10 kg of nominal CO₂e emissions.
6. All transactions in CO₂IN credits are recorded on a private blockchain ledger, which means that no change can be made to these records later. This allows all historic records to be auditable and verifiable.

Guaranteed emission reduction

CO₂IN credits provide a guaranteed emission reduction by using EU Emission Allowances as collateral. These allowances are part of the EU ETS, which sets a cap on the total amount of greenhouse gases that can be emitted by regulated industries. Every year, all obliged entities must surrender allowances corresponding to their GHG emissions produced the previous year. The number of allowances entering the market each year is reduced over time, driving emission reductions.

When someone acquires allowances from the mandatory carbon market and turns them into CO₂IN credits, they effectively remove these allowances from circulation. This action has a direct impact on the supply of available emission allowances in that market.

Since the total number of allowances is capped, removing them from circulation means that companies subject to the EU ETS regulations have fewer allowances available. This creates an incentive for these companies to reduce their emissions in order to comply with the system's requirements. In other words, by acquiring emission allowances, CO₂IN helps to lower the overall emission cap, ensuring a guaranteed emission reduction.

We have certified the permanent removal of EU Emission Allowances from circulation through CO₂IN as a GHG reduction according to ISO 14064-2:2019¹⁵. The certification was done by the independent authority of TÜV Nord Czech.

Scalability

CO₂IN is extremely scalable because it is directly linked to the world's largest mandatory carbon market. The EU ETS covers around 45 % of the EU's greenhouse gas emissions, making it a significant market

¹⁴ [BCG/Shell \(2023\)](#), [Morgan Stanley \(2023\)](#), [Ecosystem Marketplace \(2022\)](#), [BloombergNEF \(2022\)](#)

¹⁵ [ISO 14064-2:2019](#) Greenhouse gases — Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

with a large volume of tradable allowances. For comparison, the market cap of the EU ETS system today is greater than €100 billion, whereas the total market for voluntary carbon credits is estimated at a few billion Euro globally¹⁶.

Given the considerable size difference between the mandatory and voluntary carbon markets, it's reasonable to conclude that drawing a substantial number of voluntary carbon credits from mandatory markets would not adversely affect them. The voluntary market, being much smaller, simply doesn't have the capacity to make such a significant impact.

As more industries and jurisdictions join emissions trading systems like the EU ETS, the potential market for CO2IN will expand, making it even more scalable and robust. It is unlikely that there would be a formal direct connection between the mandatory markets of different countries and regions; however, CO2IN can function as a bridge between these markets and use the growing market cap of all mature mandatory carbon markets to provide an unprecedented level of scale to the voluntary carbon compensation markets. In other words, CO2IN constitutes an appropriate platform for targeting the goal of „one carbon price globally“.

The scalability of CO2IN also benefits from the use of blockchain technology, which allows for efficient, immutable and secure management of the credits. Blockchain's inherent characteristics enable CO2IN to accommodate a growing user base and handle an increasing volume of transactions without compromising the system's performance.

Trustworthiness and verifiability

CO2IN's trustworthiness is founded on several key pillars that ensure the integrity and transparency of the platform.

The primary pillar concerns the underlying asset used to create CO2IN credits. Unlike the unregulated certifications often associated with conventional voluntary credits, CO2IN credits are backed by highly regulated EU emission allowances. This guarantees that each CO2IN credit is based on a solid, real-world foundation, representing genuine emission reductions.

The secondary pillar revolves around the processes of purchasing and storing these allowances, creating CO2IN credits, and recording transactions. CO2IN stores all allowances that serve as the underlying

asset for CO2IN credits in a dedicated client account. These allowances cannot be used as collateral nor transferred directly to any external accounts.

Each business day, an end-of-day procedure is executed, during which the heads of regulations, trading, and back office independently verify that the client allowances account maintains a sufficient balance (typically a small surplus) compared to the total number of CO2IN credits in circulation. Every step of this process is recorded and securely stored.

Every transaction involving CO2IN is recorded on a private ledger technology operated by Tatum, a company holding ISO 27001 and SOC2 type 1 certifications. This ensures that all platform transactions are verifiable, immutable, and recorded in real-time. The transparency offered by the ledger enables external verifications of the number of credits in circulation at any given moment and allows for comparisons with the history of held emission allowances according to official extracts from the emission allowances registry.

Flexibility

CO2IN credits can be used for many use cases beyond offsetting. Clients can also send them to other users, or sell them back. This provides high versatility to the clients. Depending on the need of the situation, a client may retire the tokens to meet their emission targets, send them to other parties (e.g. as vouchers to employees, or customers) or sell them back if they have made sufficient internal changes to reduce their carbon emissions.

The option of selling back the CO2IN credits means that investors who purchase them aren't locked into compensating their emissions outright, which reduces their financial risk and makes the tokens a more attractive hedge for their potential carbon liabilities. Many clients may not know their exact liability before the results of a carbon audit, but the ability to sell surplus credits back enables them to purchase CO2IN credits gradually throughout the year.

The ability to sell back credits can also attract a larger pool of potential clients, including those primarily motivated by financial returns rather than climate concerns. This increased participation, which would otherwise not happen, leads to more capital flowing into the carbon market, which in turn contributes to creating more pressure on decarbonization and reducing carbon emissions, albeit temporary.

¹⁶ [ISO 14064-2:2019](#) Greenhouse gases — Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

Fees from such transactions also help to finance the operation of CO2IN.

There is another positive indirect impact on the EU ETS market of simply holding emission allowances. This is because of the Market Stability Reserve (MSR) mechanism. Each year, the total number of allowances in circulation (TNAC) is calculated and based on this number, a certain amount of allowances that would be otherwise made available in auction the next year, are typically withheld. This is because at present, there is a much larger number of emission allowances in circulation than the trigger level. Every CO2IN credit held during the decisive date for TNAC calculation delays the release of further 24 % of its nominal value in carbon into auction the next year.

Business model

CO2IN provides a platform for corporations and individuals to offset their carbon emissions and charges fees for all transactions. CO2IN charges its users a 1 % fee when they purchase CO2IN credits, a 2 % sell fee when they sell them back to the platform, a 1 % offset fee to permanently withhold CO2IN credits from circulation for compliance purposes and a 0,1 % payment fee for sending credits to another CO2IN Wallet. These fees enable CO2IN to generate revenue and cover its operational costs while providing a transparent and efficient platform for offsetting carbon emissions.

Furthermore, CO2IN offers a support service to corporations that require assistance in navigating the latest ESG related regulation, with a focus on achieving the necessary emissions targets.

Overall, CO2IN's business model is built on the principles of transparency, environmental sustainability, and social responsibility. By charging reasonable fees and providing a reliable platform for trading and retiring carbon credits, CO2IN is helping individuals and corporations take meaningful action towards addressing climate change.

Technical solution - Bridging the Gap between Carbon Credits and Blockchain Technology

Unlike many other projects, CO2IN credits are created only when a user purchases them, and they cease to exist once they are sold back. This process ensures that the credits in circulation are at all times 100% backed by real assets. As the operator, CO2IN always maintains a surplus of allowances compared to the circulating credit supply, preventing any shortfall in real asset coverage.

CO2IN leverages a private blockchain ledger solution provided by the Czech company Tatum, a global leader in the field. Private blockchains have two main advantages compared to public ones. The first is privacy. Individual transactions are not publicly accessible, but instead are used to verify the issuer's claim by an independent third party. The second is a lower carbon footprint, especially compared to public blockchain solutions based on the Proof of work consensus algorithm¹⁷. By using Tatum's blockchain technology, CO2IN supports the transition to low-carbon technologies without contributing to the carbon footprint issue.

Trading of CO2IN credits currently happens on our own platform (BE, front end, apps, web portal, devops), where our clients can access what can be described as a secondary market for European emission allowances. In reality, it is much more. Transforming an otherwise inaccessible and illiquid asset (as discussed above) into an available resource for customers is just the beginning.

By retiring our credits, we enable our users to permanently withhold CO2IN credits from circulation in exchange for a certified voluntary carbon credit in the nominal value of the retired credits. This approach not only contributes to global efforts to combat climate change, but also provides a transparent, secure, and efficient way for individuals and organizations to meet their climate targets on their way towards a low-carbon economy.

Certification

Since CO2IN is an innovative carbon credit, it presented a unique challenge of how best to certify it

¹⁷ „Proof of work (PoW) is a form of cryptographic proof in which one party (the prover) proves to others (the verifiers) that a certain amount of a specific computational effort has been expended.[1] Verifiers can subsequently confirm this expenditure with minimal effort on their part. A key feature of proof-of-work schemes is their asymmetry: the work – the computation – must be moderately hard (yet feasible) on the prover or requester side but easy to check for the verifier or service provider.“ [Wikipedia](#)

by an independent third party. For example, typical certification schemes such as the Gold Standard only certify nature based projects.

For that reason we have decided to certify CO₂IN as a GHG Reduction Project according to ISO 14064-2:2019(E). The process of certification of CO₂IN has been done by the Czech office of TÜV Nord in Q2/2023. From July 2023, CO₂IN can be used as a certified voluntary carbon credit.

Beyond CO₂IN: Addressing the Entire Environmental Credits Space

Throughout this whitepaper, we have emphasized the urgent need for an innovative solution in the carbon credit space that serves as a reliable benchmark. CO₂IN, with its groundbreaking approach, seeks to transform this domain and offer a comprehensive solution for companies and individuals. However, it's important to note that CO₂IN is only one component of a broader strategy.

In addition to its primary function, CO₂IN also acts as a proof of concept for addressing the entire environmental credits landscape. The technology underpinning CO₂IN has been designed to be adaptable for use in other related projects, encompassing various facets of the environmental credits sphere.

To this end, we have developed the „environmental credit triangle“ framework, which consists of three interconnected components: negative externalities, positive externalities, and decentralized decarbonization. This concept highlights three key areas where in our view digital tools have an outsized potential to have a meaningful impact to accelerate the decarbonization process.

CO₂IN directly tackles negative externalities, as it decreases the ability of polluters to emit more harmful emissions. Positive externalities are all about sequestering carbon and its long-term underground storage. Lastly, decentralized decarbonization is about supporting investment into renewable projects and direct access to electricity markets.

In fact, there are already two projects in development that should address the other areas, which are outside of CO₂IN's scope. Both will employ the same technology that powers CO₂IN to deliver meaningful climate positive solutions.

The first project, tentatively named Woodit, aims to develop a revolutionary new methodology for carbon sequestration using trees that delivers both transparency and permanence and will be inherently verifiable and trustworthy.

Powerit, the second project, is designed to revolutionize the renewable energy sector by enabling individuals and companies to purchase fractional shares in renewable projects, thereby contributing to their funding and/or enable flexible asset ownership. Simultaneously, Powerit will facilitate the buying and selling of power tokens, giving consumers and prosumers direct access to the electricity market that is compliant with relevant regulation.

Utilizing the technological and regulatory framework behind CO₂IN for Woodit and Powerit creates considerable savings in both investment and rollout time for these projects. Ultimately, therefore, CO₂IN's innovation reaches beyond transforming voluntary carbon credits, as it establishes an efficient foundation which significantly accelerates the development of follow up projects transforming other areas of the environmental credits space.

