Carbon Credits and Offsets: What are they, and how can you buy or sell them?

July 2024

Recycled Materials Association
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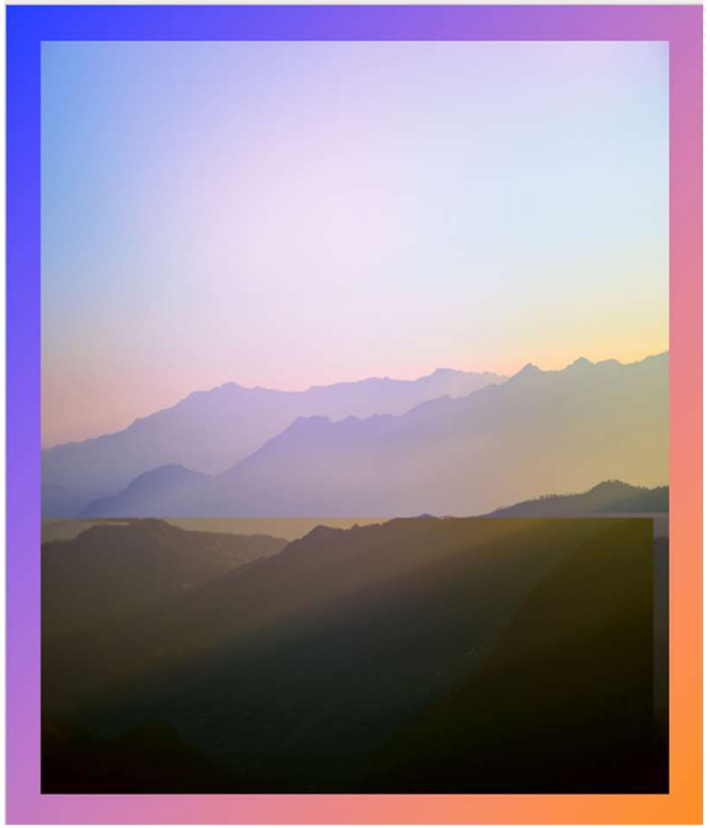

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What are Carbon Credits? What are Carbon Offsets?

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What are Carbon Credits and Carbon Offsets? How are they different & alike?

What are Carbon Credits?

- Carbon credits are marketable permits that each reflect one metric ton of carbon dioxide (CO_2) emissions (or other greenhouse gases) that a business is allowed to emit in a regulatory environment.
- Carbon credits are commonly used in the context of emissions trading in which companies are given a fixed amount of credits (carbon emissions) based on **state law,** depending on their emissions. They can purchase more credits if needed or sell their extra credits.
- Carbon credits are traded much like other commodities. They are based on straight monetary exchanges for a credit of carbon.

What are Carbon Offsets?

- Carbon offsets are typically created when **companies or individuals finance projects** that reduce greenhouse gas emissions elsewhere.
- Projects to reduce carbon often fall into one of two types of project categories:
  - ✓ ***Natural solutions***. *Reforestation and wetland restoration activities are examples of solutions that "**naturally**" collect carbon in the environment.*
  - ✓ ***Mechanical solutions.*** *These include investments in new technology that result in higher efficiency or lower emissions, like renewable energy projects or direct carbon capture technologies.*

What's the difference between Carbon Credits and Carton Offsets?

- **Carbon credits** are a measurement unit to **"cap" emissions** (meaning permitted emissions) and are traded like other commodities. They are the result of state laws regulating carbon emissions.
- **Carbon offsets are voluntary and "compensate" a business for investing in green projects or initiatives (whether natural or mechanical) that eliminate emissions**. Once an offset has been produced, the offset value can either be kept by the company that carried out the project or traded on a voluntary carbon market.

Carbon Credits and Offsets: Going Deeper

Carbon credits are an exchange of money for another company's carbon reduction credits in a regulatory environment.

- **Carbon credits are a regulatory tool used when countries/states pass "cap-and-trade" regulations limiting the number of tons of carbon (CO2) a business can emit in a year**. These tons are allotted as carbon credits. Carbon credits are a measurement unit to "cap" these permitted emissions.
- **Credits are used by companies that cannot reduce their emissions below their required cap**. They might be years away from substantial and compliant reductions in emissions, and they still have to keep operations going to make a profit in the interim. As such, they need to find a way to be able to emit more carbon than their cap without breaking the law.
- **When companies hit their emissions cap, they look to the compliance market to "trade" money for another company's carbon emissions credits.**

Carbon Offsets pay someone else to remove pollution from the atmosphere instead of a company reducing their own emissions.

- **Carbon offsets are a measurement unit used to compensate a business for investing in green projects or initiatives (whether natural or mechanical) that eliminate emissions.** These are **new projects** that will reduce emissions beyond the current state.
- **The purchase of these offsets is voluntary, which is why carbon offsets form what's known as the "Voluntary Carbon Market".** By buying these carbon offsets, companies can decrease the amount of CO_2e in their carbon footprint.

Where are Regulatory Carbon Credit Programs in Place?

Greenhouse Gas Emissions Targets

- There are no federal carbon pricing regulations in the U.S.
- Twenty-four states plus the District of Columbia have adopted specific **greenhouse gas emissions targets**.
- Policies include carbon pricing, emissions limits, renewable portfolio standards, and steps to promote cleaner transportation.

Carbon Pricing

- One of the most direct policies that states use to address emissions is carbon pricing. Currently, this is only implemented via **cap-and-trade programs**, although **carbon taxes** are being considered in a few states as well.
  - ✓ ***California's*** *cap-and-trade program covers nearly its entire economy and is linked with the Canadian province of Quebec.*
  - ✓ ***Washington State's*** *cap-and-invest legislation went into effect in 2023.*
- The eleven states in the Regional Greenhouse Gas Initiative (RGGI) have implemented cap and trade in the **power sector**.
  - ✓ ***Massachusetts*** *has two separate cap-and-trade programs to reduce GHG emissions in the power sector: It participates in RGGI and also has a separate cap-and-trade program (Reducing CO_2 Emissions from Electricity Generating Facilities) that runs in parallel to RGGI.*

U.S. Carbon Pricing Policies by State

State Climate Policy Maps - Center for Climate and Energy SolutionsCenter for Climate and Energy Solutions (c2es.org)

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How are Carbon Offsets Bought, Sold and Regulated?

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How are carbon credits and offsets bought and sold?

- **Carbon Credits and the Regulatory Environment.** Buying carbon credits permit a company or other entity to emit a certain amount of carbon dioxide or other greenhouse gases in a state regulated cap and trade program. While there is no global marketplace for carbon trading, several regional jurisdictions have created their own markets for the exchange of carbon credits.
  - ✓ The state of California operates and manages its own cap-and-trade program. (CARB)
  - ✓ Several other U.S. states and Canadian provinces created the Western Climate Initiative (WCI, Inc.) to manage carbon trading efforts.
  - ✓ In the Northeast, 11 states formed the Regional Greenhouse Gas Initiative, a cap-and-trade program for power companies (RGGI).
- **Carbon Offsets and the Voluntary Carbon Market.** Carbon offsets are traded on a voluntary market. There are no regulations governing voluntary market participation. Participants purchase carbon offsets to achieve internal carbon emission goals.
  - ✓ **This absence of control does not imply that offsets bought via this market do not adhere to specific requirements**. For example, the SEC requires disclosure of the use of carbon offsets for large publicly traded corporations, as does California's AB 1305.
  - ✓ **Organizations are also encouraged to invest in approved programs in order to demonstrate their environmental credentials and avoid charges of "greenwashing,"** which involves making false environmental claims to promote brand image.

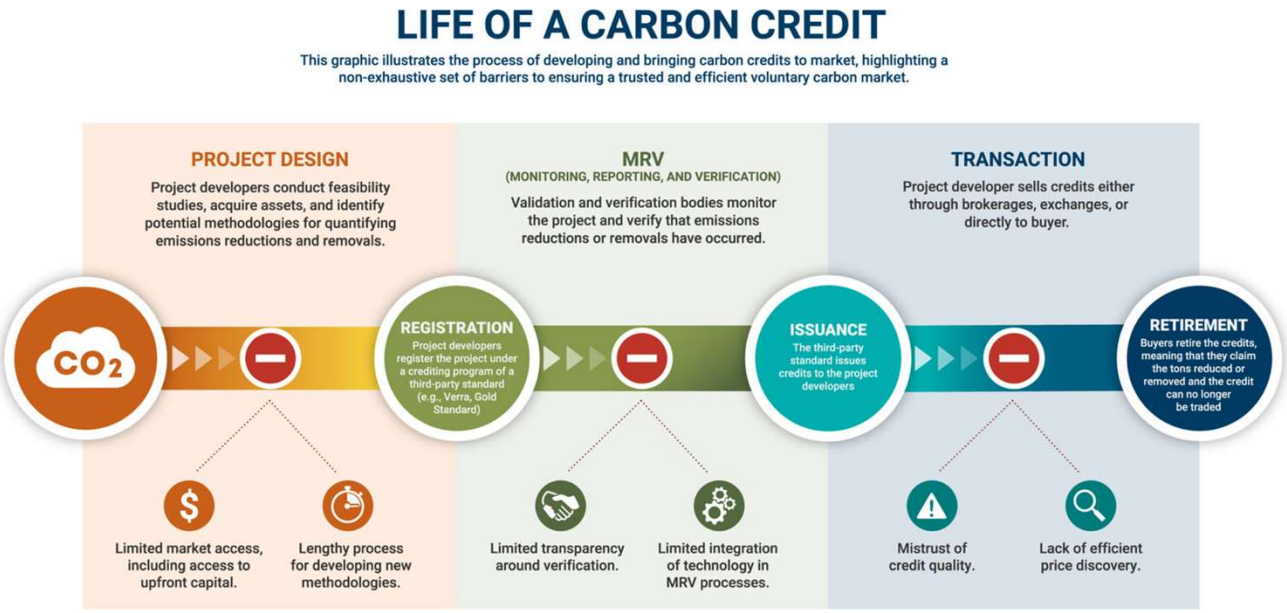
Programs like the **Verified Carbon Standard/Verra** (Verified Carbon Standard - Verra) or the **Gold Standard** (Gold Standard) set industry standards. These programs outline the criteria that offsets should achieve to be certified. Projects are then examined and accredited in accordance with their standards.

How are Carbon Credits and Carbon Offsets Used?

Although the terms are sometimes used interchangeably, carbon credits and offsets are regulated and used differently.

- **Carbon credits** are also known as carbon allowances. When a company buys a carbon credit, **usually from the government,** they gain permission to generate one ton of CO_2 emissions. With carbon credits, **carbon revenue flows vertically** from **companies to regulators**.

- **Carbon offsets flow horizontally, trading carbon revenue between companies.** When one company removes a unit of carbon from the atmosphere as part of their normal business activity, they can generate a carbon offset. **Other companies can then purchase that carbon offset to reduce their own carbon footprint.**



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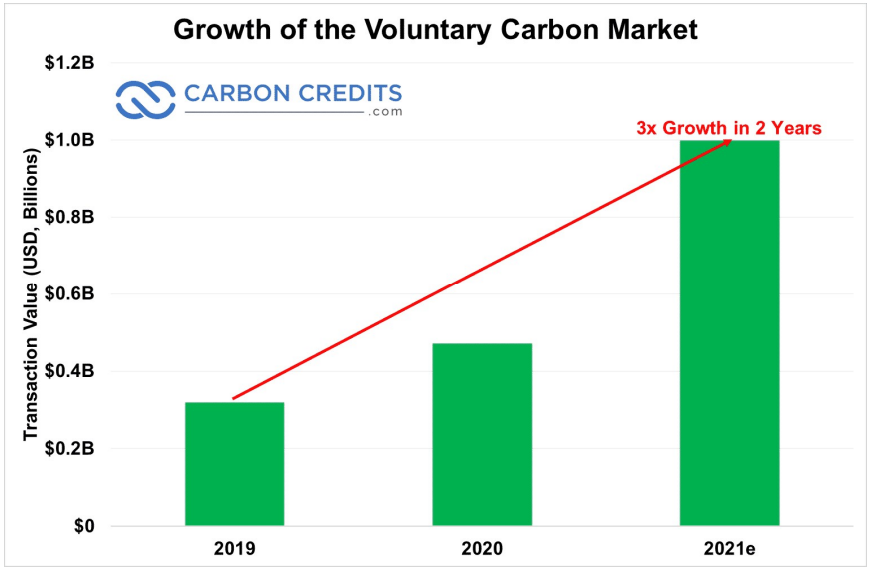
Why Carbon Offsets are Important

Carbon credits are a regulatory tool created when "cap-and-trade" regulations are enacted. They limit the number of tons of carbon (CO2) a business can emit in a year.

Conversely, carbon offsets are used to invest in new projects to reduce emissions. This is a decentralized market where private actors voluntarily buy and sell carbon offset credits that represent removals or reductions of greenhouse gases (GHGs) in the atmosphere**. The voluntary carbon markets offers opportunities and flexibility to fund new projects that reduce carbon emissions.** This is different from government required cap and trade programs .

- **High-integrity carbon offsets can unlock urgently needed finance that would not otherwise be available to reduce and remove billions of tonnes of emissions**. The VCM enables companies to invest in high-integrity carbon credits now to accelerate climate mitigation beyond their value chain.
- **While companies' priority must be to decarbonize their own value chains, the VCM provides a way for them to take responsibility for emissions they can't yet cut**. High-integrity carbon credits allow them to go further, providing finance to critical climate mitigation activities that would not otherwise be viable.



How to Make Money Producing and Selling Carbon Offsets (carboncredits.com)

Buying Voluntary Offsets

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Buying Voluntary Carbon Offsets: Are they Credible?

- **The market for carbon offsets is voluntary – there's no government agency setting a standard emission reduction that must be met for eligible project**. There is no established criteria for what makes a viable carbon offset project.
- **The voluntary carbon offset market is a relatively new frontier - especially for investors and startups.** But not all carbon offsets are created equal. Without an external regulator to weigh the impact of one project against another, entities purchasing carbon offsets rely on the trustworthiness of the third-party vendor. In these early days of the carbon offset markets, there's less transparency, and less of a chance to accurately determine good projects from bad ones.
- **Verification programs are improving.** As entities develop better metrics to track the effectiveness of carbon offsets, transparency will improve with verification programs to ensure that consumer receive proper value for their money.

Verra's Offset Verification Program

Voluntary carbon registry Verra (Verified Carbon Standard – Verra) has established a rigorous verification program for carbon offsets. They recruit, train, and maintain a network of auditors who can follow up on any Verra-approved offset programs. It is an in-house offset project verification, trying to ensure that a ton of carbon offset is an actual ton of carbon gone.

Buying Voluntary Carbon Offsets

Because carbon offsets are voluntary, there has been a lot of scrutiny on them and how they are bought and sold. Credible companies that certify carbon offsets include: Verra (Verified Carbon Standard – Verra), Nori (Carbon Removal Credits & Integrations for Climate Impact (nori.com) and Gold Standard (Gold Standard).

- **Nori and Gold Standard allow individuals to purchase carbon credits directly.** Each offers a carbon footprint calculator allowing companies or individual to plug in your information and instantly see exactly how much carbon is needed to purchase to offset emissions.
- **Companies like Verra facilitate investment in climate-friendly projects and sell carbon offsets in bulk to corporations and large-scale investors**. These brokers also serve as gatekeepers, verifying the quality and effectiveness of the carbon credits they sell.

Major categories. A quick glance at any of the projects in the offing through these brokers shows just how expansive the carbon credit market is. The most prevalent types of projects include:

- **Agriculture and Forestry investments**
- **Wind power projects**
- **Solar Farms projects**
- **Hydroelectric Power Projects**

Example: Purchasing Carbon Offsets for Corporate Airline travel

An individual or a company can choose to purchase carbon offsets to reduce the carbon emissions associated with their personal or business travel. Airline customers cannot directly reduce the emissions associated with flying (unless they choose to not fly) so airlines offer programs for their customers to purchase credits from a third party when they buy their plane tickets.

In this case, Alaska Airlines offer carbon offsets to customers through a third party, **The Good Traveler (**The Good Traveler). To offset carbon for a flight, The Good Traveler charges the airline customer the cost of supporting the reduction of the equivalent amount of carbon for that flight. The Good Traveler uses a carbon equivalency of estimate of 344 lbs. of CO_2 for 1000 miles of air travel, and uses the International Civil Aviation Organization's Carbon Emissions Calculator, available here.

The Good Traveler invests the funds from airline customers into projects such tree planting or new solar farms.

Airlines offer carbon offsets as a way to reduce carbon impact associated with jet fuel emissions.

Are Carbon Offsets a Good Solution to the Climate Change Crisis? - Bloomberg

Example: Purchasing Carbon Offsets for Diesel Fleet Emission

A trucking company offsets the emissions from its diesel trucks through purchasing offsets.

- In this example, a trucking company that operates a fleet of diesel-powered trucks that generates 100 tons of carbon dioxide each year chooses to fund specific projects to pay a landowner to implement projects that absorb an equivalent amount of carbon from the atmosphere.
- Examples include wind and solar installations or tree planting efforts.

Are Carbon Offsets a Good Solution to the Climate Change Crisis? - Bloomberg

Should you Buy Carbon Offsets or Work to Reduce Your Own?

Why buy carbon offsets instead of working to reduce them?

For many companies, the cost of reducing their emissions is daunting. But allowing company, governments, and even individuals, to pay for, and take for, their emissions is an attractive proposition.

- **One example is the aluminum industry.** Reducing emissions from an aluminum smelters can cost over $100/ton. For industries such as these, paying for projects that plant trees or destroy landfill methane might reduce carbon for a small fraction of their cost to reduce their own emissions.
- **Offsets should not be a way to avoid costly, but effective, actions to cut down on carbon.** There's a belief that offsets have turned into a "get-out-of-jail-free" card for big polluters. A growing number of scientists are raising doubts about the effectiveness of the market, and some sellers of offsets have joined the call for more guidelines. A debate has emerged about how much companies should be trying to shrink their carbon footprints before they offset what they deem to be unavoidable emissions.

Critics argue that offsets often promise more emissions reductions than they deliver, raising doubts about their overall effectiveness. Additionally, there are concerns that reliance on offsets could discourage businesses from reducing their own emissions, potentially slowing the transition to zero-emission systems.

Are Carbon Offsets a Good Solution to the Climate Change Crisis? – Bloomberg

Selling Voluntary Offsets

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Selling Voluntary Carbon Offsets

Voluntary carbon offsets sold are expected to be "additional" to current emissions, and to create "permanent emissions reductions."

- **Additionality.** A carbon-reduction project is considered "additional" when its impact (emission reductions and/or removals) would not have been realized if the project had not been carried out, and that the project itself would not have been undertaken without the proceeds from the sale of carbon credits.

  Projects must be new and not 'business as usual'.

- **Permanence.** Carbon-reduction projects should realize permanent emission reductions and/or removals. Where projects have a reversibility risk—such as forestry projects, which could suffer from fire, logging, or disease—comprehensive risk mitigation and a mechanism to compensate for any reversals needs to be in place.

  It is common practice for standard bodies to include buffer provisions (requiring all projects with reversibility risk to set aside a certain percentage of credits in a buffer or insurance pool).

  In the unfortunate event of a reversal of emission reductions and/or removals (for example, due to fire or disease), credits from the buffer would be used to cover the losses. For example, in 2021, two carbon offset forestry projects funded by Microsoft and BP funded, threatening their carbon offset investment.

How the voluntary carbon market can help address climate change | McKinsey


Science

US Forest Fires Threaten Carbon Offsets as Company-Linked Trees Burn

At least two forestry projects used by businesses including BP and Microsoft to compensate for their greenhouse gas emissions are burning in Oregon and Washington.

By Camilla Hodgson, Financial Times
August 4, 2021

Fires smolder and burn in the mountains west of Paisley, Oregon. Credit: Maranie Staab/Bloomberg via Getty Images

US Forest Fires Threaten Carbon Offsets as Company-Linked Trees Burn - Inside Climate News

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How to Sell and Get Paid for Voluntary Carbon Offsets

There are numerous online carbon exchange programs located both within the United States and internationally that enable sellers to get cash for the carbon offsets they've produced. The exchanges work the same way as various stock and commodity exchanges.

The three largest voluntary carbon registries in the United States have created standards for producing carbon offsets. In addition, they use strict protocols that both scientists and stakeholders have implemented.

1. **American Registry (ACR):** One of the oldest voluntary carbon offset registries, ACR is known for its rigorus standards and methodologies for carbon offset project (Assessing the State of the Voluntary Carbon Market in 2022 | Carbon Direct (carbon-direct.com).
2. **Climate Action Reserve (CAR):** This registry focused on ensuring the environmental integrity of carbo offset projects and has a strong presence in North America (Assessing the State of the Voluntary Carbon Market in 2022 | Carbon Direct (carbon-direct.com).
3. **Verra (VCS).** Verra's Verified Carbon Standard (VCS) is one of the most widely used voluntary carbon offset programs globabally, supporting a variety of project types (Verified Carbon Standard – Verra).

As an example, for a landowner to enroll, the owner/company provides documentation of the details of its proposed project (e.g. land maps available that document ownership of the land, legal description of the land) and documentation of management practices. A signed contract between the land owner and those purchasing/paying for the carbon credits will also be required, along with the fees for the project.

How to Make Money Producing and Selling Carbon Offsets (carboncredits.com)

Example: Selling Carbon Offsets from a Farm/Ranch Project

Farmers, ranchers, and landowners can produce and sell carbon offsets by capturing and storing emissions. They do this using carbon farming and carbon sequestration processes, which involve implementing practices that remove CO2 from the atmosphere by converting the gas into organic matter within the soil and eventually into plants. Once absorbed, the CO2 helps restore the soil's natural qualities—simultaneously enhancing crop production and reducing pollution.

Though not a comprehensive list, here are a few practices that typically qualify as farming or ranch offset-producing projects:

- *Returning biomass to the soil as mulch after harvest instead of removing or burning.*
- *Using conservation tillage or no-tillage practices that improve the quality of water and the air by increasing nutrients, soil structure, porosity, and tilth.*
- *Using nutrient management and precision farming to maintain plant and soil health*
- *Planting cover crops during the off-season to ready the land for cash crops by improving the soil quality.*
- *Replacing surface irrigation systems with flood irrigation systems so that runoff water can be recycled to improve efficiency.*
- *Promoting forest regrowth to remove, store, and re-purpose carbon within trees and plants.*
- *Returning degraded soils to their natural state, converting acreage into grasslands, or planting trees or seeds to change open land into forest or woodlands.*
- *Rotating crops to ensure soil nutrients remain plentiful.*
- *Switching to alternate fuel types, such as lower-carbon biofuels like corn and biomass-derived ethanol and biodiesel.*
- *Altering manure management and changing feeding schedules.*

Projects need to be large enough in scope to capture the net impacts along the entire supply chain. Unfortunately, the math for selling carbon offsets doesn't work for small farmers, which means that most organic farms – seemingly a perfect candidate for carbon credits – won't aren't able to benefits from carbon credits because of their size.

Third-party verification expert collect, analyze, and verify data from the property, possibly conducting a site visit, to determine how many offsets can be sold.

Example: Selling Carbon Offsets from a Forestry Project

- **In forest carbon projects, additionality is typically a measure of additional carbon sequestered and stored on forested land**.

  Additionality has to be quantified relative to a baseline condition in order to understand that the carbon storage was additional to what would have otherwise occurred under a business–as–usual scenario.
- **The difference in carbon stored over time between a baseline scenario and a scenario where project activities increase stored carbon is referred to as the carbon benefit.**
- **Carbon benefit can come from increasing forest carbon sequestration and storage or by avoiding GHG emissions**. For instance, a project developer can measure how newly planted trees in a reforestation project will generate a carbon benefit over time by subtracting the GHG emissions from the planting activities from the carbon sequestered due to new tree growth over time.
- **This benefit is considered additional because it can be measured against a baseline scenario in which no new trees were planted**. In carbon trading schemes, additionality created by carbon project activities provides the potential to generate marketable forest carbon credits.

Forestry Project Examples

- **Establishing forest on land not previously forested (or not forested within the previous 50 years**) and restoring tree cover on lands that are not at optimal stocking levels (e.g., postharvest or following other forest disturbances).
- **Preventing the conversion of forestland to nonforested** land (must have demonstrably high likelihood of forest stand and carbon loss).
- **Improved Forest Management (IFM) includes activities that maintain or increase forest resilience and carbon stocks.** This may include management of pests or invasive species, stand irrigation or fertilization, and extending harvest rotations or forgoing intensive harvesting.

Commentary on carbon offset examples

Whether buying or selling carbon offsets, third parties use funding received from the emitter to make an investment in projects that reduce the equivalent carbon emissions, selling the emission value to the purchaser of the offsets.

- **Purchases credits for airline travel.** A company purchasing offsets for airline travel would be well-served to first develop policies and procedures to ensure that they shift to more video conferences and virtual meetings whenever possible. After ensuring that these opportunities are maximized, purchasing carbon offsets for the remaining travel is a great way to help support additional new carbon emission reduction programs.
- **The transportation/trucking company.** A more effective solution for this company would be to invest in low or zero emissions fleet technology and infrastructure, than to continue to buy diesel fuel and carbon offsets for that fuel. A longer-term economic analysis would like prove out the benefits of this longer term investment.

The Integrity Council for the Voluntary Carbon Market (ICVCM Leading the way to a high integrity Voluntary Carbon Market) is seeking stronger rules and guidance for carbon markets.

Is Recycling a Candidate for Offsets?

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Can I sell carbon offsets from recycling?

Technically – the answer is probably "yes". Realistically, the cost and effort required may be greater than the economic benefits, and the scale would need to be large enough to capture the complete value chain where the additional and permanent carbon emissions offsets would be realized for sale into the voluntary marketplace.

- **Verra offers a verification program, and methodology for selling carbon offsets from recycling (see next page).**
- **Recycling avoids carbon emissions primarily by reducing the mining of virgin resources**. An analysis of the carbon offset from the mining industry, as well as transportation and manufacturing would need to be completed to show the **net** additional, new reductions in virgin resources from the recycling investment.
- **New infrastructure, new tons recycled.** A credible carbon offset trader would require this analysis, with evidence of the permanence of the additional recyclables/avoided emissions. Much like the forest that is considered an offset, if it burns down, the carbon offset investment is considered reversed. *If a recycling program falters for any reason, the offset would be reversed, and investors could expect renumeration for the lost credits/offsets.*
- **Step required.** To generate carbon offsets through recycling, a recycler would need to take the following steps to validate the additional, permanent carbon reducing activities:
  - An analysis of current carbon emissions.
  - An analysis of additional emissions associated with investments in the offsets.
  - A project plan for this investment.
  - A data tracking system for the offsets.
- **The project would need to be large enough in scope to capture the net impacts along the entire supply chain**. Similar to the earlier farming example, the math for selling carbon offsets may not work for recyclers. While recycling may appear to be a good fit for carbon offset sales, it is very difficult to document additional avoided emissions along the value chain.

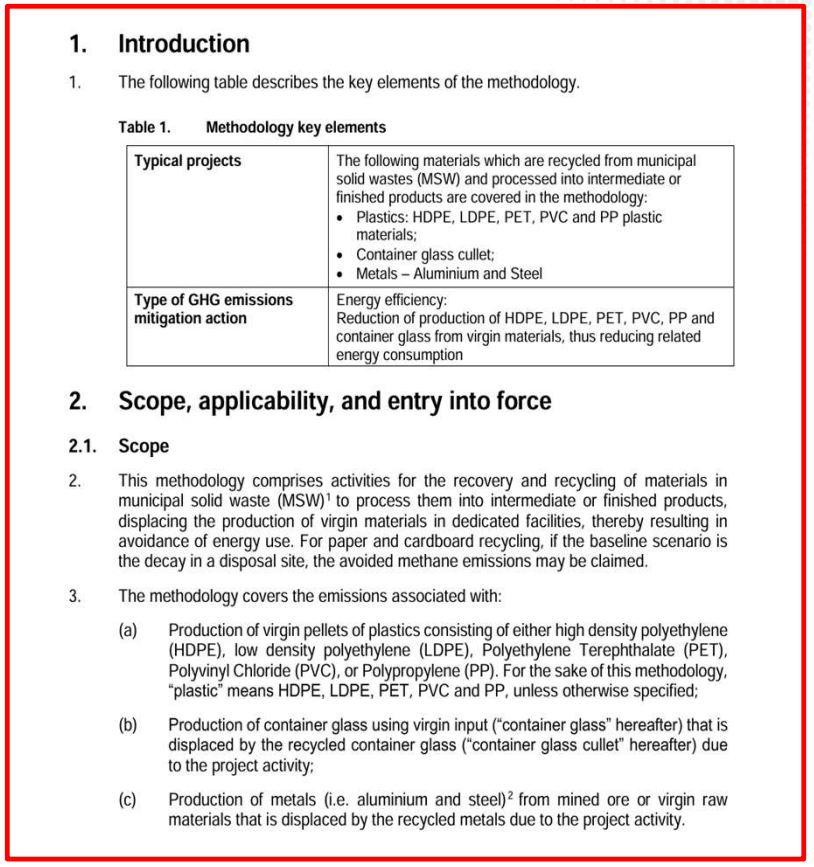
Methodology to Verify a Recycling Project

Verra offers a detailed methodology for verifying the sale of carbon offsets from recycling projects

- Verra's **Methodology** is very detailed, offering examples for "informal sector" projects (in developing countries, as well Greenfield facilities or added capacity projects at "formal sector" facilities.
  - ✓ *The project must demonstrate that the materials recycled by the project activity are not diverted from other existing recycling facilities belonging to the formal sector;*
  - ✓ *The project is not in a location where it is a "common practice in the region to recover and recycle these materials from municipal solid waste streams by means of formal businesses."*
  - ✓ *For recycling of PVC/PET/PP, the project participants shall demonstrate the chemical equivalence of the recycled PVC/PET/PP to that of PVC/PET/PP made from virgin inputs by the comparison of intrinsic viscosities to ensure that the recycled PVC/PET/PP replaces virgin inputs.*

Additional requirement can be found on the Verra Methodology website: (VCS Program Details – Verra) and the link to the right.

Recycling Facility Verification Document



1. Introduction

1. The following table describes the key elements of the methodology.

Table 1. Methodology key elements

Typical projects	The following materials which are recycled from municipal solid wastes (MSW) and processed into intermediate or finished products are covered in the methodology: • Plastics: HDPE, LDPE, PET, PVC and PP plastic materials; • Container glass cullet; • Metals – Aluminium and Steel
Type of GHG emissions mitigation action	Energy efficiency: Reduction of production of HDPE, LDPE, PET, PVC, PP and container glass from virgin materials, thus reducing related energy consumption

2. Scope, applicability, and entry into force

2.1. Scope

2. This methodology comprises activities for the recovery and recycling of materials in municipal solid waste (MSW)[1] to process them into intermediate or finished products, displacing the production of virgin materials in dedicated facilities, thereby resulting in avoidance of energy use. For paper and cardboard recycling, if the baseline scenario is the decay in a disposal site, the avoided methane emissions may be claimed.

3. The methodology covers the emissions associated with:

(a) Production of virgin pellets of plastics consisting of either high density polyethylene (HDPE), low density polyethylene (LDPE), Polyethylene Terephthalate (PET), Polyvinyl Chloride (PVC), or Polypropylene (PP). For the sake of this methodology, "plastic" means HDPE, LDPE, PET, PVC and PP, unless otherwise specified;

(b) Production of container glass using virgin input ("container glass" hereafter) that is displaced by the recycled container glass ("container glass cullet" hereafter) due to the project activity;

(c) Production of metals (i.e. aluminium and steel)[2] from mined ore or virgin raw materials that is displaced by the recycled metals due to the project activity.

WDFQ1I93T5S7J2EXHC84LOZUBPKM0G (unfccc.int)

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Plastic Recycling Credits

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Plastic Recycling Credits

What is a Plastic Credit?

A Plastic Credit issued by Verra represents one tonne of plastic waste collected or recycled that would otherwise not have been.

Purchase of these credits helps to finance plastic waste collection and recycling projects that need capital to build local plastic waste management infrastructure.

There are two types of Plastic Credits that indicate the infrastructure investment made:

- Waste Collection Credit (WCC)
- Waste Recycling Credit (WRC)

Plastic Recycling Credits are NOT carbon offsets; however, they use the same voluntary concept to drive investment in plastic waste management projects worldwide that reduce the overall emissions associated with plastic manufacturing and use.

Plastic Recycling Credit is issued by Verra, who also certifies each project. A serial number is assigned to the credit, indicating the project's location, and enabling companies to invest in projects that address specific waste management challenges in key production regions.

It is worth noting that there are no known carbon credits purchased or sold from projects in the U.S.

THE SOLUTION

Verra's Plastic Waste Reduction Program (Plastic Program) drives investment to plastic waste management projects worldwide that are third-party audited and verifiably reduce plastic waste in the environment. The safeguards incorporated in the program promote other environmental and social co-benefits.

HOW PLASTIC CREDITS WORK

Projects certified with Verra's Plastic Program can generate Plastic Credits.

A company's purchase of Plastic Credits enables it to scale up plastic waste management projects in geographies relevant to its supply chain, complementing internal plastic reduction measures and advancing plastic stewardship goals.

A Plastic Credit's serial number indicates the project location, material types managed, and activity type, enabling companies to invest in projects that address specific waste management challenges in key production regions.

CASE STUDIES

Second Life Thailand Project

The Second Life Project (Verra project ID 2513) supports the increased collection and recycling of plastic waste from ocean and terrestrial ecosystems in remote coastal and island communities across Thailand.

The sale of Plastic Credits enables the project to pay collectors a premium for plastic collected from hard-to-reach islands, fund the sorting of collected fishing nets, and invest in regional initiatives to boost recycling.

Photo credit: Second Life Thailand

Far North Queensland Farm Plastics Project

The Far North Queensland Farm Plastics Project (Verra project ID 2718) implements and scales up the collection of agricultural waste from banana farms by collecting plastic waste and delivering it to mechanical recyclers or sanitary landfills. This reduces the plastic waste entering the Great Barrier Reef and the surrounding waterways and landscapes of Far North Queensland in Australia.

Photo credit: Far North Queensland Farm Plastics Project

Plastic Credits generated by Verra-certified projects can complement businesses' plastic stewardship goals while scaling up global plastic waste collection and recycling infrastructure.

ONE PLASTIC CREDIT = **ONE TONNE OF PLASTIC WASTE COLLECTED OR RECYCLED** above baseline rates.

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([Plastic Waste Reduction Standard - Verra](#)).

Methodology Example: Plastic Recycling Carbon Credit Project

PLASTIC PROGRAM METHODOLOGIES

Methodologies set out detailed procedures for quantifying the plastic waste collected and/or recycled as the result of a project activity and provide guidance to help project developers determine project boundaries, set baselines and assess additionality.

Project proponents must always use the current and valid version of a methodology. Select from the methodologies below based on the nature of your project activity.

To ensure that the Plastic Program remains robust and credible, the Plastic Program periodically reviews approved methodologies to ensure that they conform to current requirements, international best practices, and scientific consensus. Therefore, from time to time, a methodology may be revised, withdrawn or put on hold. In such cases, A grace period will apply for projects currently using the methodology. The status of each methodology is always displayed on the Verra website.

APPROVED PLASTIC METHODOLOGIES

COLLECTION

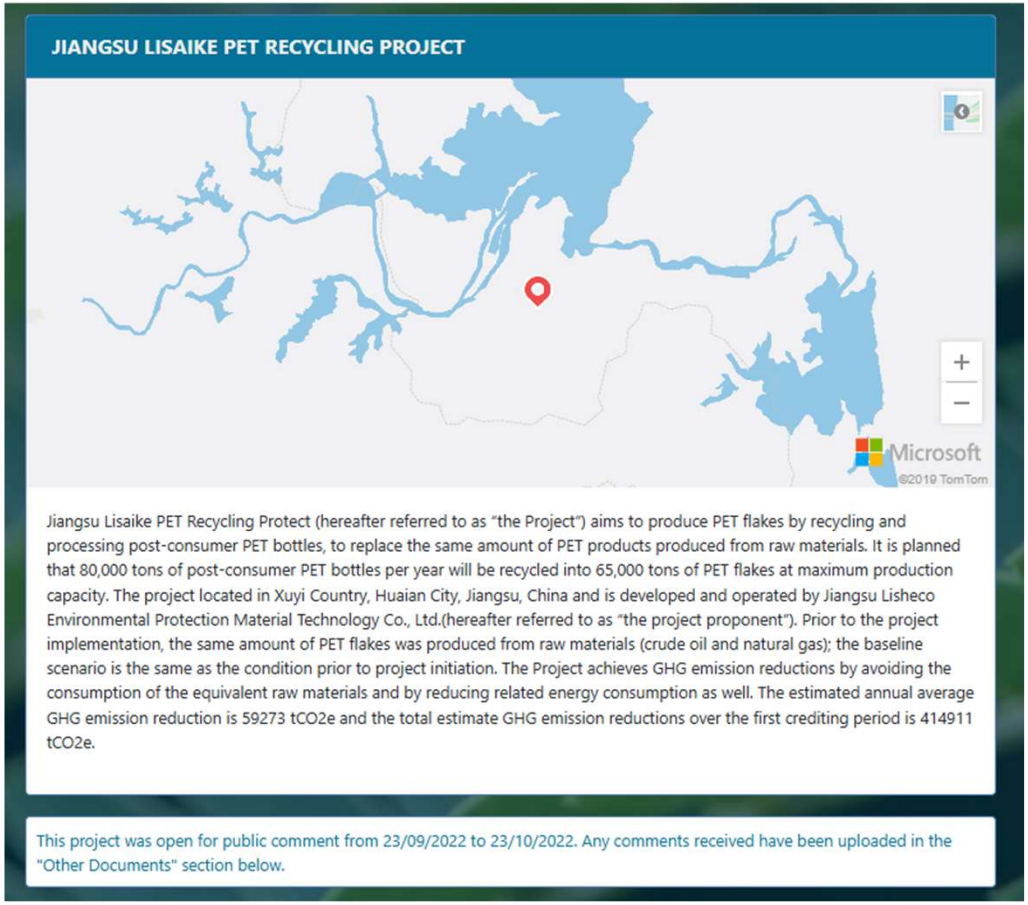
Available Methodologies —

PWRM0001 Plastic Waste Collection Methodology

RECYCLING

Available Methodologies —

PWRM0002 Plastic Waste Recycling Methodology



PROJECT SUMMARY

ID
3603

State/Province
Jiangsu

VCS

Proponent
Jiangsu Lisaike Environmental Protection Material Technology Co., Ltd.
Jiangsu Province, China

VCS Project Status
Registered
View Issuance Records

Estimated Annual Emission Reductions
59277

VCS Project Type
Waste handling and disposal

VCS Methodology
AMS-III.AJ.

VCS Project Validator
CTI Certification Co., Ltd.

Project Registration Date
31/07/2023

Crediting Period Term
1st, 16/03/2021 - 15/03/2028

Summary

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Summary

- **Carbon Credits** are bought from a government entity to comply with a regulatory system that limits carbon emissions
- **Carbon offsets** are voluntary investments in new projects, which are often verified by third parties.
- Both offsets and credits are ways to purchase emissions reductions or carbon sequestration outside of the company's operations
  - Should be used when emissions can no longer be reduced, not as a replacement for reduction activities
- Offset projects tend to be in **forestry, agriculture, and energy.**
- **Recycling is potentially an eligible offset project**, but would need to prove additionality and permanence, meet administrative requirements.
- There is an emerging market for **plastic credits** for plastic waste reduction projects.

Additional Questions?

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