

Carbon Markets

An overview



What are carbon credits?

The term carbon credit is often used when discussing the tradeable component of carbon markets. A carbon credit is a unit generated from a project that either stores or avoids the release of one tonne of carbon dioxide or equivalent gas into the atmosphere. In Australia, the primary carbon credit unit is the Australian Carbon Credit Unit (ACCU) which is a regulated, tradeable financial instrument.

What is a carbon market?

A carbon market refers to a market in which carbon units, representing emissions reductions or removals from the atmosphere, are exchanged within a defined framework. Market-based solutions put an explicit value on these emission reductions.

Carbon markets are created by governments for policy compliance or by governments and business for voluntary reductions of emissions. They place limits on emissions and allow the purchase and/or trading of emissions units or equivalents.

A compliance carbon market places a requirement on industry to reduce emissions (demand side) and allows for the purchase and/or trading of carbon emissions through the creation of carbon credits (supply side). Entities with a requirement to reduce their carbon emissions may do so directly, for example, by installing low emissions technology to reduce their emissions or they may purchase carbon credits that may allow them to offset their emissions. Entities that sell carbon credits may do so, for example, by running projects or implementing new technology that reduces, stores or avoids emissions.

Voluntary markets operate outside of compliance markets, have third-party, non-government verification networks and allow organisations to purchase carbon credits on a voluntary basis with no intended use for compliance purposes. The purchase and/or trading of carbon credits between the demand side of the market and the supply side of the market sets a price for carbon and forms the basis of a carbon market.

Why do we need carbon markets?

To slow down and reverse the impact of climate change, the world must decarbonize, by firstly avoiding and reducing emissions operations and supply chains, and then by offsetting the remaining emissions with carbon credits.

By purchasing carbon credits, an organisation or individual is able to address emissions it is unable to eliminate. For example, the replacement of fossil-fuel driven energy production is one way to significantly reduce emissions, however carbon credits may be used for some emissions that are hard-to-abate.

Carbon markets encourage businesses to find cost-effective ways to invest to reduce their emissions and provide a framework to meet climate targets and challenges at lowest cost, while also providing the opportunity to link with international markets.

The Australian carbon market

The Australian carbon market has two main parts: a compliance market and voluntary market. These markets are managed and regulated under the Emissions Reduction Fund (ERF), which is administered by the Clean Energy Regulator.

Compliance market

Australia's compliance market is governed by a framework known as The Safeguard Mechanism, which requires Australia's highest-emitting facilities to keep their net emissions below an emissions limit, called a 'baseline'.

If the baseline is exceeded, an organisation is required to purchase ACCUs to offset these surplus emissions. This only applies to facilities which emit over 100,000 tonnes of carbon dioxide per year, which currently accounts for 212 facilities.

Due in part to the current flexible emissions baseline design, Safeguard facility emissions have actually risen by 4.3% under the scheme to-date.

Following Labor's victory at the 2022 federal election, the Commonwealth Government intends to reform the Safeguard Mechanism into a 'baseline and credit' system, reducing emissions baselines predicably and gradually over time to support Australia's net zero 2050 target, which is largely supported by industry.

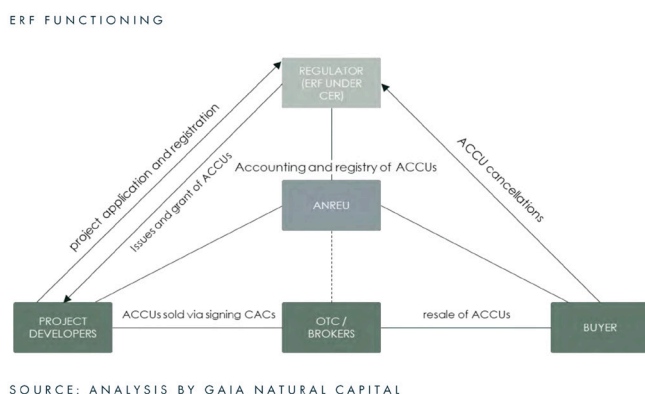
Following a period of industry consultation, legal and/or regulatory changes will take effect from July 2023. Under the enhanced framework, below-baseline credits, or Safeguard Mechanism Credits (SMCs), are proposed to be created where a facility is able to reduce its emissions below its annual emissions baseline.

Voluntary market

ACCUs and other types of carbon offsets can also be voluntarily purchased by Australian entities outside of the compliance market to meet their own emission reduction commitments. This is known as the voluntary carbon market. For example, the Australian Government's

Climate Active Carbon Neutral Standard supports Australian businesses in recognising them as carbon neutral organisations. The Climate Active program supports and guides organisations in managing their emissions, through active reductions and offsetting remaining emissions through the purchase of ACCUs. These ACCUs must be voluntarily surrendered, which means they are cancelled in the Australian National Registry of Emissions Units (ANREU) and cannot be used again.

Figure 1



Integrity in the Australian market

As a result of the growing public spotlight on carbon markets & their role in climate action, we are seeing increased scrutiny on markets and crediting as a decarbonisation tool. The integrity of carbon credits and matters for everyone across the carbon supply chain, from a telecommunications company seeking social license as carbon neutral or climate positive; through to a farmer wanting to understand how to bring in additional revenue streams from carbon abatement.

In response to integrity concerns, Labor has commenced an independent review of the Australian carbon credit system which will review its governance structures as well as specific methodologies. Findings are due to be delivered by the end of 2022.

Some Australian state, territory and local governments have also made commitments to reduce or offset their emissions. Buyers of ACCUs in the voluntary market are often also interested in the environmental, economic and social & cultural co-benefits associated with the carbon offset projects.

International carbon markets

Since the adoption of the Paris Agreement in 2015, a landmark voluntary global agreement to combat climate change, carbon markets are increasingly being implemented around the world. As part of the Paris Agreement, each signatory country has set their own Nationally Determined Contribution or emissions reduction target, and carbon markets are fast becoming one of the primary tools in reducing carbon emissions.

As a result, there are a number of functioning carbon markets around the world at both a regional, national and sub-national level including the EU ETS, New Zealand ETS and Californian Cap and Trade respectively. Each of these markets is created through environmental policy related to climate change that establishes a demand side and a supply side of the market to achieve emission reduction targets.

There are also international schemes and initiatives that support and make up international carbon markets. Initiatives such as the Gold Standard, Verra (previously known as the Verified Carbon Standard) and Clean Development Mechanism (CDM) allow for the creation of international carbon offsets.

Similar to the ERF, these initiatives set the standards and governance requirements for carbon projects that create carbon offsets by reducing, storing or avoiding carbon emissions.

These projects could be undertaken in one country and used by an organisation in another country to help them meet their compliance or voluntary commitments to reduce carbon emissions.

For example, under the Australian Government Climate Active Carbon Neutral Standard scheme in Australia, certain types of carbon offsets created under the Gold Standard, Verra and CDM are eligible to be purchased by Australian organisations and voluntarily surrendered to assist the purchaser in reaching their goal of carbon neutrality under the scheme.

More Information

Carbon Farming Industry Roadmap carbonmarketinstitute.org/roadmap

Potential Futures for Australia's Safeguard Mechanism carbonmarketinstitute.org/app/uploads/2022/06/Potential-futures-for-Australias-Safeguard-Mechanism.pdf

Emissions Reduction Fund [cleanenergyregulator.gov.au/ERF/ Pages/default.aspx](https://cleanenergyregulator.gov.au/ERF/Pages/default.aspx)

Explainer: Integrity in the Australian carbon market carbonmarketinstitute.org/app/uploads/2022/04/Explainer-Integrity-in-Australias-Carbon-Market.pdf