

Carbon Accounting for your Net-Zero Strategy

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Renewable energy certificates (like LGCs and REGOs) record ownership of renewable electricity attributes and support claims about the energy source used, without reducing an organization's actual emissions inventory. Carbon credits (like ACCUs) represent tonnes of CO₂-equivalent abatement and can be purchased and retired to offset emissions within an inventory. These serve different accounting purposes under frameworks like GHG Protocol Scope 2 Guidance. A renewable certificate addresses where energy comes from; a carbon credit addresses whether emissions occurred. Both are tradeable instruments, but they cannot substitute for one another when making environmental claims.

Publication context: This article reflects its publication date. Market prices, program rules, reporting duties and deadlines may have changed. Confirm current official guidance before making a decision.

Carbon Accounting for Environmental Certificates

Your company has announced with great fanfare 50% emissions reductions by 2030. Everyone's very excited!!! Except you, you're the Sustainability and Environment Manager, they just told you and it's your job - how are you going to make it happen?

One of the big pieces of the puzzle is Environmental Certificates and accounting for these under the various Carbon accounting regimes. We take a look at everything you need to know so you are prepared for what's to come.

The Journey to Net Zero

The journey to carbon emission reductions (and eventually neutrality) involves several key steps:

Establish a baseline - audits & emissions accounting for different boundaries - Scope 1,2,3 emissions

Engage stakeholders and set targets

Identify risks and opportunities and the business cases

Build the roadmap and program for energy and carbon performance, which includes: - Energy efficiency, heat recovery and direct emissions reductions projects - Onsite renewables and grid purchased renewables - And lastly use offsets (environmental certificates) for hardest reductions

Implement and Iterate

To learn more about the steps see our " Net-Zero Webinar: Decoding the Buzzwords and Practical Sector-Specific Advice ". For any terms in this article, you may want to reference Northmore Gordon's Glossary

Emissions Offsetting using Environmental Certificates

Offsetting means taking steps to offset existing emissions from the business with abatement (emissions reductions from another source), one way to do this is by purchasing and surrendering Environmental Certificates. There are several distinct types of certificates, and not all can be used for offsetting.

Environment Certificates

Renewable Energy CO₂ Emissions Reductions Electricity & Gas Efficiency

Put simply Environmental Certificates are a mechanism to measure the quantity and then decouple the environmental component (value) from a project or resource. The environmental value can then be traded and used to generate income or to meet other objectives such as offsetting emissions.

For example, a biogas boiler that generates 500 MWh of renewable electricity could register approximately 500 Renewable Energy Certificates (LGCs). The owner can sell the 500 MWh of electricity (via the grid) and separately sell the 500 LGCs (the renewable component) to receive additional income.

The three main types of certificates for Energy and Carbon are as follows:

Renewable Energy Certificates (1 MWh Renewable Energy Generated) - RECs -

LGCs (large generation) are registered after measuring the generation that has occurred.

STCs (small technology) are deemed (calculated) for the expected generation through to 2030 based on the postcode of the installation and system size.

International Certificates TGRs, RECs, are either deemed or measured

Carbon Credits (1 Tonne CO₂-e abated) - e.g. Australian Carbon Credit Units (ACCUs), Verified Emissions Reductions (VER), Certified Emissions Reductions (CER)

Energy Savings Certificates (typically 1 MWh electricity or gas energy saved), aka White Certificates, these are sometimes converted to tonnes of CO₂-e through conversion factors. NSW Energy Saving Certificates, VIC Energy Efficiency Certificates

Putting it all together. Environmental Certificates and Offsets

It's important to understand that by selling the certificate, then the environmental component (renewable energy, carbon abatement, or energy efficiency) can no longer be claimed by the consumer of the physical resource or implementer of the project.

The flipside of this is that an existing project that consumes grid energy or generates emissions can "made" renewable or carbon neutral by purchasing (and surrendering) the equal number of certificates as the amount of energy consumed or the amount of carbon emitted.

Looking at the Accounting for each of the Australian certificate types:

RECs - Large-scale Generation Certificates (LGCs) can be purchased and used to offset grid-based energy used by a business for their sites. This is done by surrendering that quantity of certificates in the REC registry, this takes the certificates out of circulation. For example, a business that consumes 500 MWh from the grid and does not have the space to install Solar PV can simply buy 500 LGCs each year and surrender them and can now claim to be using renewable energy.

RECs - Small-scale Technology Certificates (STCs) , unlike LGCs, under the Climate Active Standard, STCs can now be sold to assist with the system cost and the energy consumer can still claim the renewable energy. STCs cannot be used for offsetting energy bought from the grid.

Australian Carbon Credit Units (ACCUs) and other international credits (recognized under different standards) can be purchased and surrendered to offset emissions. e.g. If the business emits 500 tonnes of CO₂-e p.a. they could purchase 500 ACCUs per year and surrender them to claim to be

carbon neutral (e.g. for Scope 1 emissions)

Energy Saving Certificates (ESCs, VEECS) are neither renewable energy nor carbon credits, hence they cannot be used to offset energy consumed from the grid nor emissions from operations. The upside of this is that buying and selling energy saving certificates and generating income towards the cost of the project does NOT currently undermine the emissions reductions which are a side benefit of the energy efficiency project. Some Accreditation agencies are reviewing this at present.

Voluntarily surrendering a certificate from a company's account in a government registry means that the certificate has been taken out of circulation and this is done to claim the environmental value and hence reduce emissions by offsetting.

Energy Saving Certificates (White Certificates)?

Energy efficiency projects that generate energy saving certificates, these certificates are treated as a financial incentive for typically awarding 10 years of savings to help overcome CAPEX barriers and to reduce demands from the network. This is particularly beneficially for VEECs generated in Victorian by energy savings activities from the grid reductions of renewable energy generation. EG Solar VEECs , and VEECS from Biomass, Biogas, and Cogeneration. In all these cases the business has reduced their energy consumed and can sell the environmental certificates and sell them whilst still achieving the carbon reduction or renewable energy benefits. Some agencies are reviewing this space, so make sure you contact Northmore Gordon to learn the latest.

Standards for Carbon Neutrality

To legitimately claim to achieve a certain level of carbon reductions, a business needs to be certified against one of the recognized standards. In Australia these include:

Climate Active Carbon Neutral Standard (formerly the National Carbon Offset Standard, NCOS) . Climate Active is an ongoing partnership between the Australian Government and Australian businesses to drive voluntary climate action. The brand represents Australia's collective effort to measure, reduce, and offset carbon emissions to lessen our negative impact on the environment

Science Based Targets Initiative (SBTi) Is an international initiative that drives ambitious climate action in the private sector by enabling companies to set science-based emissions reduction targets. SBTi's Corporate Net-Zero Standard is the world's first framework for corporate net-zero target setting in line with climate science. SBTi is different from Climate Active in that it does not allow offsetting in the same way.

Corporate Emissions Reduction Transparency (CERT) In February 2021 the Australian Clean Energy Regulator (CER) announced the CERT initiative which is underpinned by the National Greenhouse and Energy Reporting (NGER) scheme and available for large companies to demonstrate their action on climate change. Going live in January 2022 this new scheme is in a pilot phase and provides a supplementary reporting scheme to allow NGER reporting companies to voluntarily disclose their purchases of offset units and supplies of renewable energy. The CERT guidelines specify which Environmental Certificates are eligible units for reducing Scope 1 and 2 emissions and in what circumstances. NG can help navigate this new opportunity.

Talk to Northmore Gordon today about your journey to carbon neutrality.

Scheme and certificate context

Before using a certificate or grant figure, confirm the current scheme method, eligible activity, effective date, evidence requirements, price date and registration or application process.

Related guidance

Certificate services

Government schemes

Contact us

Read the original article for the source publication and its full context.

What is the primary difference between how renewable energy certificates and carbon credits account for emissions reductions?

Renewable energy certificates (like LGCs and REGOs) record ownership of renewable electricity attributes and support claims about the energy source used, without reducing an organization's actual emissions inventory. Carbon credits (like ACCUs) represent tonnes of CO₂-equivalent abatement and can be purchased and retired to offset emissions within an inventory. These serve different accounting purposes under frameworks like GHG Protocol Scope 2 Guidance. A renewable certificate addresses where energy comes from; a carbon credit addresses whether emissions occurred. Both are tradeable instruments, but they cannot substitute for one another when making environmental claims.

Why should energy savings certificates (ESCs and VEECs) not be described as offsetting grid emissions?

Energy savings certificates represent electricity or gas saved through efficiency improvements—not renewable generation or carbon abatement. They belong to their own programme and cannot be used in Scope 2 accounting for purchased electricity or to claim emissions reductions from grid consumption. While selling ESCs provides revenue, the underlying efficiency benefit remains separate from any emissions offset claim. Confusing ESCs with renewable or carbon instruments creates incorrect accounting boundaries. We advise clients to keep energy savings, renewable attributes, and carbon offsets as distinct benefit lines in investment cases and transition plans.

What is the practical consequence of selling versus surrendering an environmental certificate?

Selling a certificate transfers ownership of its environmental attribute to another party, who can then make the associated claim (renewable energy, emissions reduction, or energy savings). Once sold, the original project owner loses the right to claim that attribute. Surrendering a certificate in a government registry retires it permanently, preventing any further use or claim. For offsetting, an organization must purchase certificates and surrender them to remove them from circulation and support an emissions-reduction claim. The choice between selling and surrendering determines who benefits from the environmental attribute and affects the organization's reported emissions footprint.

How should carbon accounting boundaries be documented to support environmental certificate claims?

A boundary statement should identify the legal entities and activities included, the reporting period, the applicable accounting framework, data sources, and any exclusions. Separate statements are needed for different claim types: 'our facility consumed less gas' requires different evidence from 'we acquired renewable electricity attributes.' Carbon accounting boundaries must distinguish between physical energy reductions, purchased renewable attributes, and purchased carbon offsets. We recommend maintaining a claim file with exact wording, supporting calculations, source documents, assumptions, and approver details. This prevents conflating overlapping outcomes and ensures each environmental claim is traceable to its supporting evidence and accounting methodology.

What does it mean when an ACCU is issued versus registered versus forecast?

An ACCU represents one tonne of CO₂-equivalent stored or avoided under an eligible method. Registration means the project has been accepted into the ACCU Scheme under its conditions. Issuance means ACCUs have actually been created and recorded in the registry following monitoring and reporting. A forecast or estimate is a projection of future possible issuance, not a real unit. These stages are distinct: a registered project does not guarantee issuance; an estimate should never be

labelled as an issued unit. Before relying on ACCU revenue, establish the proposed method, real project history, monitoring plan, and expected administrative obligations. We recommend auditable commercial models showing projected abatement, the route from estimate to possible credit claim, and assumed issuance timing.

Can an organization claim to be carbon-neutral by purchasing and retiring environmental certificates if its emissions inventory has not decreased?

Yes, under carbon neutrality standards like Climate Active, an organization can purchase and retire certificates equivalent to its emissions to make a carbon-neutral claim, even without physical reductions. However, this approach differs from science-based emissions targets (like SBTi), which prioritize actual reduction over offsetting. Purchasing offsets does not reduce the organization's reported emissions inventory; it represents a contractual claim separate from physical performance. We advise separating transition workplans into physical reductions, purchased renewable attributes, and carbon offsets, and applying the correct reporting framework for each. The choice of standard—Climate Active versus SBTi—determines whether offsetting is acceptable for the intended claim.

What should a project team verify before assuming a renewable energy certificate was validly issued?

Verify the scheme, registry, project registration, method version, monitoring period, and actual issuance record. A brand's case-study claim is a starting point for verification, not a substitute for checking the registry. For historical projects, confirm registration details, crediting period, and issued-unit records. Renewable electricity attributes must be matched to their generation period and the entity's entitlement. Environmental-attribute due diligence should occur before procurement and retirement. We provide this assessment as part of carbon advisory services and instrument-selection support, helping clients confirm integrity and validity of purchased attributes before retiring them for emissions reduction or renewable claims.

How do Large-scale Generation Certificates (LGCs) and Small-scale Technology Certificates (STCs) differ in their use for emissions claims?

LGCs are registered after measuring actual electricity generation and can be surrendered to offset grid-based energy use, allowing a business to claim renewable energy consumption. STCs are deemed (calculated) based on expected generation through to 2030, determined by postcode and system size; they cannot be used to offset grid energy purchases. Under Climate Active, STCs can be sold for income while the energy consumer still claims the renewable attribute, but this accounting treatment is under review by some accreditation bodies. CER's eligibility guidance distinguishes technology, capacity, and output requirements for each. Choosing between LGC and STC pathways requires understanding the facility's ability to measure actual generation and the intended claim.

Why should an investment case for an environmental certificate project show certificate quantity and price assumptions separately?

Certificate quantity depends on activity eligibility, measured evidence, and scheme methodology. Price depends on market conditions at the time of sale and is independent of quantity. An optimistic price does not resolve uncertainty about method eligibility or measured outcomes. We recommend showing the base case without unconfirmed certificate proceeds, then an incentive scenario with conservative quantity and price assumptions. This prevents overstating project value and preserves management's ability to approve the project's operating merits if certificate support is delayed, reduced, or unavailable. Combining uncertain quantity with uncertain price creates compounded risk that a transparent business case should make visible.

What information should be prepared before submitting a project for environmental certificate assessment?

Prepare the project location, equipment specifications, existing and proposed operating conditions, timeline, and ownership arrangements. Identify any prior installation, nomination, certificate claim, grant, or assignment of environmental attributes. Document which data are measured versus estimated, and prepare an evidence schedule identifying what must be recorded before works, during installation, and after commissioning. Establish who gathers evidence, who verifies it, and who can make the relevant application. We recommend submitting a short project brief with state or country, project stage, and intended outcome. These steps ensure eligibility assessment is based on actual project facts rather than generic assumptions, and prevent later discovery that requirements cannot be met due to missing baseline data or unclear ownership.