

Carbon credit income from FOGO

NSW councils may be able to use Australian carbon credits as an income source to help roll out new FOGO services.

Australian carbon credit units

The Clean Energy Regulator (CER), through the Emissions Reduction Fund (ERF) scheme, provides incentives for organisations and individuals to adopt new practices and technologies to reduce their emissions. Eligible emission reductions can earn Australian carbon credit units (ACCUs). Reductions are measured using specific methods.

The ERF **source-separated organic waste (SSOW) method** includes separating food and garden organics from the mixed waste stream at source so that it can be diverted from landfill. The organic material must be separated into dedicated bins at the point of generation – for example, it must go into a FOGO bin at each house.

New food and garden organics services meeting the requirements of the SSOW method can apply to earn carbon credits.

Emissions reductions (also called **abatement**) are calculated as the difference between baseline emissions and emissions from processing the new source-separated organic material. Abatement is measured in tonnes of carbon dioxide equivalent

(tCO₂-e). One tonne of carbon dioxide equivalent creates one Australian carbon credit unit (1tCO₂-e = 1 ACCU).

Baseline emissions are the methane emissions that the organic waste would have created in landfill. The SSOW method includes discount factors and assumptions based on average NSW landfills, so councils don't have to measure their landfill emissions. Here are examples of waste service changes that will create ACCUs:

- **No service to FOGO service** – every tonne of FOGO diverted from landfill will create approximately 0.44 ACCUs per crediting year. Only the food component of FOGO is eligible. Under certain assumptions about the food component in FOGO bins,¹ for every 1,000 households the change from no service to FOGO service is likely to create 280 ACCUs per crediting year.
- **Garden organics (GO) service to FOGO service** – every tonne of food waste diverted from landfill will create approximately 0.91 ACCUs per crediting year. For every 1,000 households this change in service is likely to create 70 ACCUs per crediting year.

Projects can earn credits for the first seven years (the **crediting period**). Each year's credits are issued in equal instalments over the following seven years – for example, credits created in 2023 are issued in 2024–30, in an equal amount each year. An example is shown in Figure 1.

This fact sheet focuses on FOGO and composting. However, the SSOW method includes other source-separated organics and treatment options, such as food donation and the anaerobic digestion of food waste.

¹ The assumptions are that the average food waste in a NSW FOGO bin is 1.45kg/hh/wk and the average GO (garden organics) in a NSW FOGO bin is 10.81 kg/hh/wk.

Source: *Analysis of NSW Kerbside Green Lid Bin Audit Data Report* (Rawtec, March 2020)

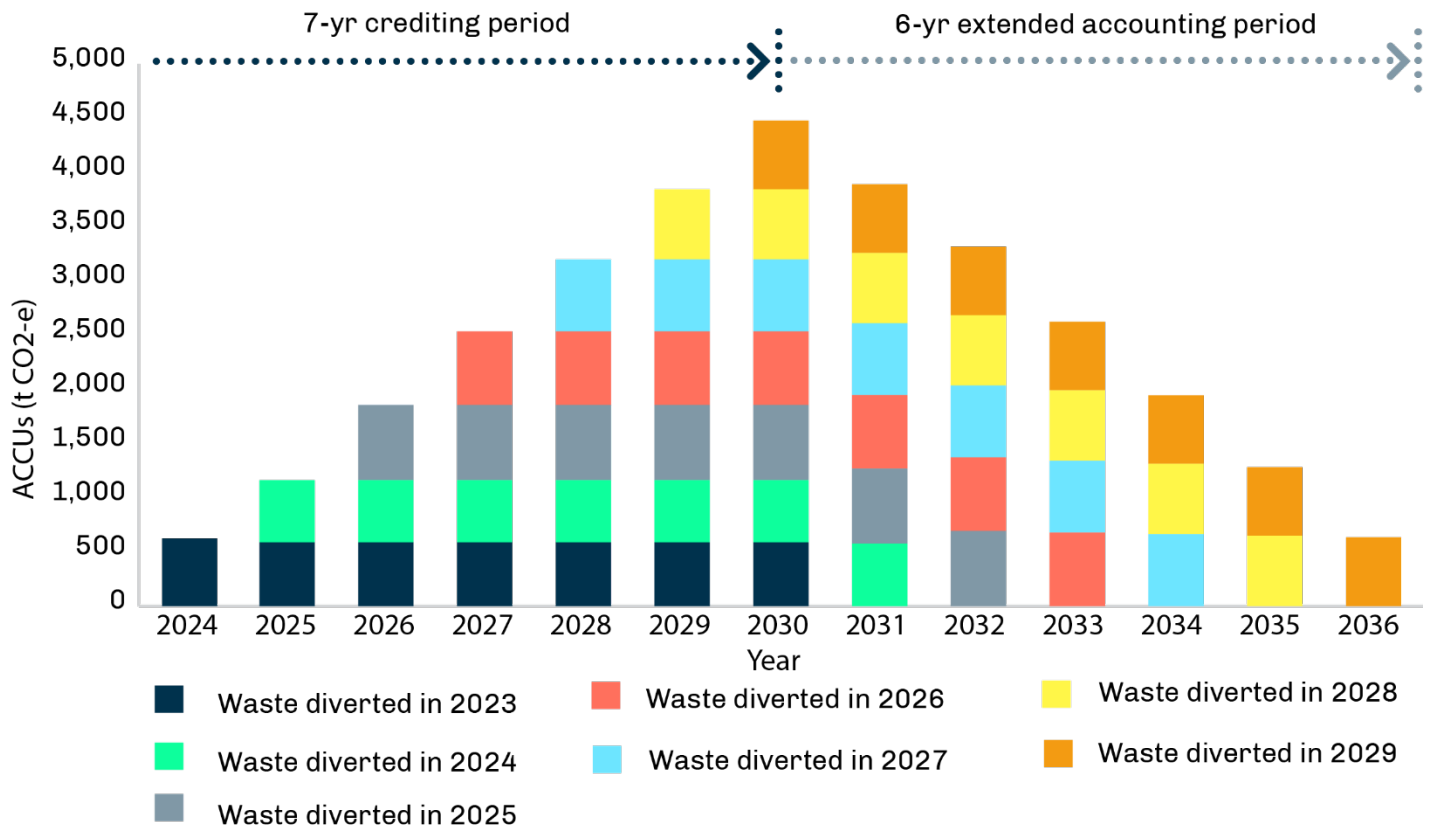


Figure 1 Australian carbon credit units (ACCUs) created in each year are issued in equal tranches over the following seven years. For example, credits created in 2023 are issued in 2024–30, an equal amount each year.

Carbon Credits (Carbon Farming Initiative – Source Separated Organic Waste) Methodology Determination 2016

Some kinds of projects are not eligible as SSOW projects.

- Projects are not eligible if registered after a financial investment decision is made – for example after committing expenditure to buy organics bins or after signing waste contracts for collection.
- Projects are not eligible for registration once they are required by law (in NSW, post 2030).
- Existing organics diversion from landfill (e.g. existing garden-only collections) is not eligible. You'll need to show that the diversion from landfill is a new initiative by providing records of waste being sent to landfill for the 24 months prior to the start of the project (e.g. waste contracts, invoices, weighbridge data).
- Organic waste going to alternative waste treatment (AWT) facilities and then to landfill is not eligible as a SSOW project.
- Diversion from households not built at the time of project registration is not eligible.

Monetising carbon credit units

The CER is the main buyer of ACCUs in the Australian carbon market through **carbon abatement contracts (CAC)** awarded to ERF projects during ERF **reverse auctions**. CACs can be fixed volume and fixed price, or 'optional delivery', which allows a council to secure a floor ACCU price with the CER or sell in the secondary market.

The secondary market is based on supply and demand, and can therefore be subject to price fluctuations. Buyers in the secondary market may buy ACCUs to fulfil compliance requirements or voluntary targets.

As an example of prices, the average CAC price was \$16.94 per ACCU as of Oct 2021, and the secondary market price was \$51.00 per ACCU as of 31 December 2021.

Project steps – from registration to selling ACCUs

1. Identify a FOGO service opportunity.
2. Assess eligibility as a SSOW project including ensuring the project has not made a financial investment decision
3. Register the project under the ERF by:
 - a. gathering required documents, including evidence that the organic waste is going to landfill, proof of legal right to apply, etc.
 - b. preparing a description of the proposed FOGO service and the proposed composting facility
 - c. describing any likely future collections changes (e.g., if a staged rollout)

The CER takes up to 90 days to process registration applications.

There is no penalty if you decide to not go ahead with FOGO after the project is registered.

4. Wait up to 90 days for the CER to register the project then begin the new FOGO collections.
5. Record waste collection data:
 - a. type of service
 - b. number of households
 - c. tonnes (using NMI approved scales e.g., at the composting facility)
 - d. ensure the composting facility gathers operating data including tonnes in and out, fuel and electricity consumption.
6. Report to the CER on an ongoing basis (preferably yearly). Project reports will need independent verification, typically three times during a 7-year crediting period. The CER may take up to 90 days to issue the first portion of the ACCUs after receiving the first report.
7. Receive ACCUs and monetise or retire them.

You will receive a seventh of the ACCUs per report year. This will continue until you have received the total number.

You can monetise ACCUs by:

- selling them to the Federal Government via a carbon abatement contract (if you do this, you can also make an emissions reduction claim)
- selling them on the secondary market
- retiring them and claiming emissions reductions.

Example: a group of NSW councils changing from GO to FOGO

Background

A group of three NSW councils with a total of 60,000 households is interested in going from GO (garden organics) to FOGO service in July 2023.

The council group has received a tender for waste collection and processing that has various options, including GO and FOGO. Before committing to the tender, the council group registers an aggregated SSOW project so that it can participate in the ERF. (The registration can be revoked if the project does not go ahead.)

After the CER declares the project has been registered, the councils sign contracts for FOGO collection and processing.

Project details

The council group sets up a system for data collection. This streamlines annual reporting to the CER and makes it easy to audit.

Householders separate their food and garden waste and put it in their new weekly FOGO bin. The FOGO is then taken to a composting facility.

The council group participates in the ERF auction and secures an optional delivery carbon abatement contract. This will give the group an ACCU floor price and secure multi-year revenue from selling ACCUs. The optional delivery contract also allows the group to negotiate better ACCU prices in the secondary market.

The amount of food being collected is determined through a council bin audit or the SSOW method's default figures for FOGO composition. Only the food waste fraction is eligible for claiming ACCUs as a garden organics service was already in place.

The council group works with waste transporters and processors to ensure required data is available for reporting. It also works with householders to maximise the amount of food and garden waste transferred from the red bin into the FOGO bin and to minimise contamination. By 2026, the project's third year, the percentage of food waste going into the FOGO bin has risen from 44% to 54% so the amount of food waste in the FOGO bin is 1.79 kg/hh/wk rather than 1.45kg/hh/wk. The councils do at least three audits during the 7-year crediting period to measure and report FOGO composition.

Outcomes

In June 2024, one year after rollout of the new FOGO service, the council group prepares the project's first offsets report. In July 2024 the report is audited by an independent third-party auditor, who establishes reasonable assurance that the abatement achieved and reported is accurate. The council group then lodges the report with the CER.

By October 2024 the CER accepts the report and issues a seventh of the relevant ACCUs to the councils. The councils choose to sell the ACCUs on the secondary market because it offers better ACCU prices than their optional carbon contract. The councils realise their first revenue from the SSOW project.

The councils repeat the project workflow for the 7-year crediting period.

After three years, households are using the FOGO bin better and the number of ACCUs rises (from 70 ACCUs/1,000hh per crediting year to 84 ACCUs/1,000hh per crediting year). The last offsets report for the project is lodged with the CER in July 2030.

For the next six years the council group claims accrued abatement on an annual basis. It makes its last accruals claim in 2036.

The project creates a total of 31,343 ACCUs. At an assumed average sale price of \$51 per ACCU this results in \$1.6 million of project revenue.

(Calculation of the total number of ACCUs: (60,000hh x [(0.07 ACCUs x 2yrs) + (0.084 ACCUs x 5yrs)] x SSOW method discount factors))

If you want to know more about ACCUs and how to register a project, contact us at organics.recycling@epa.nsw.gov.au

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