

Participant Guide GreenPower Renewable Gas Certification

Version 4.0



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1. Purpose of this guide

This Participant Guide provides information about Producer and Trader eligibility requirements, the application and assessment process, and supporting documentation required for participation in the GreenPower Renewable Gas Certification (the Certification).

The Certification provides independent verification of the attributes of renewable gas. The Certification aims to help establish a voluntary market for renewable gases across Australia, including biogas, biomethane, renewable hydrogen and e-methane injected into a gas network or directly supplied to a consumer behind the meter (BTM) or by road, ship or rail. By creating and tracking the ownership of Renewable Gas Guarantees of Origin (RGGOs), the (the Certification) enables commercial and industrial gas customers to match or displace their gas use with renewable gas.

The Certification Rules have been developed which set out the terms and conditions of accreditation. The Rules are available for download on the GreenPower website.

Three guidelines are available which complement the Certification Rules, setting out the practical steps and processes. These include this Participant Guide as well as:

- a Registry User Guide for Producers that provides instructions for renewable gas producers on how to access and use the online registry platform. This includes how to log in, make a renewable gas production declaration, create RGGOs, and how to transfer the RGGOs to Trader accounts.
- a Registry User Guide for Traders that provides instructions for RGGO traders on how to access and use the online registry platform. This includes how to log in, how to transfer or trade RGGOs, how to retire RGGOs on behalf of end-use customers, and how to generate retirement statements.

Please contact the GreenPower Program at greenpower.gas@dpie.nsw.gov.au if you would like clarification on any part of these documents or have suggestions for improvements.

2. Definitions

For definitions, please refer to the Definitions section of the Certification Rules.

3. How to apply to become a participant

A Participant is a renewable gas Producer or certificate Trader registered in the Certification, as defined in the Certification Rules. To apply to become a Participant, applicants must:

- Complete a Trader or Producer application form available on the GreenPower website.
- Ensure all the required documentation listed in the application form where applicable is attached to your application.
- Submit the form and the required documents to the GreenPower Program Manager (NSW DCCEEW) via email to greenpower.gas@dpie.nsw.gov.au.

4. Participation fees

The National GreenPower Accreditation Program, including its Renewable Gas Certification, operates on a non-profit cost-recovery basis.

Participants pay fees to the GreenPower Program Manager a contribution to the cost of administering the Certification. Fees include initial accreditation assessment fees, certificate registry fees and annual fees. The fees are published on the GreenPower website and are reviewed and amended by the Program Manager.

5. How are applications assessed?

The GreenPower Program Manager assesses applications and supporting documents against the eligibility criteria in the Certification Rules. Applicants will receive the outcome of their application within around one month of submitting the application unless additional information is required.

An extended assessment timeframe may be required where projects propose new use new technologies or fuels that require changes to the Certification's standard operating procedures.

Once eligibility is confirmed, successful applicants are required to execute a standard form Participant Agreement with NSW DCCEE. Once the Participation Agreement is executed, the Participant will be provided with login details to access the Certification's online certificate registry. Guidance on how to use the registry is available in the Registry User Guides for Producers and Traders found on the GreenPower website.

6. Producer application supporting documentation

Prospective Participants will need to review the eligibility criteria listed in Appendix 1 of the Certification Rules to understand if a project and the applicant are eligible to participate in the Certification. The following sections explain the application's supporting documentation that the GreenPower Program Manager needs to assess.

a. Producer requirements

Applicants for renewable gas projects under the Certification must:

- provide a letter stating ownership, operate or control of the renewable gas project. The letter must be on a letterhead showing the Australian Company Number (ACN) and Australian Business Number (ABN) details of the applicant's company.
- complete the fit and proper person (FPP) declaration that is part of the application form and include a national police check in your supporting documents.

b. Renewable gas and feedstock requirements

To be eligible, a renewable gas project must meet the conditions listed below:

- The feedstock used to produce renewable gas must meet the Certification requirements (see feedstock requirements in the Rules). Feedstock must be specified in a Greenhouse Gas (GHG) Accounting Report that needs to be submitted as part of the application for participation (see Appendix A of this Participant Guide).
- The project must use renewable energy sources listed in Section 17 of [the Renewable Energy \(Electricity\) Act 2000 \(Cth\)](#). The energy sources must be outlined in the GHG Accounting Report.
- The project may only use energy crops as a feedstock where the Producer demonstrates to the satisfaction of the GreenPower Program Manager that this is necessary to ensure feedstock certainty or consistency. Where this occurs, energy crops must not make up more than 10% of the total feedstock by mass on wet weight (as received) over the course of a reporting period.
- An exemption from this requirement may be considered by the GreenPower Program Manager in cases where the energy crops are cultivated as cover crops or on marginal land, defined below:
 - Cover crop: A single species or mix of species of grasses, forbs or legumes cultivated to enhance soil health, deliver other ecosystem services, and which is not marketable as a food crop.
 - Marginal land: Agricultural areas characterised by resource degradation, constrained agriculture potential and low productivity of agricultural resources attributable to biophysical constraints such as rugged terrain, extreme weather conditions, poor soil quality, salinity, contaminationⁱ, drought, erratic rainfall and or other factors that present significant constraints for intensive agriculture, or
 - favourable agricultural areas, for example areas not constrained by biophysical factors, with limited access to rural infrastructure and agricultural markets where cost-effective production is likely unfeasible without additional support under given conditions.
- A project assessment template will be provided by GreenPower to Producers for evaluation purposes. An exemption will only be approved to projects that can demonstrate that negative environmental, social and economic impacts are minimised or avoided.
- The GHG emissions intensity resulting from renewable gas production must be lower than the emissions intensity for equivalent fossil natural gas as specified in the most recent update to National Greenhouse Accounts (NGA) Factors for the location (state or territory) where the renewable gas is produced. The project's GHG Accounting Report must state the GHG emissions intensity of the renewable gas based on the accounting guide provided in Appendix A.
- For network injection projects, the quality of produced renewable gas must meet AS 4564 gas quality standards, and any other requirements set by the relevant gas network operator. To demonstrate this, please provide an approval letter from the gas distribution network operator that the injection point is approved.
- For behind-the-meter (BTM) projects, the gas must meet the quality requirements of the end-user of the renewable gas. Your application must outline the end-user quality requirements and show that the renewable gas meets the requirements.

c. Electricity requirements

Electricity used by the project to produce renewable gas must be matched with renewable electricity sources. Applicants must provide a plan for the use of one of the following options, or a combination of, as the project's source of electricity. The renewable electricity use must be evidenced as part of each gas registration.

The eligible electricity sources and renewable energy certificates include:

- on-site BTM Renewable Electricity Sources that do not receive Large-scale Generation Certificates (LGCs). Applicants need to include details about the electricity source and include in the GHG Accounting Report.
- purchase of accredited GreenPower Products. Applicants need to include details of the retail plan or a copy of your electricity purchase contract.
- matching the project's electricity use with GreenPower LGCs purchased from a GreenPower Provider or acquired and retired directly by the Producer through GreenPower Corporate Direct. The number of GreenPower LGCs required is calculated as follows:
 - Renewable Gas Projects that are exempt from the LRET:
$$100\% \times \text{total electricity consumption (in MWh)} \times 1 \text{ LGC/MWh}$$
 - Other Renewable Gas Project:
$$(100\% - \text{RPP} - \text{JRPP}) \times \text{total electricity consumption (in MWh)} \times 1 \text{ LGC/MWh}$$

Where:

 - RPP is the Renewable Power Percentage set for the relevant Reporting Period by the Clean Energy Regulator.
 - JRPP is any applicable Jurisdictional Renewable Power Percentage set for the relevant Reporting Period in the National Greenhouse Accounts in respect of the jurisdiction in which the Renewable Gas Project is located.
- include your plan for the purchase of GreenPower LGCs.

d. Water requirements

Renewable gas projects must use water in a responsible manner. Details of the water treatment process, including the emissions, must be included in the GHG Accounting Report.

Depending on the source of water, applicants must provide the following information:

- If the used water is recycled, desalinated, or treated at the renewable gas production facility then emissions will be part of the site's Scope 1 and Scope 2 emissions.
- If desalinated or recycled water is purchased, you must provide a contract or other evidence that the water is from a recycled or desalinated source, and the associated emissions.
- If potable water is used, you must include in your application the information listed below to demonstrate responsible water use:
 - volume of water used (L/GJ of renewable gas produced)
 - location of the water source and if the transport of water is required
 - information about the local availability and scarcity of the water source, including consideration of the impact of the project's water use on competing uses
 - any specific state or territory regulation affecting water use
 - any social or community license concerns and engagement outcomes associated with the water use

- viable plans for the reduction of potable water use in the near future for example plans for recycling the water or hydrolyser cooling technologies in hydrogen projects.

e. Environment, community, cultural and safety requirements

Negative environmental, community, cultural and safety impacts of projects must be avoided or minimised where possible. The GreenPower Program Manager retains discretion to reject an application due to actual or perceived adverse impacts.

The following documents need to be provided to demonstrate that a renewable gas project meets the environmental, community, cultural and safety requirements to the satisfaction of the GreenPower Program Manager:

- Evidence of relevant statutory and licensing requirements, including environmental, cultural and planning approvals have been met.
- A report detailing potential community and cultural impacts and concerns, mitigation measures, and benefit sharing, including but not limited to Aboriginal and Torres Strait Islander communities.
- The report should include any community and local stakeholder consultation with stakeholders such as residents, interest groups, Aboriginal and Torres Strait Islander communities, and environmental advocacy groups.
- A copy of the Environmental Impact Statement (EIS) undertaken for the project as part of relevant planning requirements that addresses key environmental issues including potential impacts of the project and proposed mitigation measures, and how the project meets the principles of Ecological Sustainable Development (ESD).
- Where applicable, a Major Hazard Facility (MHF) license or equivalent license from the jurisdiction where the project is located, and specifically for hydrogen projects.

f. Other requirements

The following requirements apply to projects that create displacement ACCUs under the Australian Carbon Credit Units Scheme or projects that produce hydrogen through steam methane reforming (SMR):

- If the project has received ACCUs from carbon abatement resulting from displacing or avoiding the use of fossil natural gas, known as 'displacement abatement', these 'displacement ACCUs' represent the same renewable energy benefit as the RGGOs.
- To avoid double counting, the Certification Rules provide two options (Section 7.5 of the Certification Rules):
 1. 'stapling' of the ACCUs to the RGGOs, so that they are traded and retired together, and the renewable energy benefit stays with the same end-user, or
 2. voluntary retirement of the 'displacement ACCUs' before the RGGOs are created.

Applications must outline which option applies and how applicants will ensure the process is auditable. This plan must be in line with the options provided in Section 7.5 of the Certification Rules.

- Applicants that receive RGGOs for produced biogas, biomethane or e-methane and will use the biogas, biomethane or e-methane to produce renewable hydrogen, the following options apply:
 1. not creating certificates for the biogas, biomethane or e-methane, this may include ACCUs or other certificates, and creating RGGOs for renewable

hydrogen. No retirement certificates are needed, however, you will be required to provide evidence of biogas, biomethane or e-methane production as part of each hydrogen gas registration.

2. creating RGGOs or other certificates for the biogas, biomethane or e-methane which must be voluntarily retired prior to RGGOs being created for the renewable hydrogen.

Applications must outline which option applies and how applicants will ensure the process is auditable. This plan must be in line with the options provided in Section 7.6 of the Certification Rules.

- If the project produces hydrogen through SMR of fossil natural gas, the amount of consumed gas for the declaration period must be matched with RGGOs related to biogas, biomethane or e-methane projects connected to the same distribution or transmission gas network. Applicants must include the plan to source or purchase the required RGGOs.
- Producers must ensure that any certificates for example equivalent ACCUs or Product Guarantee of Origin (PGOs) issued for biogas or biomethane are not double-counted.

7. Supporting documentation needed for Trader applications

Prospective certificate Traders will need to review the eligibility criteria listed in Appendix 2 of the Certification Rules to understand if they are eligible to participate in the Certification.

To demonstrate eligibility applicants must:

- Provide a letter outlining the ABN or and ACN details of the applicants business. The letter must be on a letterhead showing the Australian Company Number (ACN) and Australian Business Number (ABN) details of the applicant's company.
- Complete the fit and proper person (FPP) declaration that is part of the application form and include a national police check in your supporting documents.

Government-owned corporations wishing to participate as a Trader are not required to provide the above documents.

Producers can also register as a Trader. A separate user account is required as Traders have access to different functions in the certificate registry platform.

Appendix A - GHG Accounting Report

GHG Accounting Report is used by the GreenPower Program Manager to assess eligibility and determine the emissions intensity of the produced renewable gas. Please provide a GHG Accounting Report as part of your application.

The emissions intensity of renewable gas must be lower than the equivalent emissions intensity for fossil natural gas. The project's emissions will be compared against the published fossil natural gas emission factors (EFs) in the latest Australian National Greenhouse Accounts (NGA) Factors for the location, state or territory, where the renewable gas is produced.

Content of GHG Accounting Report

Applicants must provide a GHG Accounting report that is either prepared or critically reviewed by a third-party practitioner.

The report must include, but is not limited to, the following information:

- overview of the project
- functional unit and reference system
- system boundary
- inventory analysis of inputs and outputs
- cut off criteria and exclusions
- temporal aspects
- assumptions
- GHG calculation and reporting.

Overview of the project

The overview of the project must include, but is not limited to:

- the project design including a schematic flowchart
- production capacity
- production site location
- commissioning date
- project ownership or partnership.

Functional unit and reference system

The functional unit is a quantified description of the function of produced renewable gas that serves as the basis for emission calculations. For the Certification, the functional unit must be the supply of 1 GJ of renewable gas, measured based on higher heating values, to the gas network or to the end-user of BTM renewable gas projects.

The reference system is fossil natural gas. The GHG Accounting Report should cover the emissions calculations associated with renewable gas production which then will be compared against the NGA factors for fossil natural gas.

System boundary

The system boundary is the description of the activities within the renewable gas life cycle phases that are both included and excluded from emissions calculations. For the Certification, the system boundary for renewable gas projects must be cradle-to-gate. Cradle-to-gate assesses the partial product life cycle

starting from materials acquisition and pre-processing followed by collection and transport of materials, then all the steps during the production of gas to the point that gas is injected into the network or transferred to the end-user directly or by other means than network pipeline. The injection or delivery point to the end-user is defined as the 'gate' and endpoint of the system boundary.

The following steps must be included in this system boundary:

- Production or processing of feedstock - emissions from the extraction, processing, harvesting, or cultivation of raw materials e.g., harvesting of crop residue, collection of food waste or desalination of water.
- Collection and transport of feedstock to the production site - this applies to the collection and transport from the feedstock origin to the production site for the purpose of renewable gas production.
- Production processes and transport of goods within the site - this applies to all processes related to the final renewable gas product and are done within the primary site. Examples of these processes are:
 - anaerobic digestion of waste
 - transport of biogas to upgrading unit
 - upgrading of biogas to biomethane
 - production of renewable electricity on site
 - treating water (recycling or desalination) if done within the primary site
 - heating or cooling processes including electrolyser cooling
 - cleaning processes
 - gas scrubbing, treatment, or purifying processes.
- Storage of renewable gas - this applies to any form of short or long-term storage of gas including buffer storage.
- Renewable gas metering - any process related to metering and quality monitoring of the gas done at custody transfer stations and/or within the production site.

Inventory analysis of inputs and outputs

The inventory analysis is a compilation of data on energy use, material flows, and emissions to the environment in all phases of the life cycle within the system boundary. All inputs and outputs in the form of elementary flows, to and from the environment for all the processes involved in the production of renewable gas, must be included.

Cut-off criteria and exclusions

Cut-off criteria state the amount of environmental significance associated with a product system, to be excluded from GHG Accounting Report. If the level of emissions from an individual material or energy flow is found to be insignificant, these may be excluded from the emissions calculations but must be reported as data exclusions. For the Certification, the emissions cut-off for individual flows is set at 1% of total emissions and the cumulative emissions of the excluded processes are set at less than 5% of total emissions.

Temporal aspects

The GHG Accounting Report should be prepared based on the status or proposed design of the project

at the time of application. This means that the effects of events that occur over time, such as technology advancements or plant capacity changes, will not be required to be assessed. Future changes in the project must be communicated with the GreenPower Program Manager and a revised GHG Accounting Report must be provided when the changes occur.

Assumptions

Any general assumptions regarding the emissions calculations must be included in the GHG Accounting Report.

GHG calculation and reporting

To calculate the GHG emissions intensity of the renewable gas that will be produced at a project, use the steps set out in the “System boundary” section above as a guide for the inclusion of activities in your report. For calculating the project’s emissions, use the EFs and methods provided in the National Greenhouse and Energy Reporting (Measurement) Determination 2008 (NGER MD) and the latest NGA factors available at the time of GHG Accounting Report preparation. Use the template provided in Table 1 to report the emissions.

The following aspects must also be considered in reporting the emissions:

- Emissions from the extraction, harvesting or processing of raw materials (embodied emissions) must include emissions from the collection, drying, and storage of raw materials, from waste and leakages, and from the production of chemicals or products used in extraction or cultivation.
- Emissions captured and stored in any of the steps within the system boundary shall be deducted from reported emissions.
- Whereby products exist in the production process, distribution or allocation of allowable emissions among various products must be considered to avoid overallocation of emission to renewable gas products. Emissions should be allocated among different products in accordance with the procedure outlined in ISO 14067, Section 6.4.6.
- Emissions of biogenic CO₂ must be accounted as zero and non-CO₂ biogenic emissions (CH₄ and NO_x) must be included in calculation.
- Leakage/fugitive losses, venting, and flaring emissions associated with the renewable gas production process must be estimated and reported.
- Associated emissions with the consumption of electricity (Scope 2) should be reported, however, are considered zero in calculation as the Certification requires matching of electricity usage with GreenPower-accredited electricity products or on-site renewable energy generation.
- Emissions from the construction, manufacturing, and decommissioning of capital goods, business travel, and employee commuting do not need to be considered in the total emissions calculations.

Table 1. Example template for reporting the emissions

Source of emission	Assumption	Annual Activity data and units	EF and units	GHG Emissions (kg CO ₂ -e / year)
Gas processing	<p>Fugitive emissions from gas processing determined using Method 1, section 3.72 of the NGER MD, Feb 2023. Emissions are based on the quantity of gas processed.</p> <p>The density of biomethane, calculated using the ideal gas law at standard temperature and pressure, is 0.677 kg/Sm³. The biomethane throughput is estimated to be 2,558 t per annum. The general leak emission factor used is 1.6×10^{-3} tCO₂-e/ t fuel throughput.</p>	2,558 t biomethane throughput/year	1.6×10^{-3} tCO ₂ -e/ t fuel throughput	4,093
Total Emissions (kg CO ₂ -e/year)				
Emission intensity (kg CO ₂ -e/GJ)	Total emissions / annual renewable gas supply capacity in GJ			

ⁱ Defined in line with Section 5 of the NSW Contaminated Land Management Act 1997: Contamination of land means the presence in, on or under the land of a substance at a concentration above the concentration at which the substance is normally present in, on or under land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment. Such projects will be evaluated on a case-by-case basis, and exemptions will only be granted where the applicant can demonstrate net positive environmental and social outcomes, and in accordance with any Guidelines.