



GUIDE TO APPLYING TO BECOME AN ACCREDITED ABATEMENT CERTIFICATE PROVIDER GENERATION RULE

Greenhouse Gas Benchmark Rule (Generation) No.2 of 2003 (As amended 11 June 2004)

Table of Contents

Table of Abbreviations	2
Section One – Introduction	3
1.1 Purpose of the Guide	3
1.2 Using the Guide	3
1.3 Supporting Documents	3
1.4 Accreditation Process	4
Section Two – Application Form	7
Cover page	7
Part One – Applicant’s Details	7
Part Two – Project Details	16
Part Three – Eligibility for Accreditation	20
Part Four – Record Keeping Arrangements	23
Part Five – Category of Generating System	24
Part Six – Declaration	28
Attachment A – Category A Generating System	29
Attachment B – Category B Generating System	37
Attachment C – Category C Generating System	45
Attachment D – Category D Generating System	58
Section Three – Contact Details	68
Appendix 1 – Accreditation Process Maps	69

Table of Abbreviations

The following abbreviations are used in the Guide:

ACP	Abatement Certificate Provider (under the NSW Greenhouse Gas Abatement Scheme)
AGO	Australian Greenhouse Office (Commonwealth Government Agency responsible for GGAP funding and the GES)
CH₄	Methane
CO₂	Carbon Dioxide
DNSP	Distribution Network Service Provider - registered with NEMMCO
GES	Generator Efficiency Standards (Commonwealth)
GGAP	Greenhouse Gas Abatement Project (Commonwealth)
MLF	Marginal Loss Factor (applying to Generating System as defined in the Commonwealth's <i>Renewable Energy (Electricity) Act 2000</i>)
N₂O	Nitrous Oxide
NEC	National Electricity Code (as administered by the National Electricity Code Administrator)
NEMMCO	National Electricity Market Management Company Limited
NGACs	NSW Greenhouse Gas Abatement Certificates
ORER	Office of the Renewable Energy Regulator
PJ	Petajoule (unit of energy) = 1×10^{15} J
PPA	Power Purchase Agreement
REC	Renewable Energy Certificate (under the Commonwealth's <i>Renewable Energy (Electricity) Act 2000</i>)
TNSP	Transmission Network Service Provider - registered with NEMMCO

Section One – Introduction

1.1 Purpose of the Guide

This Guide has been developed to assist people applying to the NSW Greenhouse Gas Scheme Administrator for accreditation as an abatement certificate provider (ACP) under the *Greenhouse Gas Benchmark Rule (Generation) No.2 of 2003*, as amended on 11 June 2004.

The Guide provides directions and worked examples to assist you to fill out the Application Form – Generation (the Application Form) and the relevant Attachment required for your project. Please note that this Guide does not substitute for legal advice.

1.2 Using the Guide

Information found in Section 2 of this Guide relates to filling in the Application Form (comprised of Parts 1 to 6 and Attachments A to D). References in the Guide to “you” mean the person completing the Application Form.

1.3 Supporting Documents

The NSW Greenhouse Gas Abatement Scheme (the Scheme) is implemented through Part 8A of the *Electricity Supply Act 1995* (the Act). The Act outlines liability requirements for benchmark participants and establishes the classes of activities which are eligible for the creation of NSW Greenhouse Abatement Certificates (NGACs).

Part 8A and Part 8B of the *Electricity Supply (General) Regulation 2001* (the Regulation) provide further guidance on the implementation and operation of the Scheme.

A series of Greenhouse Gas Benchmark Rules (the Rules) support the legislation and detail how the benchmark participants will measure their compliance and how abatement certificates are created. Applicants seeking to become accredited to create NGACs for electricity generation activities should refer to Greenhouse Gas Benchmark Rule (Generation) No.2 of 2003 (the Rule), as amended on 11 June 2004.

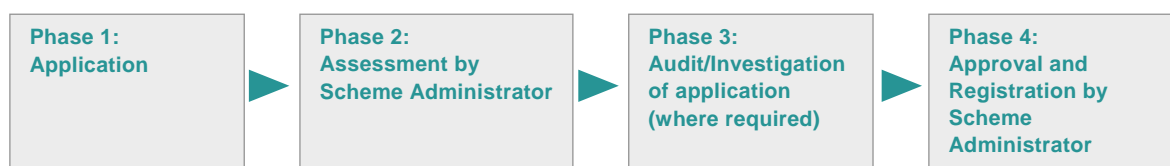
These documents can be downloaded from the Scheme website www.greenhousegas.nsw.gov.au

1.4 Accreditation Process

Figure 1 below shows an overview of the process of becoming an accredited Abatement Certificate Provider, the. More detailed process maps identifying each of the phases outlined below are provided in Appendix 1 of this Guide.

To become an accredited ACP, the accreditation process shown in Figure 1 must be completed. Detailed process maps identifying key steps within these phases are provided in Appendix 1.

Figure 1: Accreditation Process



Phase 1: Application

When applying for accreditation you must ensure that you have completed all relevant forms and attached all supporting documents. A complete application will be one that provides all information specified in this Guide. Incomplete applications will not be accessed by the Scheme Administrator and may delay your application, or result in a rejection of the application.

Every application must be accompanied by the application fee of \$500 (**GST exempt**). This fee may be paid either by cheque or EFT:

- Cheque payments should be made out to the Independent Pricing and Regulatory Tribunal of NSW.
- EFT payments should made to:

Westpac Banking Corporation

BSB: 032 001

Account No: 205717

Account Name: IPART

Note: If paying by EFT please ensure that you attach a copy of your remittance advice with your application.

Phase 2: Assessment by Scheme Administrator

The Scheme Administrator will initially review the application for completeness of information and documentation requested in the Application Form, and specified in this Guide. Depending on the application's level of completeness, the Scheme Administrator can either reject the application, or proceed further with assessing the adequacy of the information provided.

Depending on the adequacy of information provided in the application, the Scheme Administrator will then determine whether the project is eligible under the Rule. If the adequacy of information is

insufficient to make this determination, the Scheme Administrator can investigate further by requesting more information, or reject the application.

Note: The applicant may be required to pay the costs of the Scheme Administrator in respect of further investigating an application for accreditation, in addition to the application fee and any subsequent audit costs. However, an applicant may withdraw its application prior to any investigation being undertaken.

If a project is determined to be eligible under the Rule it will then proceed to Phase 3, whereby an audit of the application can be undertaken (where required).

Phase 3: Audit where Required

Prior to conducting any audit you will be advised of the related scope work required and the anticipated costs. Although the Scheme Administrator appoints the auditor, you will bear the costs of the audit and these must be paid prior to the audit being undertaken. An applicant may withdraw its application prior to an audit being undertaken.

Any audit will be undertaken in accordance with the scope determined by the Scheme Administrator. Generic audit scopes are available on the Scheme website as a guide. However, audits may also include additional scopes items specific to each project. You must facilitate the efficient and effective performance of such activity. Investigations or audits may review, among other things:

- the applicant's eligibility for accreditation,
- the status of the site equipment,
- the appropriateness of the metering equipment,
- calculations made to determine total Greenhouse Gas emissions or baselines,
- calculations or estimations of output levels,
- the appropriateness of selected calculation methods, and
- the integrity of the record keeping arrangements.

The auditor will be engaged by the Scheme Administrator from the Scheme's Audit and Technical Services Panel.

Phase 4: Approval and Registration

Based upon its review of the available information and the results of any investigation and/or audit, the Scheme Administrator will determine if the applicant should be accredited.

If successful, you will be notified by the Scheme Administrator advising you of your conditions of accreditation and you will be listed on the Scheme Registry as an accredited ACP. Unsuccessful applicants will be informed in writing of the reasons for refusal of their application.

Timing of Audit

A risk-based approach will be adopted by the Scheme Administrator to determine the scope of ongoing audits of abatement activity and whether these should be conducted before or after the

registration of abatement certificates. The initial audit requirement for each ACP would be determined at the point of accreditation as an ACP. However, an ACP's audit requirements may be varied through time to reflect changes in the risk profile of the abatement activity. Audit requirements will be determined based upon such factors as the complexity of the abatement activity, the estimated number of certificates to be created and the applicant's compliance history (if any) as an ACP.

Section Two – Application Form

The following section provides a step-by-step guide to completing each section of the Application Form.

Cover page

The Application Form's cover page has three fields which you are required to complete. You are required to insert:

- Field 1: The legal name of the Applicant (not merely the business name), or if the applicant is comprised of more than one person/entity, all of their legal names. Applicants must either be the Generator as defined under Clause 6.2 of the Rule, or the Deemed Retailer as defined under Clause 6.3 of the Rule.
- Field 2: The name of the Generating System which is the subject of the application. The Rule defines a Generating System as:
- “a system comprising one or more of the physical generators of electricity and all the related equipment capable of functioning as a single entity”. (Clause 11.1)*
- Field 3: The name of the project. It may simply be the name of the generating system (re-stated), or if several projects for the one generating system are envisioned (and hence requiring further applications for accreditation), it may refer to the actual specifics of the current application. However, it must be a descriptive name, not an alphanumeric code e.g. “Fuel mix change at Sunshine Power Plant,” not “SPP123”.

If the application is successful and the applicant is accredited, the applicant's name (Field 1) and the name of the project (Field 3) will be placed on the Scheme Registry. This information will be publicly available to all Registry users. When selecting a project name, applicants should therefore take care to choose a name that they would be willing to make publicly available.

A separate Application Form (and fee) is required for each Generating System in relation to which an entity wishes to be accredited.

Part One – Applicant's Details

Part One asks you to provide summary details of the applicant and the people the Scheme Administrator may contact regarding the application

1 (a) Who is the Applicant?

Please restate the full legal name (not merely the business name) of the applying entity (or all of them, if the applicant is comprised of more than one person/entity). The Australian Business Number (ABN) of the applicant must be provided (if the applicant has an ABN). The type of entity must also be provided (eg is the applicant an individual, company, partnership, incorporated association, government department, statutory corporation, etc).

1 (b) Who are the contact people for the application?

The purpose of this question is to identify key individuals involved with the applicant's accreditation. Although three Contact Persons are provided for, in some instances the identification of Contact Person 1 (only) may suffice, provided that this person acts in the combined role of primary contact, 'Key User' and the person with the technical and operation expertise in regard to the Generating System. Otherwise:

Contact Person 1: **is the primary contact person for all communication and correspondence between the applicant and the Scheme Administrator.** This person must be an employee of the applicant and not an external consultant. It is likely that this person is the author of the Application Form.

Contact Person 2: (optional) is the person designated by the applicant as the 'Key User' for the registering of NGACs with the Scheme's Registry. Guidance Point 1 on the following page contains a brief introduction to the Scheme Registry and the role of the Key User. For further information, please refer to the Scheme website at www.greenhousegas.nsw.gov.au or Scheme Registry at www.ggas-registry.nsw.gov.au.

Contact Person 3: (optional) will be a person with operational or technical involvement with the applicant's Greenhouse Gas abatement activity, e.g. a project engineer on site, or a contracted external consultant. The Scheme Administrator may choose to contact this person with regard to technical elements of the application.

Please ensure that for each Contact Person identified, that their ongoing role in regard to the Scheme is clearly identified in the second field of the Table eg Primary Contact, or Key User, or Technical Contact/Consultant, or combination.

Guidance Point 1: The Role of the Key User

The Act requires that the Scheme Administrator keep a Register of:

- accredited abatement certificate providers, and
- greenhouse gas abatement certificates.

The Registry is a web based database application. ACPs will use the Registry to register and transfer abatement certificates.

The Key User is the primary user of the Registry for each ACP. The Scheme Administrator may allocate, if necessary, a separate Key User for each project for which the ACP is accredited. The Key User will be able to create accounts for other users authorised by the applicant to access the Registry. In creating these accounts for these additional users, the Key User will also be able to control the level of Registry access of each user (such as whether the user can create, transfer or surrender abatement certificates), determine which Registry generated emails the user will receive, add/ disable user accounts and change passwords of those users.

The Registry is designed to be intuitive and user friendly. Please refer to the Scheme Registry www.ggas-registry.nsw.gov.au or its on-line helpline (1800 006 797) for further assistance.

1 (c) What is the applicant's relationship to the Generating System?

This question asks you to identify the applicant's relationship to the Generating System under one of the two principal categories allowed, namely **Generator** or **Deemed Retailer**.

A **Generator**, (see Clause 6.2 of the Rule for full definition), may be:

- (a) the person registered with the National Electricity Market Management Company (NEMMCO) as the Generator or Intermediary for the Generating System (under the National Electricity Code) at the time that the relevant electricity generation activity takes place; or

Evidence required: Please attach a copy of the NEMMCO advice of approval of registration with respect to the Generating System.

- (b) the owner of the Generating System at that time, if no person is registered with NEMMCO; or

Evidence required: Please provide details of ownership and explain why no person is registered as the generator (as defined under the National Electricity Code) with respect to the Generating System.

Please note: NEMMCO's guide for the registration of generators under the National Electricity Code, defines the Owner as: "*Having all or part of the generating system recorded as assets on its books.*"

- (c) a person nominated, to the satisfaction of the Scheme Administrator, to be the Generator by
- (i) a person referred to in (a) or (b) above; or
 - (ii) a person previously nominated to be the Generator,

provided that:

- (iii) the person(s) making the nomination ("nominator") has not previously nominated another person (or if so, that previous nomination is not still effective);
- (iv) the nomination is in writing and signed by the nominator;
- (v) the person being nominated ("nominee") consents to the nomination (such consent will be assumed from the nominee's application for accreditation); and
- (vi) the nominator (and any previous nominator) continues to meet the criteria to be the nominator for the period of the nomination.

Evidence required: Please attach a nomination form as per Guidance Point 2(a) (see below), evidence of the nominator's entitlement to nominate (as in (a), (b) or (c)(ii) above), and (if applicable) evidence of any previous nominations and entitlement of those nominators.

A **Deemed Retailer**, (see Clause 6.3 of the Rule for full definition), may be:

- (a) a retail supplier who is entitled to some or all of the electrical output of a Category A Generating System is deemed pursuant to the Power Purchase Agreement (as defined under the Rule); or

Evidence required: Please attach extracts from the front pages of the PPA and execution clauses evidencing the parties to the PPA, and a statement of novation from the CEO if party names have changed.

Please note that if the name of the applicant (retail supplier) is not the same as the purchaser's under the PPA:

- Where the retail supplier has acquired rights under the PPA via assignment or novation (or a chain of them) from an original party to the PPA, please also attach extracts of the relevant documentation evidencing the novation or assignment. If this has occurred by force of legislation, please attach extracts of relevant legislative provisions.
- If the parties' names have changed since the PPA was signed but the parties are still the same legal entities (eg change of company name), please attach relevant information evidencing the name changes (eg ASIC documentation or extracts of relevant legislative provisions).
- If the applicant is a retail supplier listed in Schedule C to the Rule, you do not need to submit evidence of assignments, novations or name changes. Please attach a statement from the retail supplier's CEO (or other appropriate senior officer) confirming that there has been no assignment or novation of the purchaser's rights under the PPA since 1 January 2003.
- If the applicant is a retail supplier who has acquired the rights of a Schedule C retail supplier under the relevant PPA via assignment or novation (or a chain thereof) after 1 January 2003, you do not need to submit evidence of all previous assignments, novations or name changes. You only need to attach extracts of the relevant documentation evidencing the novation or assignment from the retail supplier listed in Schedule C.

In all cases, please also submit a statement from the retail supplier's CEO (or other appropriate senior officer) confirming that there has been no assignment or novation of the purchaser's rights under the PPA since the applicant became a party to it. (If the applicant is a retail supplier listed in Schedule C to the Rule, this statement referred to in the 2nd last bullet point above is sufficient.)

[Note: you may need to provide further details of the PPA for the purposes of Part 5 and Attachment A.]

- (b) a person nominated, to the satisfaction of the Scheme Administrator, to be the Deemed Retailer for the purpose of creating NGACs under the Generation Rule, by written agreement with such a person or a person previously nominated to be the Deemed Retailer, provided that:
- (i) the nominator has not previously nominated another person (or if so, that previous nomination is not still effective);

- (ii) the nomination is in writing;
- (iii) the nominee consents to the nomination (such consent will be assumed from the nominee's application for accreditation); and
- (iv) the nominator (and any previous nominator) continues to meet the criteria to be the nominator for the period of the nomination.

Evidence required: Please attach a nomination form as per Guidance Point 2(b) (see below), evidence of the nominator's entitlement to nominate, and (if applicable) evidence of any previous nominations and entitlement of those nominators.

Nominated Generator or Deemed Retailer – evidence of nomination

Where a person has been nominated (by written agreement as indicated above) to be the Generator or Deemed Retailer for the purposes of creating NGACs under the Generation Rule, the written nomination must be attached to this application. Where more than one nomination has occurred since the original Generator or Deemed Retailer, a clear chain of nominations must be evidenced from the original Generator or Deemed Retailer.

In assessing applications where the applicant is a nominee, the Scheme Administrator will not consider as complete, and may reject any application submitted without satisfactory proof of nomination. Guidance Point 2 (below) contains suggested wording to assist applicants in obtaining a satisfactory nomination.

Nominated Generator or Deemed Retailer – evidence of entitlement to nominate

The nomination form in Guidance Point 2 (below) contains a declaration by the nominator that it is entitled to make the nomination, being an eligible Generator or Deemed Retailer itself. The nominated applicant will need to provide, in addition to the nomination form, evidence of the nominator's entitlement to nominate. If the nominator is not the original Generator or Deemed Retailer, a clear chain of nominations must be evidenced from the original Generator or Deemed Retailer to the applicant. The Scheme Administrator will require evidence of each nomination, in addition to evidence of the original Generator or Deemed Retailer's entitlement to nominate.

In addition, the nominator (and any previous nominator where there is a chain of nominations) must continue to meet the criteria to be the nominator, for the period of the nomination. If the nominator's circumstances change (for example, the nominator's business is sold or its rights under a PPA are assigned), the nomination may become invalid. If this occurs, the ACP must ensure that it is re-nominated by the entity that is newly entitled to make the nomination in relation to the Generating System. The ACP must also notify the Scheme Administrator if this happens (under the General Conditions of Accreditation).

Nomination as responsibility of the Applicant

When accreditation is sought as a nominated Generator or Deemed Retailer, the onus of obtaining an effective nomination lies with the applicant. The applicant bears any risk that:

- the nominator (or any previous nominator) was not properly entitled to make the nomination;
- the person purporting to sign on behalf of the nominator did not have authority to do so; or
- the nominator (and any previous nominator) does not, or will not continue to meet the criteria to be the nominator for the period of the nomination.

The wording in Guidance Point 2 (below) contains various declarations by the nominator as to entitlement and authority. However, you cannot rely on these declarations as proof (or continuing proof) of those matters. You should consider conducting your own enquiries in each case as to the nominator's authority and (continuing) entitlement to make the nomination. The Scheme Administrator may seek further evidence of these things, during the accreditation process or during an audit. In assessing applications, the Scheme Administrator may reject any application submitted without proof of nomination or a nomination which does not meet the requirements outlined in Guidance Point 2 (below). The application will not be considered as complete until satisfactory proof of nomination has been submitted to the Scheme Administrator.

Guidance Point 2: Suggested wording for the Nomination of a “Generator” or a “Deemed Retailer”.

This Guidance Point advises of standard wording, which could be used to provide evidence that a nomination as a Generator or Deemed Retailer has been made (subject to the Notes below). The nomination form must be validly authorised and should be on the nominator's letterhead.

2(a) Nomination as a Generator

"For the purpose of clause 6.2.1(c) of the *Greenhouse Gas Benchmark Rule (Generation) No. 2 of 2003 (Rule)*:

1. [A] nominates [B] as the "Generator" in respect of [X] (the Generating System).
2. This nomination is effective to entitle [B] to create and own all "Abatement Certificates" (as defined in the *Electricity Supply Act 1995 (NSW)*) in respect of electricity exported by the Generating System in accordance with the Rule.
3. [A] declares that it is entitled to make this nomination, because [please select one of the following]
 - (a) [A] is registered with NEMMCO as the Generator or Intermediary (as defined under the National Electricity Code) with respect to the Generating System; or
 - (b) no person is registered with NEMMCO as the Generator or Intermediary (as defined under the National Electricity Code) with respect to the Generating System, and [A] is the owner of the Generating System; or
 - (c) [A] was previously validly nominated to be the "Generator" in respect of the Generating System (and that nomination is still effective).
4. [A] declares that [A] has not made another nomination under the Rule in respect of the Generating System that is still effective.

[signature]

[print name]

[date]

If you, the signatory, are not [A] or are only one of the persons comprising [A] (for example, if you are signing on behalf of a company, on behalf of both you and someone else or on behalf of a third person), you declare that you have authority to sign this form on behalf of [A]. Please also complete the following:

[position within [A] / relationship to or authority on behalf of [A]]"

(continued next page)

2(b) Nomination as a Deemed Retailer

the purposes of clause 6.3.1(b) of the *Greenhouse Gas Benchmark Rule (Generation) No. 2 of 2003 (Rule)*:

1. [A] nominates [B] as the "Deemed Retailer" in respect of [X] (the **Generating System**) which is a Category A Generating System within the meaning of clause 7.1 of the Rule.
2. This nomination is effective to entitle [B] to create and own all "Abatement Certificates" (as defined in the *Electricity Supply Act 1995 (NSW)*) in respect of electricity exported by the Generating System in accordance with the Rule.
3. [A] declares that it is entitled to make this nomination, because [please select one of the following]
 - (a) [A] is the retail supplier who is entitled to some or all of the electrical output of the Generating System pursuant to a Power Purchase Agreement (as defined under the Rule) to which [A] is a party, ; or
 - (b) [A] is the person who was previously validly nominated to be the Deemed Retailer under the Rule (and that nomination is still effective).
4. [A] declares that [A] has not made another nomination under the Rule in respect of the Generating System that is still effective.

[signature]

[print name]

[date]

Where you, the signatory, are not [A] or are only one of the persons comprising [A] (for example, if you are signing on behalf of a company), you declare that you have authority to sign this form on behalf of [A]. Please also complete the following:

[position within [A] / relationship to or authority on behalf of [A]]"

Notes for Applicant for use of standard wording:

- Insert at [A] the full name (not a business name) of the person(s)/company(ies) making the nomination (the "nominator"). If the nominator comprises more than one person or entity, please ensure that the full names of all those entities/persons are included. You may want to define "[A]" and then use the defined term throughout the rest of the form.
- Insert at [B] the name(s) of the person(s)/company(ies) being nominated as the "Generator" or the "Deemed Retailer" (ie you, the applicant).
- Insert at [X] a clear description of the generating system. The generating system must be a generating system that exports (or will export) electricity into:
 - the NSW Electricity Network or;

- a "transmission system" or a "distribution system" (as those terms are defined in the National Electricity Code) interconnected with the NSW Electricity Network.

For the Deemed Retailer nomination form, the generating system must be a Category A Generating System (as defined under clause 7.1 of the Rule).

- The words in paragraph 2 ("create and own **all** "Abatement Certificates" in respect of electricity exported by the Generating System") clarify that the nomination applies to electricity generation activity both before and after the date the nomination is signed. This wording should only be used where no other person has ever created, and will never create, any abatement certificates under the Rule in respect of electricity exported from the Generating System. However, there may be circumstances where, for example, another person (such as the nominator) has created or will create some of the abatement certificates, and the person being nominated will create the rest of them. If this is the case, the following additional words should appear at the end of paragraph 2: "after [\[relevant date\]](#)."
- Do not use headings or other language that refers to "assignment of NGACs" or similar. An effective nomination to become a Generator will only give you the right (once you are accredited) to create NGACs under the Generation Rule. The nomination itself does not assign any NGACs.
- Applicants must note that the onus of obtaining an effective nomination lies with the applicant, even if the processes in this guidance point are followed correctly. The applicant bears any risk that the person signing this form does not have authority to do so on behalf of the nominator, that the nominator may not be entitled to make the nomination and that it may not remain so entitled for the period of the nomination. You may need to make further enquiries in this regard. Refer to the Guide for further details.

Part Two – Project Details

This Part of the Application Form requires you to provide summary details of the applicant's Generating System. This information is central to the application and has been asked from the outset to avoid unnecessary repetition in the form.

2 (a) Where is the Generating System located?

This question asks you to identify and provide details on the location of the Generating System that is the subject of this application. It is expected that a generating system will be located at one physical site. Please insert the information as prompted in the Application form.

“Generating System means a system comprising one or more of the physical generators of electricity and all the related equipment capable of functioning as a single entity”. (Clause 11.1)

2 (b) Description of the Generating System

This question asks you to provide a description of the operational characteristics of the Generating System. In this regard, would you please provide:

- an overarching description of the Generating System's physical arrangements (for example; number of generating units; typical output profile on weekdays and weekends; voltage of generating units and their connection point; power output etc), and
- include a description on how the Generating System's operation results in reduced emissions of greenhouse gases.

2 (c) Details of generating units comprising the Generating System

For each of the generating units which make up the Generating System, a number of details are required to be inserted in the Table provided. These are as follows:

- Fuel type – energy type(s) used to generate electricity e.g. black coal, natural gas, hydro, black coal co-fired with biomass etc.
- Fuel source – the origin of the fuel(s). Please provide the source of each fuel type used, for example, in regard to a black coal fuel type the fuel source would include each coal mine from which coal was sourced. e.g. Sunshine Coal Mine, Hunter Valley, NSW and Big Pit Coal Mine, Hunter Valley NSW etc.
- Nameplate rating in accordance with the manufacturer's specification. This should be stated in MW units preferably, or MVA units where MW units is unavailable.
- Date commercial operation commenced. Commercial Operation means *“receiving any payment for electricity generated by a Generating System, after completion of testing to meet conditions of any licences or authorisations prior to those licences or authorisations being granted or becoming effective”* (Clause 11.1 of the Rule).

Please add additional rows where there are more than four generating units.

2 (d) Does the Generating System generate electricity using Native Forest Bio-Material?

In this question you are asked to indicate whether the Generating System uses, as a fuel source, any Native Forest Bio-Materials.

Whilst a Generating System may use eligible biomass as a fuel, (where eligible biomass fuel means renewable energy sources consisting of organic matter that has been derived from recently living plants or animals), Clause 9.6 of the Rule prohibits an ACP from creating NGACs in respect of any generation resulting from the use of Native Forest Bio-Material as fuel (as this is in violation of Clause 57M of the *Protection of the Environment Operations (General) Regulation 1998 (NSW)* ("POEO Regulation").

The *POEO Regulation* (Clause 57L) defines "Native Forest Bio-Material" as: "*the bio-material comprised in Australian native trees, other than:*

- (a) *bio-material obtained from:*
 - (i) *an authorised plantation within the meaning of the Plantations and Reafforestation Act 1999, or*
 - (ii) *an existing plantation within the meaning of section 9 of the Plantations and Reafforestation Act 1999, or*
 - (iii) *land on which exempt farm forestry (within the meaning of the Plantations and Reafforestation Act 1999) is being carried out, or*
 - (iv) *land on which ancillary plantation operations (within the meaning of section 9 of the Plantations and Reafforestation Act 1999) are being carried out, or*
- (b) *sawdust or other sawmill waste, or*
- (c) *waste arising from wood processing or the manufacture of wooden products, other than waste arising from activities (such as woodchipping or the manufacture of railway sleepers) carried out at the location from which the Australian native trees are harvested."*

Please refer to the POEO Regulation and the *Plantations and Reafforestation Act 1999* for further information on ineligible fuels.

2 (e) Is the Generating System an accredited power station under the Renewable Energy (Electricity) Act 2000?

The following is only applicable if the Generating System is an accredited power station under the *Renewable Energy (Electricity) Act 2000*. If not, please proceed to Part 3.

The Regulation (Clause 73IB) disallows, subject to the Rule, the creation of NGACs for the same unit of output for which a REC has been created. A REC is a Renewable Energy Certificate as defined in Section 97AB of the Act. The Rule (Clause 8) also prescribes that, in some circumstances, the NSW Production Baseline for the Generating System (for the purposes of the Scheme) may be equal to the Commonwealth Office of the Renewable Energy Regulator (ORER) assigned REC baseline.

Accordingly, and as required by Clause 73H(2) of the Regulation, applicants are asked to complete the Application form table by providing details of:

- (i) the Generating System's ORER-assigned REC baseline,
- (ii) the Marginal Loss Factor for the Generating System as defined in the Renewable Energy (Electricity) Regulation, and
- (iii) the number of RECs created in each calendar year since ORER accreditation of the Generating System was received.

Supporting Documents

Supporting documentation attached must include the notice of accreditation from ORER stating the Generating System's REC baseline. In order to confirm this information, the Scheme Administrator may contact ORER. Consent to this must be obtained from the owner of the Generating System and from the person entitled to create RECs from it (currently the operator of the Generating System - see Section 18 of the *Renewable Energy (Electricity) Act 2000*). These may be different persons, and may or may not be the applicant. As such, the relevant entity (or their authorised representative) must download and sign the 'Consent for the NSW Greenhouse Gas Scheme Administrator to contact the Office of the Renewable Energy Regulator' form. This should be printed onto the relevant entity's letterhead and signed by an appropriate legal authority for the entity.

2(f) Is the ORER assigned baseline a collective baseline?

In this question you are asked whether the Generating System's assigned REC Baseline is a collective baseline. That is, has ORER assigned a single baseline to more than one Generating System? If this is the case, please provide details of the other generating system(s) to which the collective REC baseline also applies.

2(g) Is the Generating System accredited by ORER for electricity generated using landfill gas, sewage gas, manufactured methane or cogeneration from Renewable Energy Sources?

If the Generating System is not ORER accredited for these fuel types or the applicant does not plan to create additional NGACs under Clause 9.5 (and Equation 6) of the Rule, you are not required to provide any further information in question 2(f). Please proceed to Part 3.

In some circumstances, the Scheme allows for NGACs to be created, in addition to RECs, where electricity is being generated using methane derived from landfill gas, sewage gas or manufactured methane*, or where cogeneration from Renewable Energy Sources is being used.

*Manufactured methane is methane manufactured from material that would otherwise have been disposed of in a landfill, anaerobic pond, windrow or by other means which would lead to the venting of methane as a by-product. This material is referred to in the Rule as *Qualifying Putrescible Waste* which means:

"the putrescible waste, used in a process which manufactures methane from putrescible waste, that is other than paper, cardboard or other materials that the Scheme Administrator disqualifies on the

grounds that they are of non-renewable origin or that their inclusion encourages unsustainable use of materials" (Clause 11.1).

Burning of methane from Renewable Energy Sources to create energy, abates Greenhouse Gas emissions in two ways:

1. by avoiding the emission of fugitive methane (CH₄) to the atmosphere, and
2. through the generation of energy using a renewable, less Greenhouse intensive, fuel than coal.

Similarly, cogeneration from Renewable Energy Sources (RES):

- abates notional greenhouse gas emissions, by using heat (in the cogeneration process) that would otherwise be discharged and wasted; and
- abates greenhouse gas emissions through the generation of energy using a renewable, less greenhouse intensive fuel than coal.

By allowing NGACs to be created for avoiding these "fugitive methane" and "notional greenhouse gas" emissions (described above), the Scheme recognises the 'double' Greenhouse benefit of using such methods to generate energy. Clause 9.5 and Equation 6 of the Rule therefore allow additional NGACs to be created for these "avoided emissions". This is a separate abatement action to the generation of electricity, which may be used to create NGACs using Equations 1 of the Rule.

This question then, firstly asks you to indicate whether the Generating System is accredited by ORER to create RECs using landfill gas, sewage gas, manufactured methane, or cogeneration from Renewable Energy Sources, and then secondly, whether the applicant intends to create NGACs for this generation under Clause 9.5 of the Rule.

If the applicant does intend to create additional NGACs, the approach to be used by the applicant to calculate the number of NGACs must be consistent with Clause 9.5 of the Rule and Equation 6 must be applied. Guidance Point 10 contains a worked example of these calculations.

The Scheme adopts the *Renewable Energy (Electricity) Act 2000* (Section 17) definition of "eligible renewable energy sources" (sometimes referred to in this Guide and the Application Form as "Renewable Fuel"):

Section 17(1) The following energy sources are eligible renewable energy sources:

- | | | |
|------------------|---|---------------------------------|
| (a) hydro | (i) food and agricultural wet | (q) micro hydro Renewable Stand |
| (b) wind | (j) landfill gas | (r) solar hot water |
| (c) solar | (k) municipal solid waste | (s) co-firing |
| (d) bagasse co- | (l) sewage gas | (t) wave |
| (e) black liquor | (m) geothermal-aquifer | (u) ocean |
| (f) wood waste | (n) tidal | (v) fuel cells |
| (g) energy crops | (o) photovoltaic and photovoltaic Renewable Stand Alone Power | |
| (h) crop waste | (p) wind and wind hybrid Renewable Stand Alone Power Supply | |

Part Three – Eligibility for Accreditation

Section 73G of the Regulation and Clause 5 of the Rule outline the electricity generation activities in respect of which an applicant can become accredited under the Rule. Part 3 of the Application Form assesses whether applicants and the relevant Generating Systems meet these criteria.

3(a) Does the Generating System export electricity?

A Generating System that generates electricity after 1 January 2003, in a manner which results in reduced Greenhouse Gas emissions, must supply *“electricity into the NSW Electricity Network or a Transmission or Distribution System interconnected with the NSW Electricity Network”* for the Scheme Administrator to accredit a Generator or Deemed Retailer in respect of that Generating System (Clause 5 of the Rule).

As such the Generating System must export electricity into either:

- (i) the main Transmission Systems of the National Electricity Market, or
- (ii) to Distribution Systems currently connected to the main Transmission Systems of the National Electricity Market in NSW, the ACT, Queensland, Victoria and South Australia.

Essentially then, eligible Generating Systems are those exporting electricity into a regulated distribution or transmission system, registered under the National Electricity Code.

Please indicate which transmission system or distribution system the Generator is connected to.

If neither of the above, the generating system is ineligible for accreditation under the Generation Rule, but may be eligible under a separate application using the Demand Side Abatement Rule, if the Generating System is supplying electricity to end user equipment within the same end user complex in NSW.

Supporting Documents

Applicants must provide:

- a description of the physical location of the connection point to the Transmission or Distribution Systems (described above) including the name of the registered Transmission or Distribution Network Provider,
- a schematic or geographical diagram demonstrating the location of the export & import meter in relation to the Generating System and Network boundaries, and
- documents which evidence the export of electricity to a Transmission or Distribution System. These may include copies of monthly invoices of electricity supply from the Generating System for the previous calendar year, or relevant parts of a respective connection agreement.

3(b) What metering equipment and arrangements are in place?

The Regulation states that a person is eligible to be an ACP in relation to a Generating System if, among other things, the Generating System is equipped with Metering Equipment approved by the Scheme Administrator (Clause 73G(1)(b)).

The Scheme Administrator will determine whether an applicant's Metering Equipment is approved on a case by case basis. In assessing the adequacy of metering equipment the Scheme Administrator will be guided, but not bound, by Chapter 7 of the National Electricity Code. Key principles of the Code are summarised in Guidance Point 3.

Supporting Documents

In completing the Application Form applicants must include, in relation to metering equipment and metering arrangements in place at the relevant Generating System site, the following information:

- An up-to-date single line diagram showing the location of all metering installations.
- Metering installation type (in accordance with the NEC), metering serial numbers and National Meter Identifiers (if appropriate)
- Accuracy classes of tariff/export/import/auxiliary meters, voltage transformers (VT's) and current transformers (CT's), as well as evidence in support of their nominated accuracy classes, eg copies of metering schedules, or an up-to-date single line diagram with respective accuracy classes marked etc.
- Who the responsible party is for the reading of meters and testing of metering equipment.
- Schedules for testing of metering equipment and the techniques used to calibrate or monitor the accuracy of metering equipment.
- Processes for ensuring the security of metering equipment.
- Whether NEMMCO or other relevant parties have conducted any recent audits of metering equipment and the results (if applicable).

Guidance Point 3: Approved Metering Equipment

Clause references in this Guidance Point are references to the National Electricity Code.

- Each connection point must have a metering installation (Clause 7.3.1A(a)).
- Metering equipment must be accurate in accordance with Clause 7.3.4 (Clause 7.3.1(a)(2)). The type of metering installation and the accuracy requirements for a metering installation which must be installed in respect of each connection point are to be determined in accordance with Schedule 7.2.
- Metering equipment must be secure in accordance with Clause 7.8 (Clause 7.3.1(a)(4)). The responsible person must ensure that the metering installation is secure and that associated links, circuits and information storage and processing systems are secured by means of seals or other devices approved by NEMMCO (Clause 7.8.1(a)).
- Metering equipment must be capable of delivering data from the site of the metering installation to a metering database (Clause 7.3.1(a)(8)).

- NEMMCO must carry out periodic random audits of metering installations to confirm compliance with the Code and must be given unrestrained access by Code Participants to metering installations (Clause 7.6.3(d)).
- Testing of a metering installation is to be carried out in accordance with the inspection and testing requirements detailed in Schedule 7.3 (Clause 7.6.1(a)).

EXAMPLE: For a 50MW Generating System owned by GreenerPowerInc, the following information on metering arrangements should be provided (although it has been simplified for the purposes of this example):

- The Generating System is connected to the Sunshine Energy Network.
- Sunshine Energy are the Metering Provider and Metering Data Agents for the Generating System.
- Meters are read on a daily basis and tested every 2 years to the specifications of the NEC.
- Please find attached the result of a recently completed independent audit of metering equipment, as well as schedules for meter testing and calibration.
- The Import/Export Meter is a Type 1 remote read Q4 meter with a metering accuracy class of 0.5S and serial number 0411223.
- The VT and CT are of accuracy class 0.2M and 0.5M respectively, with serial numbers of 0123JK and 0124LM, respectively.
- Please find attached, a recent single line diagram schematic showing the layout of metering arrangements and the location of the meters, CT 'sand VT's.
- All metering equipment is securely locked and located within the site which is security monitored. Only authorised personnel have access to metering equipment.

3(c) Has GGAP funding been approved after 1 January 2003 for the Generating System?

The Rule (Clause 9.7) stipulates that if GGAP funding is approved on or after January 1, 2003 the number of NGACs that can be created is reduced by the proportion of total project cost funded by GGAP. Guidance Point 4 (below) illustrates the number of NGACs a GGAP funded project is eligible to create.

Guidance Point 4: Calculating the number of NGACs from GGAP funded projects

$$\text{Number of NGACs} = \frac{\text{Total project cost (\$) - GGAP funding approved (\$)}}{\text{Total project cost (\$)}} \times \text{tCO}_2\text{-e abated}$$

For example: If GGAP funding represents 20% of project funding then only 80% of abatement is eligible to create NGACs.

Supporting documents

If funding has been approved by GGAP, you must complete the 'Consent for the NSW Greenhouse Gas Scheme Administrator to contact the Australian Greenhouse Office' from the Scheme website. This form needs to be printed on the applicant's letterhead and signed by the same person who is the signatory in Part 6.

Part Four – Record Keeping Arrangements

The Regulation (Clauses 73G(1)(c) and 73IF(1)(a-d)) states that a person is eligible for accreditation with respect to generation activities as an ACP if, among other things, it has record keeping arrangements which are approved by the Scheme Administrator. As a general principle, record keeping arrangements should be consistent with the Australian Standard on Records management ISO 15489-2002.

The nature of the Greenhouse Gas emissions means that the quantity of emissions is rarely directly measured. Rather, the quantity of emissions is calculated from other parameters which can be readily measured or estimated (e.g. fuel combustion). As such, keeping records of the parameters used in calculating emissions is critical to creating the correct number of NGACs.

Please refer to the 'Guide to Record Keeping for Participants in the NSW Greenhouse Gas Abatement Scheme'. You should refer to this Guide when answering Part 4 of the Application Form.

Part Five – Category of Generating System

5(a) What is the Category of the Generating System?

The category of Generating System must be determined in order to select the appropriate methodology for calculating the baseline and the number of NGACs that may be accordingly created. Under the Scheme, different categories of Generating Systems have different NSW Production Baselines and different methods for creating NGACs.

Clause 7 of the Rule defines the categories of generation. Guidance Point 5 (below) provides assistance to applicants on the categorisation of Generating Systems.

Guidance Point 5: Determining the category of Generating System

1. Does the Generating System currently satisfy the criteria for Category A under the previous scheme's Emissions Workbook?

- ▶ **Yes** – Answer question 2.
- ▶ **No** – Proceed to question 4.

2. Is the Generating System one of the following? (Table continues over the page)

Name	Type	Deemed Retailer
Smithfield, NSW	Gas-fired cogeneration	Integral Energy
Tower, NSW	Waste mine gas	Integral Energy
Appin, NSW	Waste mine gas	Integral Energy
Kembla Grange	Hydro	Integral Energy
Belrose, NSW	Landfill gas	Energy Australia
Foreshore Park, NSW	Photovoltaic cell	Energy Australia
National Innovation Centre, NSW	Photovoltaic cell	Energy Australia
Lucas Heights 1, NSW	Landfill gas	Energy Australia
Corio, Vic	Landfill gas	Origin Energy
Yarrawonga Hydro, Vic	Hydro	Origin Energy
Alfred Hospital, Vic	Gas-fired cogeneration	Origin Energy
Royal Melbourne Hospital, Vic	Gas-fired cogeneration	Origin Energy
St Vincents Hospital, Vic	Gas-fired cogeneration	Origin Energy
Austin Hospital, Vic	Gas-fired cogeneration	Origin Energy
Vansdorf, Vic	Gas-fired cogeneration	AGL
Broadmeadows, Vic	Landfill gas	AGL
Clayton, Vic	Landfill gas	AGL
Springvale, Vic	Landfill gas	AGL
Pedler Creek, SA	Landfill gas	AGL

Tea Tree Gully, SA	Landfill gas	AGL
Name	Type	Deemed Retailer
Wingfield 1, SA	Landfill gas	AGL
Wingfield 2, SA	Landfill gas	AGL
Highbury, SA	Landfill gas	AGL
Browns Plains, Qld	Landfill gas	Energex
Burrendong, NSW	Hydro	Country Energy
Wyangala, NSW	Hydro	Country Energy
Nymboida, NSW	Hydro	Country Energy
Copeton, NSW	Hydro	Country Energy
Oakey, NSW	Hydro	Country Energy
Harwood , NSW	Bagasse	Country Energy
Glenbaun, NSW	Hydro	Energy Australia
Blue Rock Dam, Vic	Hydro	TXU
Cardinia Dam, Vic	Hydro	TXU
Eildon Dam, Vic	Hydro	TXU
Glenmaggie Dam, Vic	Hydro	TXU
William Hovell Dam, Vic	Hydro	TXU
Thompson Dam, Vic	Hydro	TXU
Berwick Power Station	Landfill gas	TXU

(Schedule C of the Rule)

► **Yes** – The Generating System is Category A. Complete Attachment A.

► **No** - Answer question 3.

3. Was the Generating System claimed as Category A or Category F under the previous scheme (as referred to in the Emissions Workbook), and is its generation the subject of a Power Purchase Agreement that has not terminated as of the current date

► **Yes** – The Generating System is Category A. Complete Attachment A.

► **No** – Proceed to question 4.

4. Is the Generating System one of the following?

Name	Owner	Type
Vales Point	Delta Electricity	Steam/Coal
Mt Piper	Delta Electricity	Steam/Coal
Wallerawang	Delta Electricity	Steam/Coal
Munmorah	Delta Electricity	Steam/Coal
Eraring	Eraring Energy	Steam/Coal
Brown Mountain (b)	Eraring Energy	Hydro
Burrinjuck (b)	Eraring Energy	Hydro
Hume (b)	Eraring Energy	Hydro
Keepit (b)	Eraring Energy	Hydro
Shoalhaven (b)	Eraring Energy	Hydro/pump storage
Warragamba (b)	Eraring Energy	Hydro
Broken Hill GT	Eraring Energy	Gas turbine
Bayswater	Macquarie Generation	Steam/Coal
Liddell	Macquarie Generation	Steam/Coal
Guthega (a)	Snowy Hydro Trading	Hydro
Tumut 1 (a)	Snowy Hydro Trading	Hydro
Tumut 2 (a)	Snowy Hydro Trading	Hydro
Tumut 3 (a)	Snowy Hydro Trading	Hydro
Blowering (a)	Snowy Hydro Trading	Hydro
Murray 1 (a)	Snowy Hydro Trading	Hydro
Murray 2 (a)	Snowy Hydro Trading	Hydro
Redbank	Redbank Power	Steam/Coal

(a) refers to clause 7.2.2

(b) refers to clause 7.2.3

(Schedule B of the Rule)

Yes – The Generating System is Category B. Complete Attachment B.

No - Answer question 5.

5. Does the Generating System meet the following criteria?

(a) generates electricity using Fossil Fuels (whether or not co-fired with a Renewable Energy Source):

- (i) and had a total nameplate rating of 30 MW or less as at 30 June 1997 and for which the first generating unit commenced Commercial Operation before 1 July 1997; or
- (ii) had a nameplate ratings of greater than 30 MW as at 1 January 2002 and for which the first generating unit commenced Commercial Operation before 1 January 2002; or

(b) generates electricity using Renewable Energy Sources (only) and for which the first generating unit commenced Commercial Operation before 1 January 1997

▶ **Yes** – The Generating System is Category C. Complete Attachment C.

▶ **No** – The Generating System is Category D. Complete Attachment D.

Part Six – Declaration

The application form must be validly signed by a person with the appropriate legal authority to bind the applicant to the submitted application form. Such persons would include the applying entity's Chief Executive Officer, Chief Financial Officer, Managing Director or Board Member (the applicant).

If there is more than one applicant, all applicants (or a person authorised by all applicants), must sign the Application Form.

If the signatory is not the applicant, the signatory must provide evidence that the applicant has authorised the signatory to sign the Application Form on the applicant's behalf.

The applicant must also download the '**Undertaking regarding benefits under other mandatory Greenhouse Gas schemes**' form from the Scheme website. This form should be printed on the applicant's letterhead and be signed by the same person who signed the Application form.

If the applicant has previously submitted this undertaking with respect to a separate application for accreditation, a copy of this original undertaking is satisfactory to meet the Scheme Administrator's requirements.

Note: Before signing and submitting the application form, please ensure that the application form fully addresses each question in accordance with the Guide. Only a suitably complete application will be accepted by the Scheme Administrator for further assessment. An incomplete application may be rejected by the Scheme Administrator.

Attachment A – Category A Generating System

A(i) Is the Generating System listed in Schedule C of the Rule?

All those Generating Systems listed in Schedule C of the Rule are classified as Category A, provided there is a power purchasing agreement in place for the Generating System (that was entered into prior to 1 January 2003) and that this agreement has not been terminated.

If your Generating System is listed in Schedule C please proceed to Question A(iii). Otherwise, proceed to Question A(ii).

A(ii) Was the Generating System claimed as either Category A or Category F under the previous scheme?

To be eligible as a Category A generator under the Rule, the Generating System needs to have been claimed as either Category A or Category F (as referred to in the October 2000 Emissions Workbook) under the previous scheme in force under the Act.

If the Generating System was claimed as either Category A or Category F under the previous scheme, please provide evidence that the Generating System satisfied the criteria for Category A (under the previous scheme) and that the Generating System was validly claimed as Category A or F.

If the Generating System was not classified as a Category A or F under the previous scheme it cannot be classified as Category A for the purposes of the NSW Greenhouse Gas Abatement Scheme. **Please complete another attachment.**

A(iii) Please state the details of the Power Purchase Agreement

You are asked to provide key details of the Power Purchase Agreement (PPA) relating to the Generating System, including:

- the parties to the PPA . Please identify which party is the 'Original' Generator and which party is the 'Original' Deemed Retailer. The term 'Original' is used in the event that one or both of the original parties to the PPA has changed, for example as the result of nomination (see the explanatory comments for question 1(c) in section 2.2 above) or change of name.
- whether the PPA states a maximum amount of generation in MWh to which the Original Deemed Retailer is contractually entitled under the PPA in a calendar year, and if so, what this amount is (in MWh).

The Original Deemed Retailer means the Retailer who is the actual party to the PPA (as per clause 6.3.1(a)), as opposed to a person who has been nominated as the Retailer (as per Clause 6.3(b) of the Rule).

- the term of the PPA, including any options to extend.

Supporting Documents

Supporting documentation must include the relevant extracts from the PPA in evidence of the points described above. However, it is likely that the specific terms of the PPA are subject to confidentiality. As such, wherever possible, agreement should be reached between the parties to disclose this relevant information (on a confidential basis to the Scheme Administrator) so that a full assessment on eligibility as Category A can be made. Applicants are asked not to attach complete copies of the PPA

A(iv) Surrendering right to create NGACs to Deemed Retailer

A person who is the Generator accredited in respect of a Generating System (under Clause 6.2 of the Rule) may surrender their entitlement to create NGACs to the Deemed Retailer (Clause 6.2.1(c) of the Rule). Please advise whether this has occurred.

Supporting Documents

If the Generator (Original or nominated) of the Generating System has surrendered its entitlement then a copy of the nomination statement provided to the Deemed Retailer under Clause 6.2.1(c) of the Rule must be provided with the application. Please see Guidance Point 2(a) for the suggested wording for the nomination of a "Generator".

A(v) What is the appropriate type of NSW Production Baseline for the Generating System?

This question asks you to indicate the type of NSW Production Baseline which is appropriate for the Generating System. The appropriate NSW Production Baseline for different Category A Generating Systems is illustrated in Guidance Point 6 on the following page.

A(vi) Please state the proposed NSW Production Baseline for the Generating System in MWh

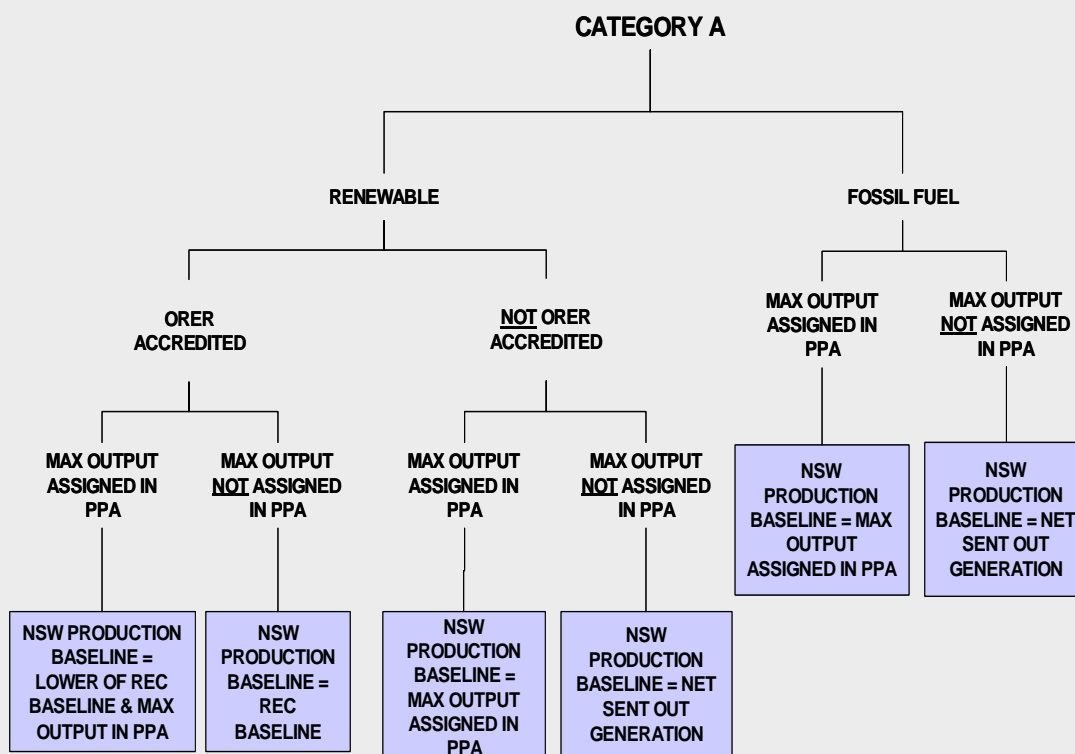
This question asks you to state the NSW Production Baseline for the Generating System (defined in question A(v) – above) in MWh. Applicants are required to attach calculations (in the case of Net Sent Out Generation) and relevant supporting documents.

Supporting Documents

These should include:

- the notice of accreditation from ORER (as required in question 2(e)).
- relevant sections of the PPA (as required in question A(iii)), or
- monthly meter readings of Net Sent Out Generation for the relevant periods.

Guidance Point 6: Determining Category A Baselines



1. The REC Baseline allocated by ORER = NSW Production Baseline

This is appropriate for Generating Systems that are ORER accredited and:

- no maximum assigned output is defined in the PPA, or
- the REC baseline is lower than the maximum output assigned in the PPA.

2. Maximum amount of electricity to which the Deemed Retailer entitled in a calendar year under the PPA = NSW Production Baseline

This is appropriate for Generating Systems:

- that have a maximum assigned output defined in the PPA, and
- in the case of Generating Systems that use renewable fuels, where the maximum output assigned in the PPA is lower than the REC baseline.

3. Net sent out generation (for the current calendar year) = NSW Production Baseline

This is appropriate for Generating Systems that:

- are not ORER accredited, and
- do not have a maximum assigned output defined in the PPA.

A(vii) Does the Generating System use waste coal mine gas, landfill gas, sewage gas, manufactured methane gas, or fugitive methane gas from other Renewable Energy Sources as fuel?

Applicant's whose Generating Systems use:

- waste coal mine gas, or
- landfill gas, sewage gas, manufactured methane gas or fugitive methane from other Renewable Energy Sources

and who propose to use Equations 13 or 16 or Method 5 of the Rule to calculate their fugitive emissions avoided, may calculate this figure using either the actual energy content of the respective fuel used; an estimated value approved by the Scheme Administrator; or by using a default factor of 36%.

As such, this question asks you to indicate whether your Generating System uses the aforementioned fuels, and if so, to indicate the basis on which you intend to calculate the fugitive emissions avoided for the Generating System.

A(viii) Was the Generating System modified after 1 January 2002 to become a cogeneration plant?

Under clause 10.2(a) of the Rule a Generator or Deemed Retailer for a cogeneration plant may adjust their respective total greenhouse gas emissions (using Method 4) to take into account notional greenhouse gas emissions avoided through use of heat that would have otherwise been wasted.

However, under clause 10.2(b) of the Rule, if a Category A Generating System was modified to become a cogeneration plant after 1 January 2002, only the Generator in respect of that plant is entitled to use Method 4 to offset their total greenhouse gas emissions for all generation activities after this date. That is, for generation activities after 1 January 2002, the Deemed Retailer is unable to use Method 4 to adjust their total greenhouse gas emissions unless they have been nominated to do so by the respective Generator (as per clause 6.2.1(c) - please see Guidance Point 2(a) for the suggested wording for this nomination).

As such, please complete question A(viii).

If you are the Generator for a Generating System that was modified to become a cogeneration plant after 1 January 2002, or a Deemed Retailer nominated by that respective Generator, please attach supporting documents which evidence that the modified Generating System (cogeneration plant) commenced commercial operations after 1 January 2002.

A(ix) Proposed calculation methodology

This question requires you to stipulate the Equations and/or Methods from the Rule that will be used to calculate your NGAC entitlement, as well as any nominated factors or coefficients from the Rule (or proposed for acceptance from the Scheme Administrator) that you intend to use in applying these Equations and/or Methods. Please note, it is not necessary to state derived figures.

For example, in the case of a generator for a natural gas fired (turbine) generating system, information may be provided in the following manner:

Equations/Methods used	Factors or coefficients applied	Source
Equation 1	NSW pool coefficient of 0.906 for 2004 Emissions Intensity adjustment factor of 1.0	The Regulation Table 9 of Rule
Equation 2	NSW Production Baseline of 130,764 MWh	Max amount specified in PPA
Equation 4	NA	NA
Equation 7	CO ₂ emission factor of 50.8 kt CO ₂ /PJ CO ₂ combustion factor of 0.995	Table 3 of Rule Table 4 of Rule
Equation 8	CH ₄ emission factor of 0.008 kt CH ₄ /PJ	Table 5 of Rule
Equation 9	N ₂ O emission factor of 0.0001 kt N ₂ O/PJ 3)	Table 5 of Rule
Equation 10	CO ₂ fugitive emissions factor of 2.60 kt CO ₂ /PJ	Table 2 of Rule
Equation 11	CH ₄ fugitive emissions factor of 0.089 kt CH ₄ /PJ	Table 2 of Rule

A(x) Estimated number of NGACs to be created

Question A(x) asks you to apply the parameters stated in questions A(i) to A(viii) and provide sample calculations of how the applicant will calculate the number of NGACs generated by its abatement activities over the first 3 calendar years of accreditation.

In developing the calculations, you should apply Clause 9.1 of the Rule. Worked examples of calculations using these Clauses are shown in Guidance Point 7 (below).

You must attach to the application (at a minimum):

- **A hardcopy spreadsheet of calculations** (a soft copy on a floppy disk must also be provided). All formula used should be clearly stated and referenced (from either the Rule or other relevant source allowable under the Rule). Values which are default, calculated and estimated, should be differentiated and identified. All input data should be labelled.
- **Methodology.** This should be detailed and explanatory. Please note that:
 - (i) All information should be fully referenced
 - (ii) Assumptions, estimates and/ or extrapolation of data should be identified, explained and justified
 - (iii) Testing and measurement procedures must be outlined, including details of:
 - instruments used and details of their calibration
 - any standard procedures used

- number of tests, timing of tests and repeatability
- person(s) performing the tests and their qualifications

■ **All calculations must be supported by relevant documentation. For example:**

- (iv) energy bills
- (v) contractor invoices
- (vi) weighbridge dockets
- (vii) calibration certificates

Guidance Point 7: Example 1: Category A Hydro Generator in NSW

Assume

- Produced 1000 GWh of Net Sent Out Generation in 2004, and is connected to a regulated Transmission System in NSW.
- Has been assigned a REC baseline of 700 GWh and a Marginal Loss Factor of 0.995 by ORER.
- Has in place a PPA with a retailer which entitles the retailer to a maximum of 800 GWh a year.
- The generator elected to create 50,000 RECs from its production.

Step 1: Establish NSW Production Baseline

- Since ORER has assigned a REC baseline and a maximum output has been specified in the PPA, Clause 8.1(b)(ii) of the Rule applies. In this situation the NSW Production Baseline is the lower of the REC baseline and the maximum output assigned to the retailer under the PPA.

The NSW Production Baseline is therefore 700 GWh (the REC baseline).

Step 2: Calculate Emission Intensity (Equation 4)

- Calculate the Emissions Intensity of generation using Equation 4

Emissions Intensity = Total Greenhouse Gas Emissions/Sent Out Generation

In this case, since the Generating System is hydro, it has zero emissions. ie Emissions Intensity = 0 tonnes CO₂-e/MWh

Step 3: Calculate the number of NGACs that can be created

For a Category A Generating System, it is possible for both the 'Generator' of the Generating System and the 'Deemed Retailer' to create NGACs (depending upon the NSW Production Baseline assigned and actual production).

Continued next page

Deemed Retailer for the Generating System

Based upon Equation 3 of the Rule, since Net Sent Out Generation (1,000,000 MWh) > NSW Production Baseline (700,000 MWh), the Eligible Generation for the retailer is simply the NSW Production Baseline (700,000 MWh).

In line with Equation 1 of the Rule, the Deemed Retailer may therefore create:

Number of NGACs that may be created

$$= \text{Eligible Generation} \times (\text{NSW Pool Coefficient} \times \text{Emissions Intensity Adjustment Factor}^* - \text{Emissions Intensity})$$

* See table 9 of Schedule A)

$$= 700,000 \text{ MWh} \times (0.906 \text{ tonnes CO}_2\text{-e/MWh} \times 0.975 - 0 \text{ tonnes CO}_2\text{-e/MWh})$$

$$= 700,000 \times 0.88335 \text{ tonnes CO}_2\text{-e}$$

$$= 618,345 \text{ tonnes CO}_2\text{-e}$$

That is, the Deemed Retailer may create 618,345 NGACs in 2004.

Generator for the Generating System

Based upon Equation 2 of the Rule, since Net Sent Out Generation (1,000,000 MWh) – NSW Production Baseline (700,000 MWh) – RECs created/MLF (50,000 MWh/0.995) >0, Eligible Generation for the

Generator of the Generating System is:

$$= \text{Net Sent Out Generation} - \text{NSW Production Baseline} - \text{RECs created/Marginal Loss Factor}$$

$$= 1,000,000 - 700,000 - (50,000/0.995)$$

$$= 249,749 \text{ MWh}$$

In line with Equation 1 of the Rule, the operator of the Generating System may therefore create:

Number of NGACs that may be created

$$= \text{Eligible Generation} \times (\text{NSW Pool Coefficient} \times \text{Emissions Intensity Adjustment Factor}^* - \text{Emissions Intensity})$$

* See table 9 of Schedule A)

$$= 249,749 \text{ MWh} \times (0.906 \text{ tonnes CO}_2\text{-e/MWh} \times 0.975 - 0 \text{ tonnes CO}_2\text{-e/MWh})$$

$$= 249,749 \times 0.88335 \text{ tonnes CO}_2\text{-e}$$

$$= 220,615 \text{ tonnes CO}_2\text{-e}$$

That is, the Generator of the Generating System may create 220,615 NGACs in 2004.

A(xi) Timing of NGAC creation and registration

This question asks for information on how often the applicant intends to create and register certificates under the Scheme. Please advise if you intend registering on a monthly, quarterly, six monthly or annual basis, or at some other time period interval?

The second part of the question also asks for how many certificates the applicant intends to register on each occasion.

Please remember however, that the applicant can only register certificates for abatement activity(s) after the abatement resulting from that activity(s) has occurred.

Attachment B – Category B Generating System

B(i) Is the Generating System listed in Schedule B of the Rule?

You must confirm that the Generating System meets the definition of a Category B Generating System. Only those Generating Systems listed in Schedule B of the Rule are Category B. All other applicants must complete another attachment.

B(ii) Please indicate the fuel type used in the Generating System

This question asks you to indicate whether the Generating System uses renewable fuel only, or whether it uses fossil fuel or fossil fuel co-fired with a Renewable Energy Source.

Renewable fuel only

The Scheme adopts the *Renewable Energy (Electricity) Act 2000* (Section 17) definition of eligible renewable energy sources (sometimes referred to in this Guide and the Application Form as "Renewable Fuel"). See the notes to question 2(f) (in section 2.3 above) for a list of eligible Renewable Energy Sources taken from Section 17(1) of the *Renewable Energy (Electricity) Act 2000*.

Applicants operating Category B Generating Systems, which only use a renewable fuel, are required to complete section B1. If the Generating System uses fossil fuel co-fired with a Renewable Energy Source, applicants are required to complete section B2 instead.

Fossil Fuel or Co-fired

Applicants operating Category B Generating Systems using fossil fuels or fossil fuels co-fired with a Renewable Energy Source are required to complete section B2. See the notes to question 2(f) (in section 2.3 above) for the definition of Renewable Energy Source.

Fossil Fuel means "black coal, brown coal, natural gas, fuels derived from petroleum, coal seam methane or Waste Coal Mine Gas". (Clause 11.1 of the Rule).

B1 – Renewable Fuels Only

This section is to be completed by applicants who are applying for accreditation in respect of a Category B Generating System using only renewable fuels.

B1(i) Proposed calculation methodology

This question requires you to stipulate the Equations and/or Methods from the Rule that will be used to calculate your NGAC entitlement, as well as any nominated factors or coefficients from the Rule (or proposed for acceptance from the Scheme Administrator) that you intend to use in applying these Equations and/or Methods. Please note, it is not necessary to state derived figures.

For example, in the case of a generator for a NSW Snowy hydro generating system, information may be provided in the following manner:

Equations/Methods used	Factors or coefficients applied	Source
Equation 1	NSW pool coefficient of 0.906 for 2004 Emissions Intensity adjustment factor of 0.975	The Regulation From Table 9 and Table 8 of Rule
Equation 2	NSW Production Baseline = 71% of REC Baseline NSOG* = 71% of lesser of NSOG & REC Baseline	Clause 8.2.2(a) Clause 7.2.2
Equation 4	Emissions Intensity = 0	Hydro, therefore no GHG emissions

* NSOG = Net Sent Out Generation

B1(ii) Estimated number of NGACs to be created

Question B1(ii) asks you to demonstrate how the applicant will calculate the number of NGACs generated by its abatement activities over the first 3 calendar years of accreditation.

In developing the calculations, you should apply Clauses 9.2.3 of the Rule.

You must attach to the application (at a minimum):

- A hardcopy spreadsheet of calculations (a soft copy on a floppy disk must also be provided). All formula used should be clearly stated and referenced (from either the Rule or other relevant source allowable under the Rule). Values which are default, calculated and estimated, should be differentiated and identified. All input data should be labelled.
- Methodology. This should be detailed and explanatory. Please note that:

- (i) All information should be fully referenced.
- (ii) Assumptions, estimated and/ or extrapolation of data should be identified, explained and justified.
- (iii) Testing and measurement procedures must be outlined including details of:
 - instruments used and details of their calibration
 - any standard procedures used
 - number of tests, timing of tests and repeatability
 - person(s) performing the tests and their qualification
- All calculations must be supported by relevant documentation, for example:
 - (iv) energy bills
 - (v) contractor invoices
 - (vi) weighbridge docketts
 - (vii) calibration certificates

B1(iii) Timing of NGAC creation and registration

This question asks for information on how often the applicant intends to create and register certificates under the Scheme. Please advise if you intend registering on a monthly, quarterly, six monthly or annual basis, or at some other time period interval.

The second part of the question also asks for how many certificates the applicant intends to register on each occasion.

Please remember however, that the applicant can only register certificates for abatement activity(s) after the abatement resulting from that activity(s) has occurred.

B2 – Fossil Fuels or Co-Fired Plants Only

This section is to be completed by applicants who are applying for accreditation in respect of a Category B Generating System using fossil fuels only, or fossil fuels co-fired with a Renewable Energy Source.

B2(i) Please indicate the fuel type used in the Generating System:

Applicants are asked to state whether the Generating System uses fossil fuels only or fossil fuels co-fired with a Renewable Energy Source. Please note that biomass sourced from Native Forest Bio-Material, is not eligible as a Renewable Energy Source for the purposes of the Scheme (under clause 9.6). See the notes to question 2(d) (in section 2.3 above) for a definition of Native Forest Bio-Material.

Supporting Documents

Please attach the energy content values of each fuel used and details of calculations, methods, and assumptions used to produce these. Supporting documents should also be attached.

B2(ii) Do you intend to create NGACs, rather than RECs, for co-firing with a RES?

In this question you are asked to state whether you intend to create NGACs rather than RECs for that portion of electricity generated from co-firing with a Renewable Energy Source (see list below). An applicant that is seeking accreditation in respect of a Generating System that uses a mix of fossil fuels in co-firing (as opposed to a mix of a fossil fuel and a Renewable Energy Source) should answer "no" to this question.

If an applicant does use a fossil fuel and a Renewable Energy Source in co-firing, and does intend to create NGACs from co-firing, (instead of creating RECs, in respect of the renewable generation component, under the *Renewable Energy (Electricity) Act 2000*), then they should indicate 'Yes' and ensure that they apply Equation 5 of the Rule (Clause 9.2.4 of the Rule) in addition to that of the appropriate Method (1, 2 or 3).

For your information, the Scheme adopts the *Renewable Energy (Electricity) Act 2000* (Section 17) definition of "eligible renewable energy sources" (sometimes referred to in this Guide and the Application Form as "Renewable Fuel").

Section 17(1) The following energy sources are eligible renewable energy sources:

- | | | |
|------------------|---|---------------------------------|
| (a) hydro | (i) food and agricultural wet | (q) micro hydro Renewable Stand |
| (b) wind | (j) landfill gas | (r) solar hot water |
| (c) solar | (k) municipal solid waste | (s) co-firing |
| (d) bagasse co- | (l) sewage gas | (t) wave |
| (e) black liquor | (m) geothermal-aquifer | (u) ocean |
| (f) wood waste | (n) tidal | (v) fuel cells |
| (g) energy crops | (o) photovoltaic and photovoltaic Renewable Stand Alone Power | |
| (h) crop waste | (p) wind and wind hybrid Renewable Stand Alone Power Supply | |

NOTE

For the purposes of answering the following questions (B2(iii) – B2(v)), a fossil fuelled or co-fired Category B generating system may apply to use any of Methods 1, 2 and 3 of the Rule to create NGACs, where appropriate. A separate Application Form for each Method is not required.

In utilising any of these three Methods, the Scheme Administrator strongly recommends that project proponents contact the Scheme Administrator to discuss their intended approach(es), prior to submission of an application for accreditation. This is especially the case if the project proponent intends to utilise Method 2 – Redesign Gain.

Specifically, in utilising Method 2 of the Generation Rule, a project proponent must conduct a heat rate test (or another testing methodology approved by the Scheme Administrator) prior to making any design changes to the generating system. As such, it is imperative that the Scheme Administrator be contacted (and an application subsequently submitted) sooner, rather than later, to allow sufficient time for the Scheme Administrator to assess and approve the proponents testing methodology, prior to the actual testing taking place.

B2(iii) Does the applicant intend to create NGACs Using Method 1 – GES Gain?

If the applicant intends to create NGACs from measures made to improve operational efficiency on or after 1 January 2002 without significantly changing the design of the Generating System or its fuel mix, and is a participant in the Commonwealth Generator Efficiency Standards (GES) then it may calculate NGACs using Method 1 - GES Gain (see clause 9.2.1(a) of the Rule).

If the applicant does not intend to take such measures, or is not a participant in the Commonwealth Generator Efficiency Standards (GES), then it may not calculate NGACs using Method 1 - GES Gain but may be able to apply under a different method. Please proceed to B2(iv).

If the applicant has taken such measures, is a GES participant, and does intend to create NGACs using Method 1 – GES Gain, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- evidence of participation in the GES
- the operational changes to the Generating System
- the dates at which the measures were, or are to be, implemented
- a case explaining why these measures may be regarded as operational efficiency improvements.

Additionally, when answering question B2(vii) below, the applicant should:

- ensure that Method 1 – GES Gain from Clause 9.2.1(a) of the Rule is applied;
- calculate and attach the calculations noted in Method 1, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: *Generator Efficiency Standards* and the *Technical Guidelines: Generator Efficiency Standards*; and

- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves.

The applicant should now proceed to question B2(iv).

B2(iv) Does the applicant intend to create NGACS from Method 2 – Redesign Gain?

If the applicant takes measures on or after 1 January 2002, that in the view of the Scheme Administrator, significantly change the design of the Generating System but not its fuel mix, then it may calculate NGACs using Method 2 - Redesign Gain (see clause 9.2.1(b) of the Rule).

If the applicant does not intend to take such measures, the applicant should proceed to question B2(v).

If the applicant has taken such measures and intends to create NGACs using Method 2 – Redesign Gain, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- the design change to the Generating System, and a detailed description of what this entails in terms of improvement to plant performance and efficiencies etc, and
- when these measures were, or are to be, implemented.

Please note that in answering question B2(vii) below the applicant should:

- ensure that Method 2 – Redesign Gain from Clause 9.2.1(b) of the Rule is applied. This requires the conducting of heat rate tests at >70% electricity output prior to, and after, making any changes in the current design (following the Commonwealth Generator Emissions Standards Methodology), or another method approved by the Scheme Administrator;
- calculate and attach the calculations noted in Method 2, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: *Generator Efficiency Standards* and the *Technical Guidelines: Generator Efficiency Standards*; and
- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves for before and after the implementation of changes.

The applicant should now proceed to question B2(v).

B2(v) Does the applicant intend to create NGACS from Method 3 – Fuel Switch Gain?

If the applicant intends to create NGACs from switching to a mix of fuels (on or after 1 January 2002) of lesser emissions intensity than the Generating System's original mix of fuels, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- the fuel(s) used prior to the fuel switch,
- the fuel(s) used following the fuel switch,

and the date the respective fuel(s) switch was implemented. Please note that in answering B2(vii) below, the applicant should:

- ensure that Method 3 from Clause 9.2.1(c) of the Rule is applied
- calculate and attach the calculations noted in Method 3, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: *Generator Efficiency Standards* and the *Technical Guidelines: Generator Efficiency Standards*; and
- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves for before and after the fuel switching.

The applicant should now proceed to question B2(vi).

B2(vi) What measurement period does the applicant intend to use for their calculations under Method 1, 2 or 3?

For each of the three respective Methods (above), an applicant may select a measurement period acceptable to the Scheme Administrator, such as yearly, monthly, or some other measurement period, provided that this selected measurement period can be supported by the applicant's data records, record-keeping arrangements, metering equipment etc.

In answering this question, please state your proposed measurement period and give reasoning in support of this measurement period, so that the Scheme Administrator may fully assess its applicability (as above).

B2(vii) Estimated number of NGACs to be created

This question asks you to apply the relevant calculation Method(s) and Equation 5 (if directed in question B2(ii)) and to provide sample calculations of how the applicant will calculate the number of NGACs generated by its abatement activities over the first 3 calendar years of accreditation.

In developing the calculations, you should apply Clauses 8 and 9 of the Rule.

You must attach to the application (at a minimum):

- **A hardcopy spreadsheet of the calculations** (a soft copy on a floppy disk must also be provided). All formula used should be clearly stated and referenced (from either the Rule or other relevant source allowable under the Rule). Values which are default, calculated and estimated, should be differentiated and identified. All input data should be labelled.
- **Methodology.** This should be detailed and explanatory. Please note that:
 - (i) All information should be fully referenced

- (ii) Assumptions, estimates and/ or extrapolation of data should be identified, explained and justified
- (iii) Testing and measurement procedures must be outlined, including details of:
 - instruments used and details of their calibration
 - any standard procedures used
 - number of tests, timing of tests and repeatability
 - person(s) performing the tests and their qualifications
- All calculations must be supported by relevant documentation. For example:
 - (i) energy bills
 - (ii) contractor invoices
 - (iii) weighbridge dockets
 - (iv) calibration certificates

B2(viii) Timing of NGAC creation and registration

This question asks for information on how often the applicant intends to create and register certificates under the Scheme. Please advise whether you intend registering on a monthly, quarterly, six monthly or annual basis, or at some other time period interval?

The second part of the question also asks for how many certificates the applicant intends to register on each occasion.

Please remember however, that the applicant can only register certificates for abatement activity(s) after the abatement resulting from that activity(s) has occurred.

Attachment C – Category C Generating System

C(i) Please indicate which of the following describes the Generating System and attach relevant documentation to support this classification

If the Generating System is neither Category A nor B, applicants are asked to confirm that the Generating System is Category C by indicating whether it has:

- A nameplate rating of 30MW or less that generates electricity using fossil fuels and commenced commercial operation before 30 June 1997.
- A nameplate rating of more than 30MW that generates electricity using fossil fuels and commenced commercial operation before 1 January 2002.
- generates electricity using renewable energy (only) and commenced commercial operation before 1 January 2002.

If a Generating System is not a Category A, Category B or Category C Generating System, then it is classified as a Category D Generating System and Attachment D should be completed instead.

Commercial Operation means “receiving any payment for electricity generated by a Generating System, after completion of testing to meet conditions of any licences or authorisations prior to those licences or authorisations being granted or becoming effective” (Clause 11.1 of the Rule).

C(ii) Indicate the approach the applicant intends to use to calculate NGACs created

In this question you are asked to tick whether the applicant intends to use the **Relative Intensity Approach** (applying Equations 1 and 2, or Equation 6) or the **Efficiency Improvement Approach** (applying Methods 1, 2 or 3), as allowed for under Clause 9.3 of the Rule. Depending on the approach taken, Section C1 or C2 is to be completed as indicated.

Please note that under Clause 9.3.3 of the Rule, applicants applying with respect to Category C Generating Systems using only Renewable Energy Sources as fuel, must apply the Relative Intensity (or NSW Production Baseline) approach.

For further assistance in determining your approach refer to Guidance Point 8 (below).

Guidance Point 8: Selecting your ‘approach’ to creating NGACS for a Category C Generating System

Case 1: The applicant’s Generating System generates electricity using Renewable Energy Sources only.

Approach: The applicant must use the NSW Production Baseline approach (clause 9.3.3 of the Rule).

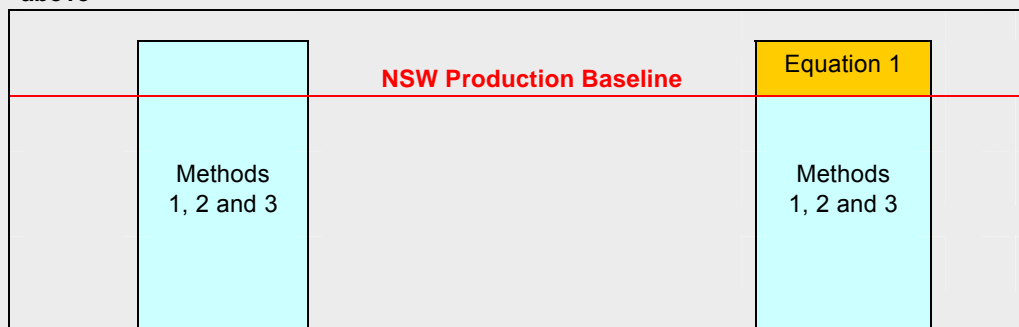
Case 2: The applicant’s Generating System uses Fossil Fuels (whether or not co-fired with Renewable Energy Sources).

Approach: The applicant can use either the NSW Production Baseline approach or the Efficiency Improvement approach, or in some cases both (clause 9.3.1 of the Rule).

For example, if the Generating System in Case 2 (above):

- (a) generates electricity at an emissions intensity greater than the NSW pool coefficient, the applicant would be unable to use the NSW Production Baseline approach. However, if the applicant can demonstrate efficiency improvements to the Generating System under Methods 1, 2 or 3 of the Rule (clause 9.3.1(b)), they can use the Efficiency Improvement approach to create NGACs (on the basis of their Net Sent Out Generation).
- (b) generates electricity at an emissions intensity less than the NSW pool coefficient and exceeds its NSW Production Baseline, the applicant can use the NSW Production Baseline approach (Equation 1) to create NGACs for eligible generation above its NSW Production Baseline (clause 9.3.1(a)). In addition, if the applicant can demonstrate efficiency improvements to the Generating System under Methods 1, 2 or 3 of the Rule (clause 9.3.1(b)), they can also use the Efficiency Improvement approach. **Please note however**, that if both these approaches are used, clause 9.3.1(c) of the Rule requires the applicant to create NGACS using Methods 1, 2 or 3 on the basis of its NSW Production Baseline figure (rather than its Net Sent Out Generation figure), and then use Equation 1 to create NGACs for eligible generation above its NSW Production Baseline. The intent of clause 9.3.1(c) therefore, is to prohibit the applicant from gaining a ‘double benefit’ in using both approaches above the Generating System’s NSW Production Baseline.

Net Sent Out Generation for the two Generating Systems as described in Case 2(a) and 2(b) above



Case 2(a)
Generating System with Emissions Intensity greater than the pool coefficient and production greater than NSW Production Baseline

Case 2(b)
Generating System with Emissions Intensity less than the pool coefficient and production greater than NSW Production Baseline

C1 – NSW Production Baseline Approach

This Section is only to be completed if you ticked the NSW Production Baseline Approach box in question C(ii) above.

C1(i) Generating System – Production

In the first instance, this Question requires you to insert the Date of Commercial Operation for the first generating unit that comprises the Generating System.

Commercial Operation “*means receiving any payment for electricity generated by a Generating System, after completion of testing to meet conditions of any licences or authorisations prior to those licences or authorisations being granted or becoming effective*” (Clause 11.1).

Secondly, this Question requires you to provide annual historic generation production data for the Generating System for the period 1 January 1997 to 31 December 2001 (inclusive), or from the date of commercial operation (above - if more recent than 1 January 1997). Please use the following definitions in completing the Table:

- “Gross Generation” means total electricity generated by the Generating System.
- “Auxiliary Electricity Use” means electricity consumed by the Generating System.
- “Sent Out Generation” means Gross Generation less Auxiliary Electricity Use for the Generating System.
- “Electricity Exported to the Network” means the amount of electricity supplied by the Generating System to the NSW Electricity Network or a Transmission or Distribution System interconnected with the NSW Electricity Network.
- “Electricity Imported from the Network” means the amount of electricity supplied to the Generating System from the NSW Electricity Network or a Transmission or Distribution System interconnected with the NSW Electricity Network).
- “Net Sent Out Generation” means Electricity Exported to the Network less Electricity Imported from the Network, for the Generating System.

Thirdly, in the context of the Generating System's metering arrangements (described earlier in question 3(b) you must attach a detailed description of how these values were derived.

Note: The value for “Sent Out Generation” will, in most cases, be equivalent to “Electricity Exported to the Network”, however if the Generating System is supplying electricity to end user equipment within the same end user complex as the Generating System itself, then the values will be different, with only the export component being eligible under the Generation Rule. (The un-exported electricity component supplied to the end-user may however be eligible under *Greenhouse Gas Benchmark (Demand Side Abatement) Rule No. 3 of 2003*).

C1(ii) Please indicate the type of NSW Production Baseline appropriate for the Generating System

In this question you are asked to indicate whether the:

- REC Baseline; or the
- Average Net Sent Out Generation (without adjustment for atypically low output, atypically high output due to testing or where not all generating units were commissioned or on-line); or the
- Adjusted Average Net Sent Out Generation;

is the appropriate NSW Production Baseline to be used for the Generating System.

If the Generating System uses Renewable Energy Sources only, and has been assigned a REC baseline, the Generating System's NSW Production Baseline is equal to its REC baseline. Please state this value as the NSW Production Baseline in question C1(iii).

If the Generating System uses Renewable Energy Sources only but ORER has not assigned a REC baseline, or if the Generating System uses fossil fuels (regardless of whether it co-fires with, or uses a majority of, renewable fuels) the Generating System's NSW Production Baseline is the average annual net sent out generation for the Generating System for the calendar years 1997 to 2001. This value must be the average of the Net Sent Out Generation values for the years 1997 to 2001. You are required to clearly state this value and provide supporting evidence and calculations in your response to question C1(iii).

Applicants may be able to use an adjusted annual net sent out generation value if they can demonstrate to the Scheme Administrator that the years 1997-2001 are not indicative of typical production levels during this period, in that there was atypically low output due to rebuilds or outages; not all units were commissioned; or there was atypically high output due to testing. Applicants seeking adjustment of their average annual Net Sent Out Generation should state the adjusted value in C1(iii) and provide thorough documentation in support of their reasoning, as well as supporting evidence and calculations, to the Scheme Administrator.

C1(iii) Please state the proposed NSW Production Baseline (as determined using question C(ii) above) in MWh per calendar year

Please insert the proposed NSW Production Baseline as determined in question C1(ii) above. Those applicants proposing a NSW Production Baseline determined on the basis of adjusted Net Sent Out Generation must provide thorough documentation in support of their reasoning, as well as supporting evidence and calculations, to the Scheme Administrator.

C1(iv) Does the Generating System use waste coal mine gas, landfill gas, sewage gas, manufactured methane gas, or fugitive methane gas from other Renewable Energy Sources as fuel?

Applicant's whose Generating Systems use:

- waste coal mine gas, or
- landfill gas, sewage gas, manufactured methane gas or fugitive methane from other Renewable Energy Sources

and who propose to use Equations 13 or 16 or Method 5 of the Rule to calculate their fugitive emissions avoided, may calculate this figure using either the actual energy content of the respective fuel used; an estimated value approved by the Scheme Administrator; or by using a default factor of 36%.

As such, this question asks you to indicate whether your Generating System uses the aforementioned fuels, and if so, to indicate the basis on which you intend to calculate the fugitive emissions avoided for the Generating System.

C1(v) If the Generating System is a cogeneration plant, does the applicant intend to use Method 4 to lower its Total Greenhouse Gas Emissions?

Under clause 10.2(a) of the Rule a Generator for a cogeneration plant may adjust their respective total greenhouse gas emissions (using Method 4) to take into account notional greenhouse gas emissions avoided through use of heat that would have otherwise been wasted.

Please indicate appropriately whether you intend to use Method 4 to accordingly lower your Total Greenhouse Gas Emissions through use of cogeneration heat that would otherwise have been wasted.

C1(vi) Proposed calculation methodology

This question requires you to stipulate the Equations and/or Methods from the Rule that will be used to calculate your NGAC entitlement, as well as any nominated factors or coefficients from the Rule (or proposed for acceptance from the Scheme Administrator) that you intend to use in applying these Equations and/or Methods. Please note, it is not necessary to state derived figures.

For example, in the case of a generator for a natural gas fired (turbine) generating system, information may be provided in the following manner:

Equations/Methods used	Factors or coefficients applied	Source
Equation 1	NSW pool coefficient of 0.906 for 2004 Emissions Intensity adjustment factor of 1.0	The Regulation Table 9 of Rule
Equation 2	NSW Production Baseline of 130,764 MWh	Average NSOG for 1997-2001 (from question C1(ii))
Equation 4	NA	NA

Equation 7	CO ₂ emission factor of 50.8 kt Co ₂ /PJ CO ₂ combustion factor of 0.995	Table 3 of Rule Table 4 of Rule
Equation 8	CH ₄ emission factor of 0.008 kt CH ₄ /PJ	Table 5 of Rule
Equation 9	N ₂ O emission factor of 0.0001 kt N ₂ O/PJ 3)	Table 5 of Rule
Equation 10	CO ₂ fugitive emissions factor of 2.60 kt CO ₂ /PJ	Table 2 of Rule
Equation 11	CH ₄ fugitive emissions factor of 0.089 kt CH ₄ /PJ	Table 2 of Rule

Note: NSOG = Net Sent Out Generation

C1(vii) Estimated number of NGACs to be created

Question C1(vi) asks you to apply the parameters stated in questions C1(i) to C1(iv) to the respective Equations and Methods of the Rule (identified in C1(v) above) and provide sample calculations of how the applicant will calculate the number of NGACs generated by its abatement activities over the first 3 calendar years of accreditation. If the Generating System uses Fossil Fuel and the applicant intends to apply an Efficiency Improvement Approach (see section C2) in one of the first three (3) years of accreditation, please indicate that 'zero' NGACs will be created by applying Equation 1 for that year.

In developing these calculations, you should apply Clauses 8 and 9 of the Rule. Worked examples of calculations using these Clauses are shown in Guidance Point 9 following.

You must attach to the application (at a minimum):

- **A hardcopy spreadsheet of the calculations** (a soft copy on a floppy disk must also be provided). All formula used should be clearly stated and referenced (from either the Rule or other relevant source allowable under the Rule). Values which are default, calculated and estimated, should be differentiated and identified. All input data should be labelled.
- **Methodology.** This should be detailed and explanatory. Please note that:
 - (i) All information should be fully referenced
 - (ii) Assumptions, estimates and/ or extrapolation of data should be identified, explained and justified
 - (iii) Testing and measurement procedures must be outlined, including details of:
 - instruments used and details of their calibration
 - any standard procedures used
 - number of tests, timing of tests and repeatability
 - person(s) performing the tests and. their qualifications
- All calculations must be supported by relevant documentation. For example:

- (iv) energy bills
- (v) contractor invoices
- (vi) weighbridge docketts
- (vii) calibration certificates

Guidance Point 9: Example 2: Category C Gas Turbine Generating System

- gas turbine Generating System connected to a regulated Transmission System in NSW.
- the Generating System produced 300 GWh of gross generation in 2004 from 2 PJ of natural gas.
- the Generating System's auxiliaries consumed 1 GWh of electricity, and 2 GWh of electricity was imported from the Network
- the Generating System had historical production of
 - 200 GWh of Net Sent Out Generation in 1997
 - 230 GWh of Net Sent Out Generation in 1998
 - 45 GWh of Net Sent Out Generation in 1999
 - 250 GWh of Net Sent Out Generation in 2000
 - 260 GWh of Net Sent Out Generation in 2001
- production in 1999 was reduced due to disruption in gas supply

Step 1: Establish NSW Production Baseline

Using Clause 8.3(a) of the Rule, for a Category C fossil fuel Generating System, the NSW Production Baseline is calculated as the average annual Net Sent Out Generation during operations over the five calendar years from 1997 to 2001, adjusted for atypical events such as rebuilds, testing or not all units being commissioned. In the example, 1999 would be considered an atypical year due to the extended off-line period caused by pipeline failure. The average would then be calculated over the 4 typical years — 1997, 1998, 2000 and 2001.

The NSW Production Baseline would then be

$$= (200,000 \text{ MWh} + 230,000 \text{ MWh} + 250,000 \text{ MWh} + 260,000 \text{ MWh})/4$$

$$= 235,000 \text{ MWh}$$

Step 2: Calculate Adjusted Emissions Intensity

The first step is to calculate Total Greenhouse Gas Emission in accordance with Clause 10.1.

For gas generation, the Total Greenhouse Gas Emissions are calculated as the sum of

- CO₂ emissions at the point of combustion (Equation 7)
- CH₄ emissions at the point of combustion (Equation 8)
- N₂O emissions at the point of combustion (Equation 9)
- fugitive CO₂ emissions (Equation 10)
- fugitive CH₄ emissions (Equation 11)

Equation 7 CO₂ combustion emissions

$$= \text{Energy Content of Fuel} \times \text{CO}_2 \text{ emission factor (Table 3 of Schedule A to the Rule)} \times$$

combustion factor (Table 4 of Schedule A to the Rule) x 1000

= 2 PJ x 50.8 kt CO₂ /PJ x 0.995 x 1000

= 101,092 tonnes CO₂-e

Equation 8 CH₄ combustion emissions

= Energy Content of Fuel x CH₄ emission factor (Table 5 of Schedule A to the Rule) x 1000 x 21

= 2 PJ x 0.008 kt CO₂ /PJ x 1000 x 21

= 336 tonnes CO₂-e

Equation 9 N₂O combustion emissions

= Energy Content of Fuel x N₂O emission factor (Table 5 of Schedule A to the Rule) x 1000 x 310

= 2 PJ x 0.0001 kt CO₂ /PJ x 1000 x 310

= 62 tonnes CO₂-e

Equation 10 Fugitive CO₂ emissions

= Energy Content of Gas x CO₂ emission factor (Table 2 of Schedule A to the Rule) x 1000

= 2 PJ x 2.60 kt CO₂/PJ x 1000

= 5200 tonnes CO₂-e

Equation 11 Fugitive CH₄ emissions

= Energy Content of Fossil Fuel x CH₄ emission factor (Table 2 of Schedule A to the Rule) x 1000 x 21

= 2 PJ x 0.089 kt CH₄/PJ x 1000 x 21

= 3738 tonnes CO₂-e

Total Greenhouse Gas Emissions are then:

= 101,092 + 336 + 62 + 5,200 + 3,738

= 110,428 tonnes CO₂-e

From Equation 4, the Emission Intensity is calculated as:

= Total Greenhouse Emissions/Sent Out Generation

(where Sent Out Generation = Gross Generation less Auxiliary Electricity Use)

= 110,428 tonnes CO₂-e/299,000 MWh

= 0.369 tonnes CO₂-e/MWh

Step 3: Calculate the number of NGACs that can be created

Based upon Equation 2 of the Rule, since Net Sent Out Generation (300,000-1000-2000 MWh) – NSW Production Baseline (235,000 MWh) – RECs created/MLF (0) >0, Eligible Generation for the Generating System is:

= Net Sent Out Generation – NSW Production Baseline – RECs created/Marginal Loss Factor

(where Net Sent Out Generation = Gross Generation less Auxiliary Electricity Use less Import from Network)

= 300,000-1000-2000 MWh – 235,000 MWh – 0 MWh

= 62,000 MWh

In line with Equation 1 of the Rule, the operator of the Generating System may therefore create the following number of NGACs from the Generating System:

Number of NGACs that may be created

= Eligible Generation x (NSW Pool Coefficient x Emission Intensity Adjustment Factor – Emissions Intensity)

The Emission Intensity Adjustment Factors are given in Table 9 of Schedule A to the Rule. Since the Generating System is connected to the Transmission System in NSW, the Emission Intensity Adjustment Factor is 0.975. Therefore:

= Eligible Generation x (NSW Pool Coefficient x Emission Intensity Adjustment Factor – Emissions Intensity)

= 62,000 MWh x (0.906 tonnes CO₂-e/MWh x 0.975 – 0.369 tonnes CO₂-e/MWh)

= 62,000 x 0.51435 tonnes CO₂-e/MWh

= 31,889 tonnes CO₂-e

That is, the operator of the Generating System may create 31,889 NGACs in 2004.

C1(viii) Timing of NGAC creation and registration

This question asks for information on how often the applicant intends to create and register certificates under the Scheme. Please advise whether you intend registering on a monthly, quarterly, six monthly or annual basis, or at some other time period interval?

The second part of the question also asks for how many certificates the applicant intends to register on each occasion.

Please remember however, that the applicant can only register certificates for abatement activity(s) after the abatement resulting from that activity(s) has occurred.

C2 – Efficiency Improvement Approach (Methods 1, 2 and 3)

NOTE

For the purposes of answering the following questions (C2(i) – C2(iii)), a fossil fuelled or co-fired Category C generating system may apply to use any of Methods 1, 2 and 3 of the Rule to create NGACs, where appropriate. A separate Application Form for each Method is not required.

In utilising any of these three Methods, the Scheme Administrator strongly recommends that project proponents contact the Scheme Administrator to discuss their intended approach(es), prior to submission of an application for accreditation. This is especially the case if the project proponent intends to utilise Method 2 – Redesign Gain.

Specifically, in utilising Method 2 of the Generation Rule, a project proponent must conduct a heat rate test (or another testing methodology approved by the Scheme Administrator) prior to making any design changes to the generating system. As such, it is imperative that the Scheme Administrator be contacted (and an application subsequently submitted) sooner, rather than later, to allow sufficient time for the Scheme Administrator to assess and approve the proponents testing methodology, prior to the actual testing taking place.

Clause 9.3.1 of the Rule allows applicants for Category C Generating Systems that use fossil fuels (whether or not co-fired with a Renewable Energy Source) to calculate the number of NGACs created, using Equation 1 of the Rule, or Methods 1, 2 or 3 of the Rule.

By responding with a 'yes' to the Efficiency Improvement Approach (Methods 1, 2 or 3) in the earlier question C(ii), you are indicating the applicant's intention to use Method 1 - GES Gain, or Method 2 - Redesign Gain or Method 3 - Fuel Switch Gain. You must now indicate the Method to be used in questions C2(i- iii) below, and provide the details requested.

Applicants, in respect of Generating Systems that use Renewable Fuel (only), must use Equations 1 & 2 of the Rule to create NGACs (under Clause 9.3.3 of the Rule), and should complete section C1 only.

C2(i) Does the applicant intend to create NGACs Using Method 1 – GES Gain?

If the applicant intends to create NGACs from measures made to improve operational efficiency on or after 1 January 2002 without significantly changing the design of the Generating System or its fuel mix, and is a participant in the Commonwealth Generator Efficiency Standards (GES) then it may calculate NGACs using Method 1 - GES Gain (see clause 9.3.1(b)(i) of the Rule).

If the applicant does not intend to take such measures, or is not a participant in the Commonwealth Generator Efficiency Standards (GES), then it may not calculate NGACs using Method 1 - GES Gain but may be able to apply under a different method. Please proceed to C2(ii).

If the applicant has taken such measures, is a GES participant, and does intend to create NGACs using Method 1 – GES Gain, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- evidence of participation in the GES
- the operational changes to the Generating System
- the dates at which the measures were, or are to be, implemented

- a case explaining why these measures may be regarded as operational efficiency improvements.

Additionally, when answering question C2(v) below, the applicant should:

- ensure that Method 1 – GES Gain from Clause 9.3.1(b)(i) of the Rule is applied;
- calculate and attach the calculations noted in Method 1, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: Generator Efficiency Standards and the Technical Guidelines: Generator Efficiency Standards; and
- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves.

The applicant should now proceed to question C2(ii).

C2(ii) Does the applicant intend to create NGACS from Method 2 – Redesign Gain?

If the applicant takes measures on or after 1 January 2002, that in the view of the Scheme Administrator, significantly change the design of the Generating System but not its fuel mix, then it may calculate NGACs using Method 2 - Redesign Gain (see clause 9.3.1(b)(ii) of the Rule).

If the applicant does not intend to take such measures, the applicant should proceed to question C2(iii).

If the applicant has taken such measures and intends to create NGACs using Method 2 – Redesign Gain, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- the design change to the Generating System, and a detailed description of what this entails in terms of improvement to plant performance and efficiencies etc, and
- when these measures were, or are to be, implemented.

Please note that in answering question C2(v) below the applicant should:

- ensure that Method 2 – Redesign Gain from Clause 9.3.1(b)(ii) of the Rule is applied. This requires the conducting of heat rate tests at >70% electricity output prior to, and after, making any changes in the current design (following the Commonwealth Generator Emissions Standards Methodology), or another method approved by the Scheme Administrator;
- calculate and attach the calculations noted in Method 2, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: Generator Efficiency Standards and the Technical Guidelines: Generator Efficiency Standards; and
- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves for before and after the implementation of changes.

The applicant should now proceed to question C2(iii).

C2(iii) Does the applicant intend to create NGACS from Method 3 – Fuel Switch Gain?

If the applicant intends to create NGACs from switching to a mix of fuels (on or after 1 January 2002) of lesser emissions intensity than the Generating System's original mix of fuels, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- the fuel(s) used prior to the fuel switch,
- the fuel(s) used following the fuel switch,

and the date the respective fuel(s) switch was implemented. Please note that in answering C2(v) below, the applicant should:

- ensure that Method 3 from Clause 9.3.1(b)(iii) of the Rule is applied
- calculate and attach the calculations noted in Method 3, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: *Generator Efficiency Standards* and the *Technical Guidelines: Generator Efficiency Standards*; and
- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves for before and after the fuel switching.

The applicant should now proceed to question C2(iv).

C2(iv) What measurement period does the applicant intend to use for their calculations under Method 1, 2 or 3?

For each of the three respective Methods (above), an applicant may select a measurement period acceptable to the Scheme Administrator, such as yearly, monthly, or some other measurement period, provided that this selected measurement period can be supported by the applicants data records, record-keeping arrangements, metering equipment etc.

In answering this question, please state your proposed measurement period and give reasoning in support of this measurement period, so that the Scheme Administrator may fully assess its applicability (as above).

C2(v) Estimated number of NGACs to be created

Question C2(v) asks you to apply the parameters stated in questions C2(i) to C2(iv) and provide sample calculations of how the applicant will calculate the number of NGACs generated by its abatement activities over the first 3 calendar years of accreditation.

In developing these calculations, you should apply Clauses 8 and 9 of the Rule. You must attach to the application (at a minimum):

- **A hardcopy spreadsheet of the calculations** (a soft copy on a floppy disk must also be provided). All formula used should be clearly stated and referenced (from either the Rule or

other relevant source allowable under the Rule). Values which are default, calculated and estimated, should be differentiated and identified. All input data should be labelled.

- **Methodology.** This should be detailed and explanatory. Please note that:
 - (i) All information should be fully referenced
 - (ii) Assumptions, estimates and/ or extrapolation of data should be identified, explained and justified
 - (iii) Testing and measurement procedures must be outlined, including details of:
 - instruments used and details of their calibration
 - any standard procedures used
 - number of tests, timing of tests and repeatability
 - person(s) performing the tests and. their qualifications
- All calculations must be supported by relevant documentation. For example:
 - (i) energy bills
 - (ii) contractor invoices
 - (iii) weighbridge dockets
 - (iv) calibration certificates

C2(vi) Timing of NGAC creation and registration

This question asks for information on how often the applicant intends to create and register certificates under the Scheme. Please advise whether you intend registering on a monthly, quarterly, six monthly or annual basis, or at some other time period interval?

The second part of the question also asks for how many certificates the applicant intends to register on each occasion.

Please remember however, that the applicant can only register certificates for abatement activity(s) after the abatement resulting from that activity(s) has occurred.

Attachment D – Category D Generating System

D(i) Can the Generating System be classified under any of the other categories?

You must confirm that the Generating System meets the definition of a Category D Generating System. If the applicant is eligible to complete any of Attachments A to C, you must not complete Attachment D.

D(ii) Indicate the approach the applicant intends to use to calculate NGACs created

In this question you are asked to tick whether the applicant intends to use the **Relative Intensity Approach** (applying Equations 1 and 2, or Equation 6) or the **Efficiency Improvement Approach** (applying Methods 1, 2 or 3), as allowed for under Clause 9.4 of the Rule. Depending on the approach taken, Section D1 or D2 is to be completed as indicated.

Please note that under Clause 9.4.3 of the Rule, applicants applying with respect to Category D Generating Systems using Renewable Energy Sources (only) as fuel, must apply the Relative Intensity (or NSW Production Baseline) approach.

D1 – Relative Intensity (or NSW Production Baseline) Approach

This Section is only to be completed if you ticked the Relative Intensity (or NSW Production Baseline) Approach box in question D(ii) above.

All Category D Generating Systems have a NSW Production Baseline of zero (0) under the Rule (Clause 8.4)

D1(i) Does the Generating System use waste coal mine gas, landfill gas, sewage gas, manufactured methane gas, or fugitive methane gas from other Renewable Energy Sources as fuel?

Applicant's whose Generating Systems use:

- waste coal mine gas, or
- landfill gas, sewage gas, manufactured methane gas or fugitive methane from other Renewable Energy Sources

and who propose to use Equations 13 or 16 or Method 5 of the Rule to calculate their fugitive emissions avoided, may calculate this figure using either the actual energy content of the respective fuel used; an estimated value approved by the Scheme Administrator; or by using a default factor of 36%.

As such, this question asks you to indicate whether your Generating System uses the aforementioned fuels, and if so, to indicate the basis on which you intend to calculate the fugitive emissions avoided for the Generating System.

D1(ii) If the Generating System is a cogeneration plant, does the applicant intend to use Method 4 to lower its Total Greenhouse Gas Emissions?

Under clause 10.2(a) of the Rule, a Generator for a cogeneration plant may adjust their respective total greenhouse gas emissions (using Method 4) to take into account notional greenhouse gas emissions avoided through use of heat that would have otherwise been wasted.

Please indicate appropriately whether you intend to use Method 4 to accordingly lower your Total Greenhouse Gas Emissions through use of cogeneration heat that would otherwise have been wasted.

D1(iii) Proposed calculation methodology

This question requires you to stipulate the Equations and/or Methods from the Rule that will be used to calculate your NGAC entitlement, as well as any nominated factors or coefficients from the Rule (or proposed for acceptance from the Scheme Administrator) that you intend to use in applying these Equations and/or Methods. Please note, it is not necessary to state derived figures.

For example, in the case of a generator for a natural gas fired (turbine) generating system, information may be provided in the following manner:

Equations/Methods used	Factors or coefficients applied	Source
Equation 1	NSW pool coefficient of 0.906 for 2004 Emissions Intensity adjustment factor of 1.0	The Regulation Table 9 of Rule
Equation 2	NSW Production Baseline of zero	Clause 8.4
Equation 4	NA	NA
Equation 7	CO2 emission factor of 50.8 kt Co2/PJ CO2 combustion factor of 0.995	Table 3 of Rule Table 4 of Rule
Equation 8	CH4 emission factor of 0.008 kt CH4/PJ	Table 5 of Rule
Equation 9	N2O emission factor of 0.0001 kt N2O/PJ 3)	Table 5 of Rule
Equation 10	CO2 fugitive emissions factor of 2.60 kt CO2/PJ	Table 2 of Rule
Equation 11	CH4 fugitive emissions factor of 0.089 kt CH4/PJ	Table 2 of Rule

D1(iv) Estimated number of NGACs to be created

Question D1(i) asks you to apply Equation 1 of the Rule and provide sample calculations of how the applicant will calculate the number of NGACs generated by its abatement activities over the first 3 calendar years of accreditation. If the Generating System uses Fossil Fuel and the applicant intends to apply an Efficiency Improvement Approach (see section D2) in one of the first three (3) years of accreditation, please indicate that 'zero' NGACs will be created by applying Equation 1 for that year.

In developing these calculations, you should apply Clause 9.4 of the Rule.

You must attach to the application (at a minimum):

- **A hardcopy spreadsheet of the calculations** (a soft copy on a floppy disk should also be provided). All formula used should be clearly stated and referenced (from either the Rule or other relevant source allowable under the Rule). Values which are default, calculated and estimated, should be differentiated and identified. All input data should be labelled.
- **Methodology.** This should be detailed and explanatory. Please note that:
 - (i) All information should be fully referenced
 - (ii) Assumptions, estimates and/ or extrapolation of data should be identified, explained and justified
 - (iii) Testing and measurement procedures must be outlined, including details of:
 - instruments used and details of their calibration

- any standard procedures used
 - number of tests, timing of tests and repeatability
 - person(s) performing the tests and their qualifications
- All calculations must be supported by relevant documentation. For example:
 - (iv) energy bills
 - (v) contractor invoices
 - (vi) weighbridge dockets
 - (vii) calibration certificates

Guidance Point 10: Worked example - calculating the number of NGACs from landfill generation

A 20 MW landfill Generating System (classified as a Category D Generating System under the Rule) commenced commercial operation in July 2002.

- It directly exports electricity to the NSW Network via connection to Integral Energy's Distribution System.
- It's gross generation is 150,000 MWh in 2003, (it imports 6,000 MWh from the grid and also uses 4,000MWh on auxiliaries).
- The amount of landfill gas used in the Generating System is not measured. No supplementary natural gas is used in the Generating System.
- The Generating System is ORER accredited with a REC Baseline of zero and a MLF of 1.0
- It creates 146,000 RECs in 2004.

As the Generating System uses a Renewable Energy Source to create RECs from generation, it is ineligible to create NGACs from that same generation. However the Scheme does recognise the additional benefit of methane emissions avoided through use of that landfill gas for generation. As such, the applicant is eligible to create 'additional NGACs' under clause 9.5 of the Rule.

Calculating Net Sent Out Generation and Sent Out Generation (Definitions)

Net Sent Out Generation in 2004 (Gross Generation – Auxiliary Electricity Use – Electricity Imported from the Network) = 150,000 MWh – 4,000 – 6,000 MWh = 140,000 MWh

Sent Out Generation(Gross Generation-Auxiliary Electricity Use) in 2004 = 150,000 -4,000 MWh = 146,000MWh

Calculating Total Greenhouse Gas Emissions

Since the Generating System uses a Renewable Energy Source, Equations 14, 15 and 16 apply in calculating Total Greenhouse Gas Emissions.

Energy Content of waste methane used as Renewable Energy Source

Since the amount of methane used is not measured directly, it can be estimated in a manner acceptable to the Scheme Administrator. For example, using the default estimating method set out in Equation 16, it is assumed that Gross Generation less Auxiliary Electricity Use represents 36 per cent of the total energy content of all energy sources used is converted to Net Sent Out Generation.

[Note: 1 MWh = 3.6 GJ]

Energy Content of Renewable Energy Source (PJ) = (1/0.36) x 146,000 MWh x 3.6 / 1,000,000 = 1.46 PJ

CH₄ Emissions from Combustion (Equation 14)

$$\text{CH}_4 \text{ emissions from combustion} = \text{Energy content of Renewable Energy Source} \times \text{CH}_4 \text{ emission factor} \times 1000 \times 21$$

No specific default factor is listed for the use of landfill gas in electricity generation. However, the applicant has documented and justified to the satisfaction of the Scheme Administrator that the emission factor listed for natural gas – Turbine (0.0080) would be most appropriate.

$$= 1.46 \text{ PJ} \times 0.0080 \text{ kt CH}_4/\text{PJ} \times 1000 \times 21$$

$$= 245.28 \text{ t CO}_2\text{-e}$$

N₂O Emissions at point of combustion (Equation 15)

$$\text{N}_2\text{O Emissions at the point of combustion} = \text{Energy Content of Renewable Energy Source} \times \text{N}_2\text{O emission factor} \times 1000 \times 310$$

$$= 1.46 \text{ PJ} \times 0.0001 \text{ kt N}_2\text{O}/\text{PJ} \times 1000 \times 310$$

$$= 45.26 \text{ t CO}_2\text{-e}$$

Fugitive CH₄ emissions avoided (Equation 16)

$$\text{Fugitive CH}_4 \text{ emissions avoided through the use of the fuel} = \text{Energy content of waste methane used as Renewable Energy Source} \times \text{CH}_4 \text{ conversion factor} \times 1000 \times 21$$

$$= 1.46 \text{ PJ} \times 18 \text{ kt CH}_4/\text{PJ} \times 1000 \times 21$$

$$= 551,880 \text{ t CO}_2\text{-e}$$

Total Greenhouse Gas Emissions (Clause 10.1(b))

$$= \text{CH}_4 \text{ emissions at the point of combustion} + \text{N}_2\text{O emissions at the point of combustion} - \text{CH}_4 \text{ emissions avoided through the use of the fuel}$$

$$= 245.28 + 45.26 - 551,880$$

$$= - 551,589.46 \text{ t CO}_2\text{-e}$$

Calculating Emissions Intensity (Equation 4)

$$\text{Emissions Intensity} = \text{Total Greenhouse Gas Emissions}/\text{Sent Out Generation}$$

$$= - 551,589.46/146,000$$

$$= - 3.778 \text{ t CO}_2\text{-e}/\text{MWh}$$

Eligible Generation (Equation 2)

$$\text{Eligible Generation} = \text{Net Sent Out Generation} - \text{NSW Production Baseline} - \text{RECs Created}/\text{MLF}$$

$$= 140,000 \text{ MWh} - 0 \text{ MWh} - 146,000/1.0$$

$$= -6,000 \text{ MWh}$$

Continued next page

Number of NGACs that may be created (Equation 1)

As eligible generation is ≤ 0 , the eligible generation is zero.

$$\text{Number of NGACs that may be created} = \text{Eligible Generation} \times (\text{NSW Pool Coefficient} \times \text{Emissions Intensity Adjustment Factor}^* - \text{Emissions Intensity})$$

* See table 9 of Schedule A

As a result no NGACs (for generation) can be created using Equation 1

Number of additional NGACs that may be created (Equation 6)

$$\text{Number of additional NGACs that may be created} = \text{Number of RECs created/MLF} \times (\text{NSW Pool Coefficient} \times \text{Emissions Intensity Adjustment Factor}^* - \text{NSW Pool Coefficient} - \text{Emissions Intensity})$$

* See table 9 of Schedule A

$$= 146,000/1.0 \times (0.906 \text{ t CO}_2\text{-e/MWh} \times 1.0 - 0.906 \text{ t CO}_2\text{-e/MWh} - (-)3.778)$$

$$= 551,588 \text{ t CO}_2\text{-e}$$

Total number of NGACs

$$= \text{Equation 1 entitlement} + \text{Equation 6 entitlement}$$

$$= 0 + 551,588$$

$$= 551,588 \text{ NGACs.}$$

D1(v) Timing of NGAC creation and registration

This question asks for information on how often the applicant intends to create and register certificates under the Scheme. Please advise whether you intend registering on a monthly, quarterly, six monthly or annual basis, or at some other time period interval?

The second part of the question also asks for how many certificates the applicant intends to register on each occasion.

Please remember however, that the applicant can only register certificates for abatement activity(s) after the abatement resulting from that activity(s) has occurred.

D2 – Efficiency Improvement Approach (Methods 1, 2 and 3)

NOTE

For the purposes of answering the following questions (D2(i) – D2(iii)), a fossil fuelled or co-fired Category D generating system may apply to use any of Methods 1, 2 and 3 of the Rule to create NGACs, where appropriate. A separate Application Form for each Method is not required.

In utilising any of these three Methods, the Scheme Administrator strongly recommends that project proponents contact the Scheme Administrator to discuss their intended approach(es), prior to submission of an application for accreditation. This is especially the case if the project proponent intends to utilise Method 2 – Redesign Gain.

Specifically, in utilising Method 2 of the Generation Rule, a project proponent must conduct a heat rate test (or another testing methodology approved by the Scheme Administrator) prior to making any design changes to the generating system. As such, it is imperative that the Scheme Administrator be contacted (and an application subsequently submitted) sooner, rather than later, to allow sufficient time for the Scheme Administrator to assess and approve the proponents testing methodology, prior to the actual testing taking place.

Clause 9.4.1 of the Rule allows applicants in respect of Category D Generating Systems that use fossil fuels to calculate the number of NGACs created using Equation 1 & 2 of the Rule, or Methods 1, 2 or 3 of the Rule.

By responding with a 'yes' to the Efficiency Improvement Approach (Methods 1, 2 or 3) in the earlier question D(ii), you are indicating the applicant's intention to use Method 1- GES Gain, or Method 2 - Redesign Gain or Method 3 - Fuel Switch Gain. You must now indicate the Method to be used in questions D2(i - iii) below and provide the details requested.

Applicants in respect of Generating Systems that use Renewable Fuel (only) must use Equation 1 of the Rule to create NGACs under Clause 9.4.2 of the Rule, and should complete section D1 only.

D2(i) Does the applicant intend to create NGACs Using Method 1 – GES Gain?

If the applicant intends to create NGACs from measures made to improve operational efficiency on or after 1 January 2002 without significantly changing the design of the Generating System or its fuel mix, and is a participant in the Commonwealth Generator Efficiency Standards (GES) then it may calculate NGACs using Method 1 - GES Gain (see clause 9.4.1(b)(i) of the Rule).

If the applicant does not intend to take such measures, or is not a participant in the Commonwealth Generator Efficiency Standards (GES), then it may not calculate NGACs using Method 1 - GES Gain but may be able to apply under a different method. Please proceed to D2(ii).

If the applicant has taken such measures, is a GES participant, and does intend to create NGACs using Method 1 – GES Gain, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- evidence of participation in the GES
- the operational changes to the Generating System
- the dates at which the measures were, or are to be, implemented

- a case explaining why these measures may be regarded as operational efficiency improvements.

Additionally, when answering question D2(v) below, the applicant should:

- ensure that Method 1 – GES Gain from Clause 9.4.1(b)(i) of the Rule is applied;
- calculate and attach the calculations noted in Method 1, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: *Generator Efficiency Standards* and the *Technical Guidelines: Generator Efficiency Standards*; and
- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves.

The applicant should now proceed to question D2(ii).

D2(ii) Does the applicant intend to create NGACS from Method 2 – Redesign Gain?

If the applicant takes measures on or after 1 January 2002, that in the view of the Scheme Administrator, significantly change the design of the Generating System but not its fuel mix, then it may calculate NGACs using Method 2 - Redesign Gain (see clause 9.4.1(b)(ii) of the Rule).

If the applicant does not intend to take such measures, the applicant should proceed to question D2(iii).

If the applicant has taken such measures and intends to create NGACs using Method 2 – Redesign Gain, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- the design change to the Generating System, and a detailed description of what this entails in terms of improvement to plant performance and efficiencies etc, and
- when these measures were, or are to be, implemented.

Please note that in answering question D2(v) below the applicant should:

- ensure that Method 2 – Redesign Gain from Clause 9.4.1(b)(ii) of the Rule is applied. This requires the conducting of heat rate tests at >70% electricity output prior to, and after, making any changes in the current design (following the Commonwealth Generator Emissions Standards Methodology), or another method approved by the Scheme Administrator;
- calculate and attach the calculations noted in Method 2, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: *Generator Efficiency Standards* and the *Technical Guidelines: Generator Efficiency Standards*; and
- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves for before and after the implementation of changes.

The applicant should now proceed to question D2(ii).

D2(iii) Does the applicant intend to create NGACS from Method 3 – Fuel Switch Gain?

If the applicant intends to create NGACs from switching to a mix of fuels (on or after 1 January 2002) of lesser emissions intensity than the Generating System's original mix of fuels, then the applicant should provide the following information in the Table provided (together with supporting documentation):

- the fuel(s) used prior to the fuel switch,
- the fuel(s) used following the fuel switch,

and the date the respective fuel(s) switch was implemented. Please note that in answering D2(v) below, the applicant should:

- ensure that Method 3 from Clause 9.4.1(b)(iii) of the Rule is applied
- calculate and attach the calculations noted in Method 3, using the most recent methodologies outlined in the Australian Greenhouse Office (AGO) Program Guidelines: *Generator Efficiency Standards* and the *Technical Guidelines: Generator Efficiency Standards*; and
- include detailed evidence supporting the calculations, methods and any assumptions made, as well as Greenhouse Intensity Reference Curves for before and after the fuel switching.

The applicant should now proceed to question D2(iv).

D2(iv) What measurement period does the applicant intend to use for their calculations under Method 1, 2 or 3?

For each of the three respective Methods (above), an applicant may select a measurement period acceptable to the Scheme Administrator, such as yearly, monthly, or some other measurement period, provided that this selected measurement period can be supported by the applicant's data records, record-keeping arrangements, metering equipment etc.

In answering this question, please state your proposed measurement period and give reasoning in support of this measurement period, so that the Scheme Administrator may fully assess its applicability (as above).

D2(v) Estimated number of NGACs to be created

Question D2(v) asks you to apply the parameters stated in questions D2(i) to D2(iv) and provide sample calculations of how the applicant will calculate the number of NGACs generated by its abatement activities over the first 3 calendar years of accreditation.

In developing these calculations, you should apply Clauses 8 and 9 of the Rule. Worked examples of calculations using these Clauses are shown in Guidance Point 9 following.

You must attach to the application (at a minimum):

- **A hardcopy spreadsheet of the calculations** (a soft copy on a floppy disk must also be provided). All formula used should be clearly stated and referenced (from either the Rule or other relevant source allowable under the Rule). Values which are default, calculated and estimated, should be differentiated and identified. All input data should be labelled.
- **Methodology.** This should be detailed and explanatory. Please note that:
 - (i) All information should be fully referenced
 - (ii) Assumptions, estimates and/ or extrapolation of data should be identified, explained and justified
 - (iii) Testing and measurement procedures must be outlined, including details of:
 - instruments used and details of their calibration
 - any standard procedures used
 - number of tests, timing of tests and repeatability
 - person(s) performing the tests and. their qualifications
- All calculations must be supported by relevant documentation. For example:
 - (i) energy bills
 - (ii) contractor invoices
 - (iii) weighbridge dockets
 - (iv) calibration certificates

D2(vi) Timing of NGAC creation and registration

This question asks for information on how often the applicant intends to create and register certificates under the Scheme. Please advise whether you intend registering on a monthly, quarterly, six monthly or annual basis, or at some other time period interval?

The second part of the question also asks for how many certificates the applicant intends to register on each occasion.

Please remember however, that the applicant can only register certificates for abatement activity(s) after the abatement resulting from that activity(s) has occurred.

Section Three – Contact Details

Contact Details

Please direct any enquiries regarding accreditation as an abatement certificate provider to:

Greenhouse Gas Reduction Scheme Administrator

Phone Number:

02 9290 8452

Fax Number:

02 9290 2063

Street Address:

Level 8
1 Market Street
SYDNEY NSW 2000

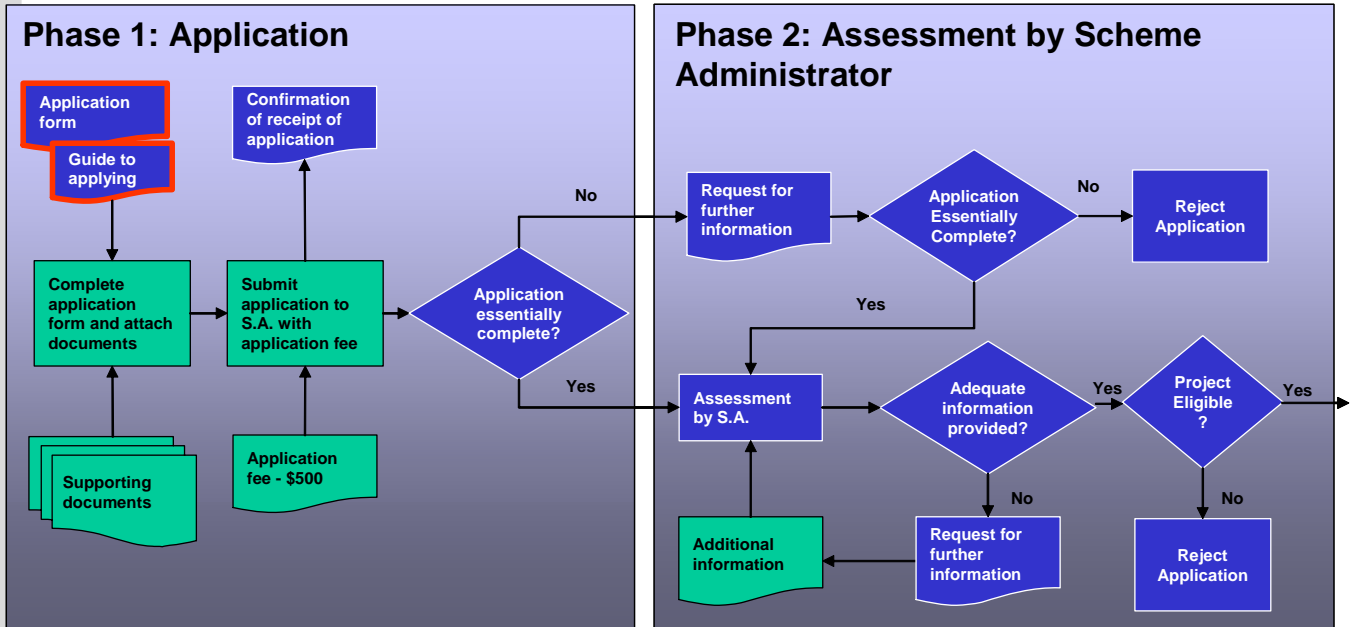
Postal Address:

Greenhouse Gas Reduction Scheme Administrator
PO Box Q290
QVB POST OFFICE NSW 1230

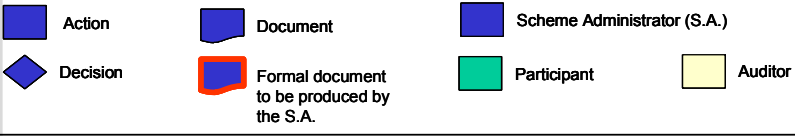
Email Address:

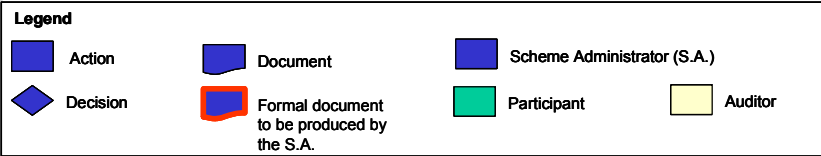
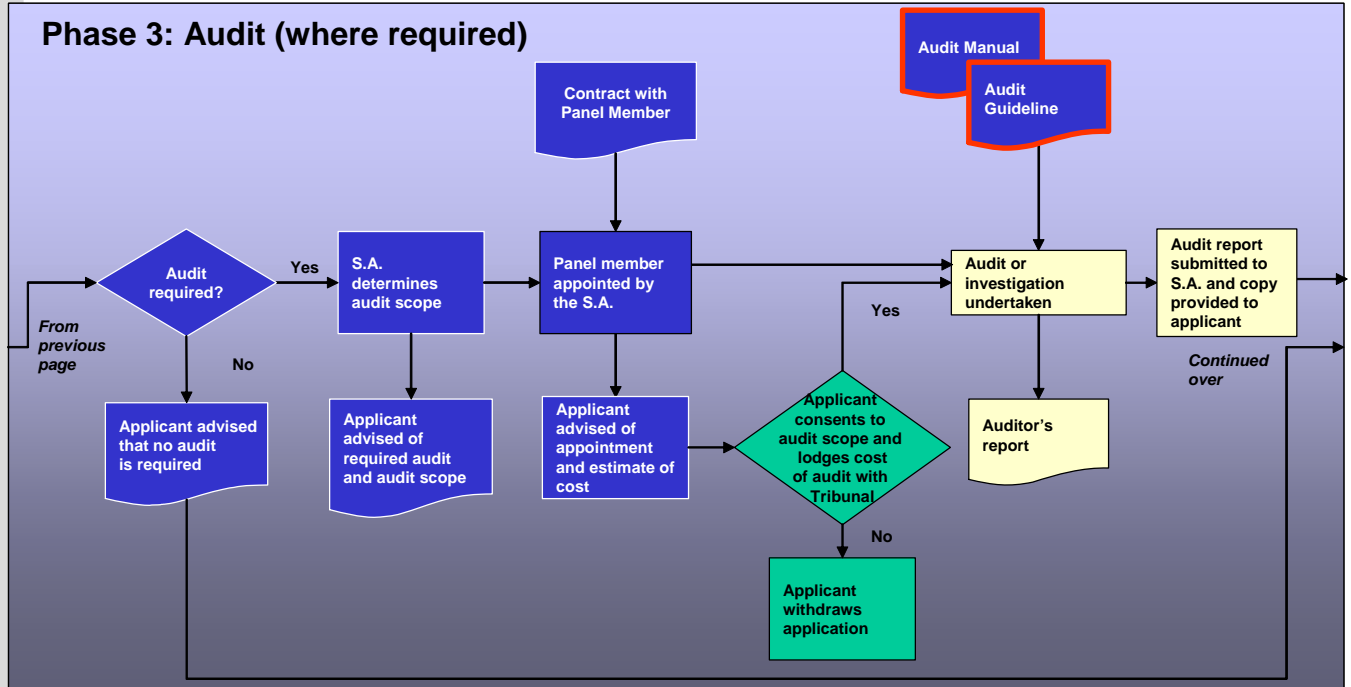
mail@greenhousegas.nsw.gov.au

Appendix 1 – Accreditation Process Maps



Legend





Phase 4: Approval and registration

