GGAS

INTRODUCTION TO THE GREENHOUSE GAS REDUCTION SCHEME (GGAS)

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1 ABOUT THIS DOCUMENT

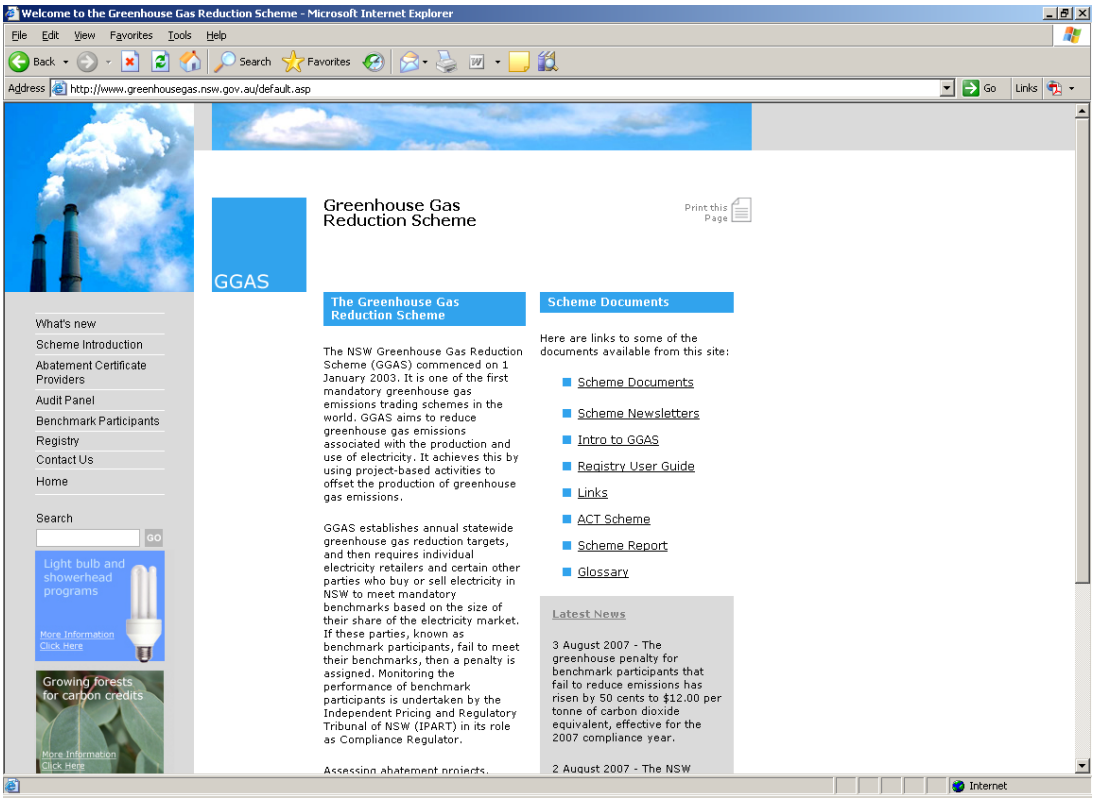
This document has been prepared to give an overview of the structure and functioning to date of the Greenhouse Gas Reduction Scheme (GGAS). It is current at 24 September 2008. Please note that any projections of NGAC creation included in this document are based on estimates only and should not be relied on by users.

Links to other parts of the GGAS website are in underlined blue text. Click on the link to open the relevant page of the website.

2 THE GGAS WEBSITE

Please visit the GGAS website which provides significantly more detail of key aspects of the Scheme. The website is located at www.greenhousegas.nsw.gov.au.

Figure 1 – The GGAS website



The web site contains all of the Scheme documents. The types of documents on the web site include:

- the legal framework that supports GGAS (the Act, the Regulations and the Rules)
- guides for various parts of the Scheme (applying, record keeping)
- application forms for abatement certificate providers
- audit framework and compliance & performance monitoring strategy.

3 THE GGAS OVERVIEW

GGAS commenced on 1 January 2003 in NSW and on 1 January 2005 in the ACT. It is one of the first mandatory greenhouse gas emissions trading schemes in the world. GGAS aims to reduce greenhouse gas emissions associated with the production and use of electricity.

GGAS establishes an annual State-wide greenhouse gas benchmark for the electricity sector and then requires individual benchmark participants (who buy or sell electricity in NSW) to meet their allocation of the mandatory greenhouse gas benchmark, based on their share of the NSW electricity demand.

Benchmark participants achieve this by surrendering abatement certificates created from project-based emission reduction activities. The surrender of these certificates effectively offsets a portion of the greenhouse gas emissions associated with their electricity purchases.

Project-based emission reduction activities, from which abatement certificates can be created by accredited abatement certificate providers, include:

- low-emission generation of electricity (including cogeneration) or improvements in emission intensity of existing generation activities (**Rule 2** – Generation)
- activities that result in reduced consumption of electricity (**Rule 3** – Demand Side Abatement)
- activities carried out by elective participants that reduce on-site emissions not directly related to electricity consumption (**Rule 4** – Large User Abatement[1]), and
- the capture of carbon from the atmosphere in forests (**Rule 5** – Carbon Sequestration).

If a benchmark participant fails to surrender enough abatement certificates to meet their mandatory benchmark, then a penalty is assigned. Currently the penalty level is set at $12.00 per tonne of shortfall.

[1] These types of activities create Large User Abatement Certificates (LUACs), which have the same value as an NGAC and may be surrendered to meet a greenhouse gas benchmark, but are not tradeable.

4 EMISSIONS TRADING SCHEMES

Emissions trading is a market-based approach for achieving environmental improvement. It creates a situation where parties buy and sell either permits for emissions or credits for emissions reductions. Emissions trading creates an incentive for the market to meet established emission goals in the most cost-effective way by letting buyers and sellers find the lowest-cost options for abatement within the coverage of the trading scheme.

The markets created by emissions trading schemes (especially those involving greenhouse gases) are constructed without the constraints (or histories) of traditional commodity markets and are based on compliance requirements.

A significant aspect of emissions trading is the basis for emissions calculations and reporting: site, corporation, jurisdiction or project. GGAS uses two different approaches to calculations and reporting ("accounting"). Benchmark participants use a form of corporate accounting by calculating the emissions attributable to the electricity that they have purchased in a calendar year. Abatement Certificate Providers (ACPs) use project based accounting to determine abatement over a variety of time periods.

GGAS can be characterised as a "baseline and credit" form of emissions trading where ACPs create certificates or credits for actions that reduce or "abate" emissions compared to prior practice, business as usual or, in some cases, current industry practice. Each certificate represents a tonne of emissions reduction. The proposals for a national scheme are for a "cap and trade" form of emissions trading where total sector emissions are capped and a permit needs to be surrendered for each tonne emitted by a sector participant.

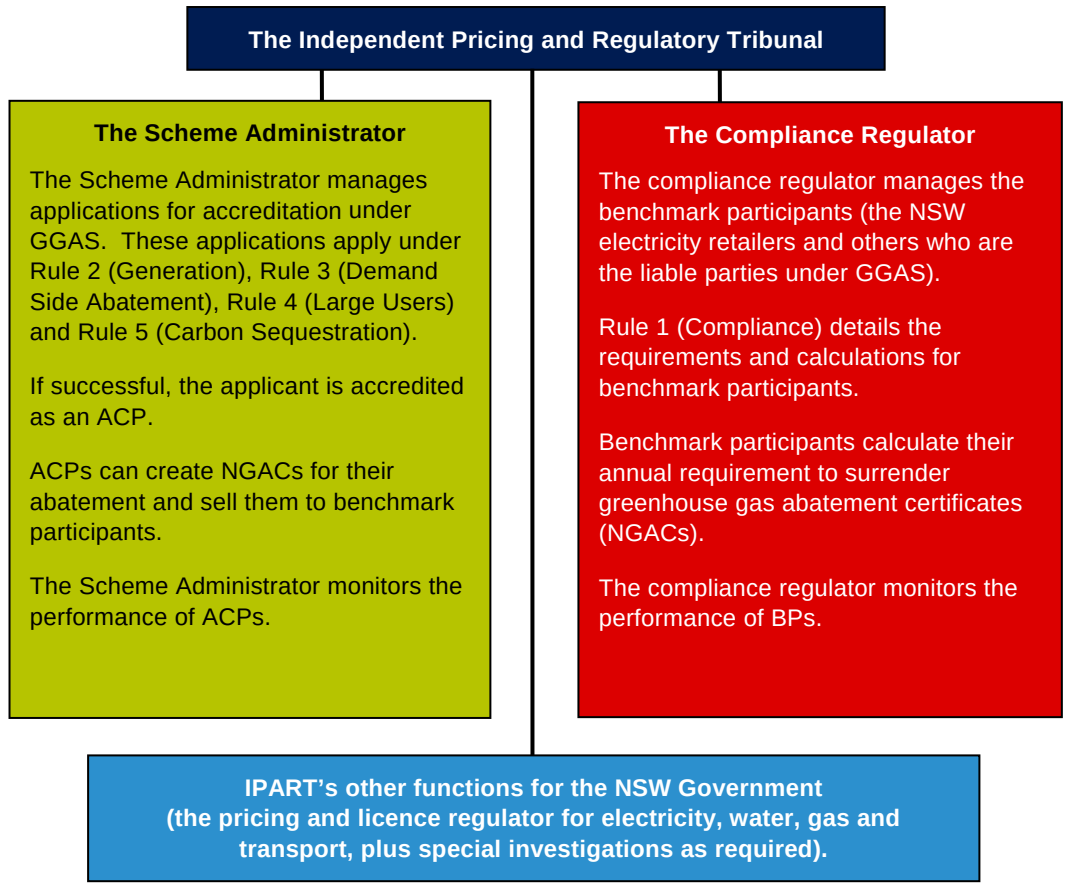
A variety of standards and protocols are being developed to provide consistent guidance on each of the accounting approaches, and other complementary activities (auditing, record keeping, trading platforms, boundary setting, etc) and GGAS is a significant contributor to the current efforts to create broad and comprehensive standards for project based accounting as well as approaches to effective validation and verification of participant activities.

5 WHO'S WHO?

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is the independent economic regulator for NSW. IPART oversees regulation of the electricity, gas, water and transport industries and undertakes other tasks referred to it by the NSW Government.

Another task required of IPART is the administration of the Greenhouse Gas Reduction Scheme (GGAS). In administering GGAS, IPART has two separate functions. These are shown in Figure 2, along with a few related key aspects of Scheme design. IPART as Scheme Administrator operates the Scheme Registry.

Figure 2 – Who's Who?



6 GGAS LEGISLATIVE FRAMEWORK

GGAS is established in NSW through an Act of the NSW Parliament. The *Electricity Supply Act 1995* sets out the functions and responsibilities given to IPART to ensure compliance by Benchmark participants (as compliance regulator). It also sets out IPART's functions as the Scheme Administrator.

The Act is supported by the Regulation which makes provision for aspects of the operation of GGAS. The Regulation provides further details of GGAS, such as:

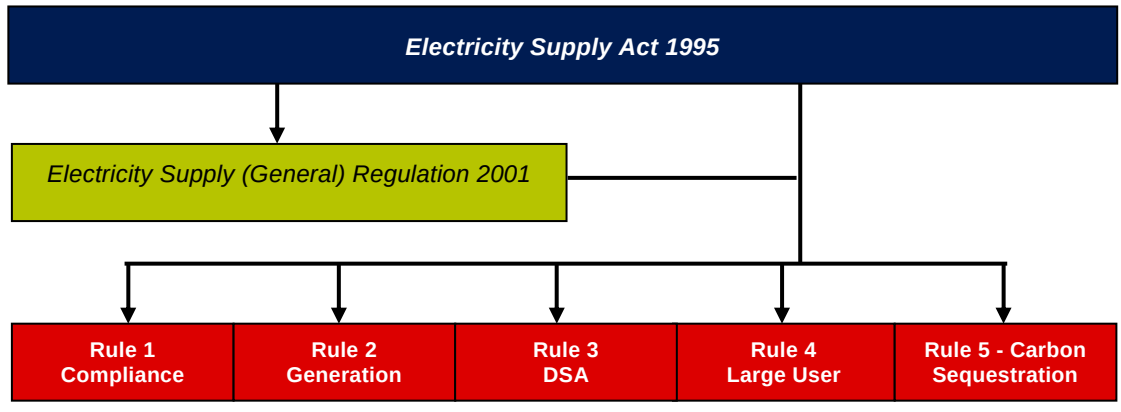
- eligibility requirements for elective benchmark participants
- assessment of compliance of benchmark participants
- eligibility requirements for accreditation as an ACP
- conditions of accreditations that are imposed by either the Regulation or the Scheme Administrator
- creation and transfer of abatement certificates, and
- the conduct of audits.

GGAS is supported by five Rules issued by the Minister. Each Rule provides additional eligibility requirements and calculation methodologies for a specific area of GGAS.

The ACT Government introduced a Greenhouse Gas Abatement Scheme on 1 January 2005 that mirrors the NSW GGAS. IPART has been appointed the Scheme Administrator for the ACT GGAS whereas the compliance regulator function for the ACT Scheme will be performed by the ACT's Independent Competition and Regulatory Commission (ICRC).

Figure 3 shows a very simplified diagram of the hierarchy and relationship between the legal instruments that form the legislative framework of GGAS.

Figure 3 – Legislative framework



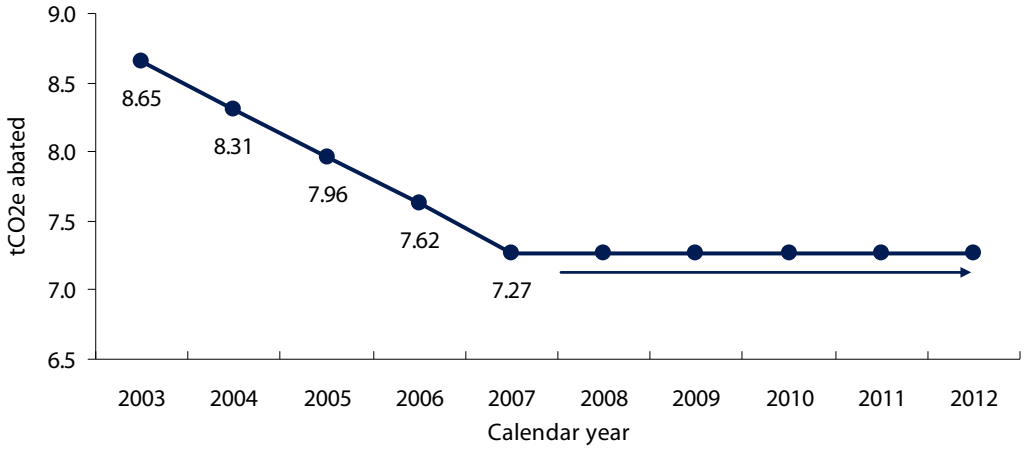
7 LOOKING AT THE SCHEME IN MORE DETAIL

Scheme objectives

The objectives of GGAS are to reduce greenhouse gas emissions associated with the production and use of electricity and to develop and encourage activities to offset the production of greenhouse gas emissions. GGAS requires electricity retailers in NSW and the ACT, and some large electricity customers who have elected to manage their own benchmark, collectively referred to as **benchmark participants**, to meet mandatory targets for reducing or offsetting the emission of greenhouse gases from the production of the electricity they supply or use.

Part 8A of the *Electricity Supply Act 1995* sets a State greenhouse gas benchmark expressed in tonnes of carbon dioxide equivalent (tCO_2-e) per capita. The initial level at the commencement of GGAS was set at 8.65 tCO_2-e and progressively drops to 7.27 tCO_2-e in 2007 and then remains at that level until 2012. This represents a reduction of 5% below the Kyoto Protocol baseline year of 1990.

Figure 4 – State per capita benchmarks

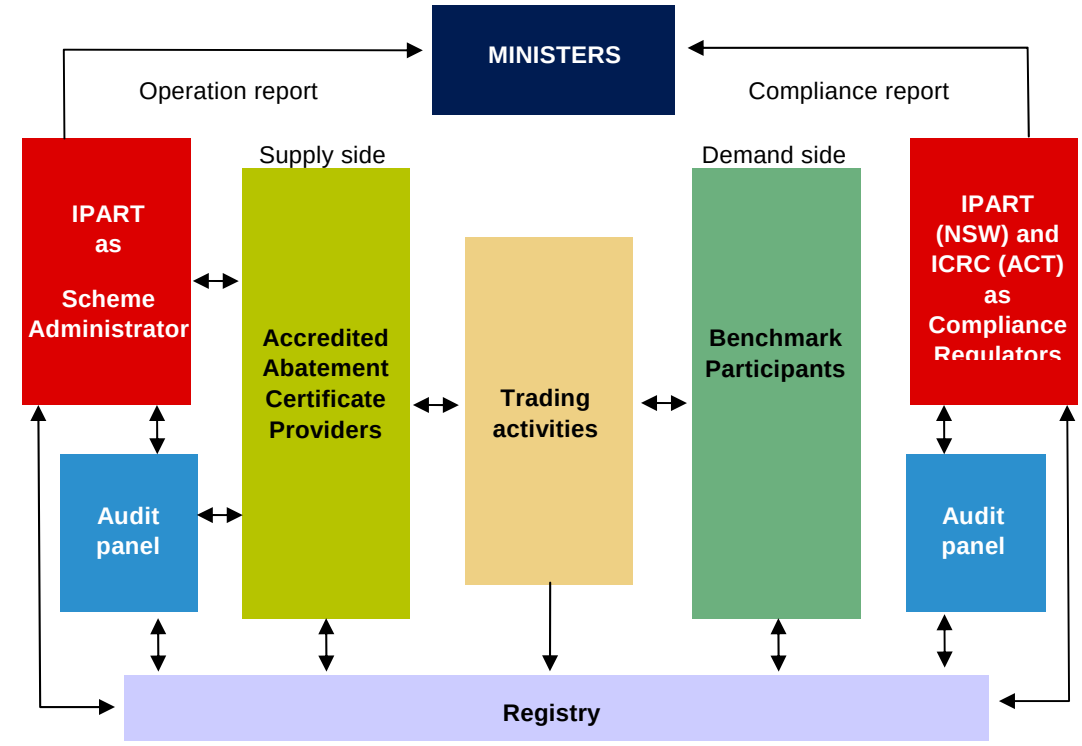


Stakeholder roles within GGAS

As with any emissions trading scheme, there are a number of stakeholders who play significant roles within GGAS.

Building on the earlier introduction to IPART's two functions, the diagram below (from the GGAS website) illustrates the different roles within GGAS and how the compliance regulator and the Scheme Administrator interact with other important stakeholders within GGAS.

Figure 5 – Roles within the Scheme



Benchmark participants

GGAS imposes mandatory greenhouse gas benchmarks on all holders of electricity retail licenses in NSW and the ACT; electricity generators prescribed by the regulations that supply directly to retail customers; as well as market customers which take their electricity supply directly from the National Electricity Market (NEM) and have an electricity load that is classified as a market load with the National Electricity Market Management Company (NEMMCO). These are referred to as mandatory benchmark participants.

GGAS also allows customers in NSW with electricity loads greater than 100 GWh (where at least one site consumes 50 GWh per annum) or people carrying out State significant development (as designated by the Minister for Planning) under the NSW planning legislation, to elect to manage their own greenhouse gas benchmarks. These are referred to as elective benchmark participants.

Benchmark participants can reduce the average emissions intensity of the electricity they supply or use by purchasing abatement certificates and surrendering these to the compliance regulator. Benchmark participants can also claim the greenhouse gas emission reductions associated with the surrender of Renewable Energy Certificates (RECs) under the Commonwealth's Mandatory Renewable Energy Target (MRET).

Five compliance years have passed. The deadline for submitting Benchmark Statements to the compliance regulator for the 2008 compliance year is 18 March 2009, and statistics on performance for previous years are available in Scheme's Annual Reports.

Abatement Certificate Providers

GGAS allows for the creation of abatement certificates by Abatement Certificate Providers (ACPs) who carry out one or more of the following abatement activities:

- low-emission generation of electricity (including cogeneration) or improvements in emission intensity of existing generation activities (**Rule 2** – Generation)
- activities that result in reduced consumption of electricity (**Rule 3** – Demand Side Abatement)
- activities carried out by elective participants that reduce on-site emissions not directly related to electricity consumption (**Rule 4** – Large User Abatement), and
- the capture of carbon from the atmosphere in forests (**Rule 5** – Carbon Sequestration).

ACPs must apply to the Scheme Administrator for accreditation in respect of their abatement activity. The Scheme Administrator assesses the application to validate that the project meets the eligibility requirements and that the project proponent can calculate abatement appropriately. The assessment by the Scheme Administrator often includes commissioning validation audits. If accredited, the ACP will be subject to ongoing project verification requirements (including audits) imposed and monitored by the Scheme Administrator.

The Registry

The Scheme Administrator maintains an online registry which enables GGAS to operate as an emissions trading scheme. The registry provides details of ACPs and the ownership and status of abatement certificates at any point in time.

The registry was designed and developed and is now operated by LogicaCMG under contract to IPART. The registry is available at www.ggas-registry.nsw.gov.au.

ACPs, benchmark participants, and members of the public may access the registry and hold an account. Members of the public may either login as a 'guest' or register either as an organisation or as an individual, to own certificates. The registry allows:

- ACPs to register certificates online, based on their conditions of accreditation
- benchmark participants to surrender certificates to meet their compliance obligations
- auditors to search for abatement certificate creation, transfer and surrender activities, and
- account holders to own, transfer and surrender certificates.

A fee is imposed on the registration of each abatement certificate at the time of creation, payable prior to the abatement certificate being released for transfer or surrender. The fee for registering certificates is set by legislation at $0.15 per certificate.

The registry is not a trading platform, as trading of abatement certificates is expected to occur outside of the registry. Where such a trade has occurred, whether bilaterally, through brokers or through other trading platforms, the change in ownership of those certificates is recorded on the registry.

Auditors

Audit framework

In order to ensure the integrity of the Scheme, IPART draws heavily on the services of specialist auditors appointed to the Audit and Technical Services Panel. Audits may be commissioned by IPART as the Scheme Administrator prior to accreditation, prior to allowing an ACP to create certificates or where a specific issue has arisen and independent assurance is sought.

Audits are also commissioned annually by IPART as the compliance regulator to ensure that benchmark participants have correctly calculated their certificate surrender requirement.

The Audit and Technical Services Panel provides for a unique contractual arrangement between its members, firms being audited and IPART. Although ACPs and benchmark participants are required to meet audit fees the Panel arrangements provide that the primary duty of care of the auditors is to IPART.

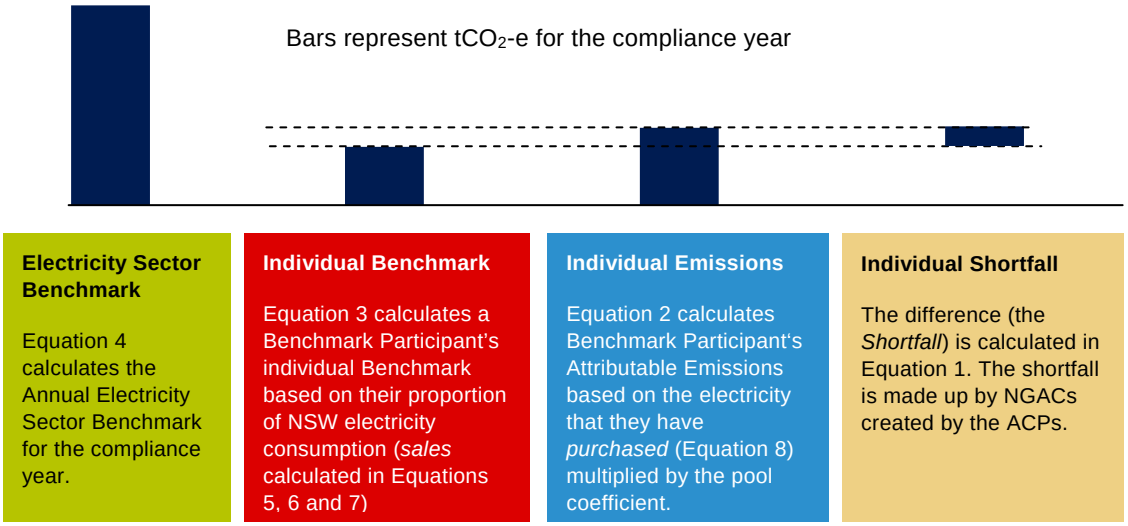
8 THE RULES IN MORE DETAIL

The Greenhouse Gas Benchmark Rules are in part highly technical and take some time to understand. The sections below provide a high level overview of each of the Rules. The most recent version of each of the Rules is available on the website.

Rule 1 – The Compliance Rule

The Compliance Rule provides the calculation methodology for benchmark participants to measure their compliance with their annual Greenhouse Gas Benchmarks. This is affected via the use of Equations 1-9 in the Rule. Figure 6 provides a very basic overview of what the Compliance Rule sets out to achieve.

Figure 6 – Compliance Rule Overview



Benchmark participants complete a standard calculation spreadsheet with relevant input data in January/February of each calendar year for the previous calendar year. The completed spreadsheet is then audited by an appropriate auditor and submitted to the compliance regulator. The "Annual Greenhouse Gas Benchmark Statement" is available from the GGAS web site, along with guidance for completing the annual return. The Guide to completing the Annual Greenhouse Gas Benchmark Statement gives detailed information about the inputs to the spreadsheet for different types or classes and benchmark participant.

Rule 2 – Generation

A person is eligible to be accredited as an ACP (Generator or Deemed Retailer) under the Generation Rule if its generation activity meets the following criteria:

- generates electricity at a lower emission intensity than the NSW pool coefficient[2] (known as the Relative Intensity approach), or
- improves the efficiency of its electricity generation to provide an associated reduction in its emission intensity (the latter being higher than the NSW pool coefficient). This is known as the Efficiency Improvement approach.

However, the Generating System must export its output (or a component thereof) to a registered distribution or transmission system of the National Electricity Market (NEM), and be equipped with adequate metering and record-keeping procedures to support the calculation of NGACs under the Generation Rule. This means that generators connected to the NEM outside of NSW and the ACT can create abatement certificates.

Only the Generation Rule allows abatement certificates to be created from interstate activities. Currently, all States and Territories connected to the NEM have Generating Systems accredited under the Scheme, with NSW contributing approximately 40% of the total number. Victoria (~30%) and Queensland (~20%) are also well represented. Landfill gas generation comprises the majority of accredited generating systems participating in the Scheme.

In 2004 the Scheme Administrator allowed for the consideration of future projects for accreditation. As a result, several new future generating projects have been accredited under the Scheme based on LFG, biomass and coal seam methane.

Projects accredited to date under this rule include:

- electricity generation using waste gas from landfill sites, waste coal mine gas and coal seam methane
- efficiency improvements at coal fired generators that reduce emissions intensity compared to a benchmark or measured prior performance, and
- gas fired generation with output above baseline output during the period 1997-2002.

[2] The NSW pool coefficient is essentially an average greenhouse gas emissions intensity factor for NSW base-load generation. The pool coefficient is determined on an annual basis by the Compliance Regulator (and is set at 0.929 tonnes/$CO_{2\text{-}e}$ for the 2006 calendar year).

Rule 3 – Demand Side Abatement (DSA)

The DSA Rule allows project proponents to undertake energy efficiency or demand management projects (DSA activities) to create NGACs. DSA activities are activities that reduce greenhouse gas emissions on the customer side of an electricity meter (ie the 'demand side').

Six types of project are eligible for accreditation:

- energy efficiency projects that modify existing energy consuming equipment, processes or systems (called 'Installations' in the DSA rule), or which modify the usage of those Installations
- energy efficiency projects that replace existing Installations, with other Installations
- energy efficiency projects that install new Installations that consume less electricity then other Installations of the same type
- fuel switching projects that substitute one source of energy for another
- reducing electricity consumption where there is no negative effect on production or service levels, and
- on-site electricity generation that replaces supply from the National Electricity Market.

Generally, DSA projects must be implemented in NSW after 1 January 2002 or after 1 January 2005 in the ACT.

A wide variety of projects have been accredited under this rule including:

- retrofit, sale and giveaways of energy efficient domestic fittings such as compact fluorescent lamps and AAA rated showerheads (subject to a discount depending whether the items are directly installed, sold or given away)
- significant energy efficiency upgrades of industrial facilities
- whole of building efficiency upgrades on major commercial premises

Rule 4 – Large Users (LUAC)

The LUAC Rule provides for the creation and calculation of non-tradable abatement certificates (LUACs) through the abatement of on-site industrial process-related greenhouse gas emissions not directly related to the consumption of electricity.

The LUAC Rule can only be used by large electricity customers who have elected to manage the greenhouse gas benchmark associated with their electricity consumption (the elective benchmark participants). Eligibility to become a Large User is assessed by the compliance regulator. Once eligibility has been approved, activities that can be carried out to create LUACs include:

- increasing the efficiency of on-site fuel use
- switching to lower emission intensity fuels
- abating on-site greenhouse gas emissions from industrial processes, and
- abating on-site fugitive greenhouse gas emissions.

These activities must occur in NSW and at a site covered by the large electricity customer's election.

Rule 5 – Carbon Sequestration

Carbon Sequestration through forestry relies on the natural process of photosynthesis, which uses carbon dioxide from the atmosphere together with sunlight in a chemical reaction to produce oxygen and glucose. The carbon dioxide from the atmosphere used in photosynthesis is effectively captured in the structure of the tree.

For a forest to be eligible to create abatement certificates, it must meet the definition of afforestation or reforestation that is specified by the United Nations Framework Convention on Climate Change. The activity must take place on Kyoto-Consistent Land, that is, land that was predominantly non-forest prior to 1 January 1990. Only sequestration that takes place after 1 January 2003 may be accounted for and eligible to create abatement certificates under GGAS[3].

To create abatement certificates from forestry activities, a party must be a 'Sequestration Pool Manager'. Essentially a Sequestration Pool Manager:

- owns or controls the Carbon Sequestration Rights registered on the eligible land on which the forestry activity takes place
- has management arrangements and policies in place that demonstrate the capacity to satisfy clause 73ID of the Regulation in regard to continued storage of the carbon sequestered for 100 years, and
- has adequate procedures in place with respect to hazards and risks to the eligible forests.

To date the Scheme Administrator has accredited five carbon sequestration projects. These all involve or will involve multiple sites but each has a unique business model.

[3] Abatement within an eligible forest is only recognized when it becomes part of an accredited carbon sequestration pool, as specified in the Regulation, Rule 5 – Carbon Sequestration and the Conditions of Accreditation for Sequestration Pool Managers.

9 SOME OUTCOMES TO DATE

Accreditations of ACPs

Table 1 sets out the number of accreditations granted and cancelled for each year the Scheme has been operating, categorised by Scheme Rule.

Table 1 Number of Scheme accreditations granted by year and by Rule

	Generation	Demand Side Abatement	Large Users – non-electricity	Carbon Sequestration	Total
Accredited in 2003[a]	14	3	1	0	**18**
Cancelled in 2003[b]	0	0	0	0	**0**
Accredited in 2004[a]	67	48	0	1	**116**
Cancelled in 2004[b]	7	34	0	0	**41**
Accredited in 2005[a]	25	43	1	3	**72**
Cancelled in 2005[b]	7	12	0	0	**19**
Accredited in 2006[a]	9	17	2	1	**29**
Cancelled in 2006[b]	4	4	0	0	**8**
Accredited in 2007[a]	**24d**	**19**	**4**	**1**	**48**
Cancelled in 2007[b]	**6**	**5**	**0**	**0**	**11**
Current total[c]	**115**	**75**	**8**	**6**	**204**

a This represents the number of accreditations approved by IPART in the calendar year.
b Accreditations may be cancelled due to a number of reasons including corporate restructure, completion of the project or a change in circumstances for the project.
c This represents accreditations still entitled to create certificates as at 31 December 2006.

Note: An accreditation may cover several 'accredited projects' with similar activity taking place. For example, activities in the commercial and residential sectors may be counted as separate projects but one DSA accreditation.

As of 31 December 2007 there were 204 accreditations. This total reflects the fact that some accreditations have been cancelled – principally following corporate restructures of ACPs requiring re-accreditation of the new corporate identity. Accreditations are not transferable. The following table lists the number of current accreditations under each of the Scheme Rules and by sector. It includes future projects which have been accredited under the Scheme.

Table 2 – Current accreditations by Rule, group, and sector

Rule	Grouping	Sector	Total
Generation	Category A	Hydro	12
		Landfill gas	17
		Natural gas	5
		Waste coal mine gas	2
	Category B	Coal	7
	Category C	Coal	6
		Hydro	2
		Natural gas	8
		Sewage gas	1
	Category D	Biomass	6
		Coal	3
		Coal Seam Methane	1
		Landfill gas	26
		Natural gas	12
		Waste coal mine gas	7
Demand Side Abatement	Energy Efficiency	Residential	22
		Commercial	29
		Industrial	18
	On-Site Generation	Industrial	5
		Residential	1
Carbon Sequestration	Carbon Sequestration		6
LUAC Rule	Fuel Switching	Paper & Wood	1
		Steel	1
	Increased Fuel Efficiency	Cement	1
		Paper & Wood	2
	Industrial Process	Aluminium	2
	Reduced Fugitive Emissions	Mining	1
Total			**204**

Creation of abatement certificates

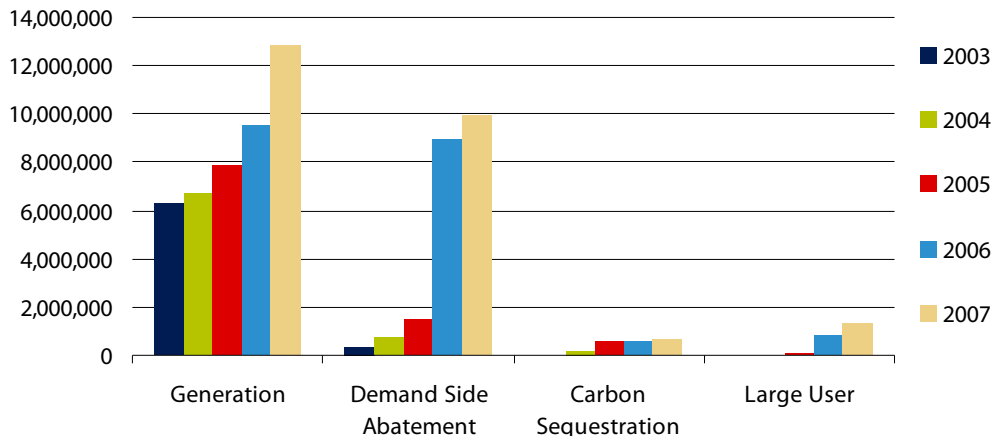
Table 3 below provides an indication of abatement certificates created under each Rule for each year to date. It is important to note that abatement certificates may be created up to 30 June for abatement activity undertaken in the previous calendar year. Thus certificates for the 2007 year may be created up to the 30th June 2008. It is therefore not possible to be certain of total 2006 certificate creation until after 30th June 2007. The distribution between sources of certificates for each year is illustrated in Figure 7.

Table 3 – Certificates created by vintage and Rule*

Vintage	Generation	Demand Side Abatement	Carbon Sequestration	Large user	Total
2003	6,317,835	345,141	0	0	**6,662,976**
2004	6,744,232	742,233	166,005	0	**7,652,470**
2005	7,879,171	1,509,199	538,471	94,277	**10,021,118**
2006	9,548,179	8,934,236	587,853	790,460	**19,860,728**
2007	12,827,675	9,975,356	698,765	1,288,383	**24,790,179**
Total	**43,317,092**	**21,506,165**	**1,991,094**	**2,173,120**	**68,987,471**

** As at 30 June 2008*

Figure 7 – Sources of NGACS (and LUACs)*



** As at 30 June 2008*

10 DEMAND AND SUPPLY OF CERTIFICATES

Of critical interest to many stakeholders is the likely balance between the demand for and supply of abatement certificates in the future years of the Scheme. The Scheme Administrator has undertaken some work to develop broad projections of demand and supply. However, this is an inherently complex task and any projection depends on the assumptions made about the future conduct of current Scheme participants.

Certificates are 'bankable' which means that the oversupply in the early years of the Scheme can assist in meeting future demand. There is no expiry date for certificates once they are created, however certificates must be registered within 6 months of the end of each calendar years' activities or they will be lost.

The projection of the demand and supply of certificates is based on a number of conservative assumptions including (but not limited to):

- Mid range estimates of electricity demand, NSW and ACT population growth, and the NSW/ACT pool coefficient.
- Queensland Generators eligible to create Gas Electricity Certificates (GECs) under the Queensland 13 per cent Gas Scheme will prioritise GEC creation over NGACs.
- The volume of certificates created from a number of similar energy efficiency projects peaked in 2007 and will continue to marginally decline during 2008 and 2009. It has been assumed that from 2010 onwards, owing to announced changes with regard to the use of incandescent light bulbs, accredited energy efficiency projects will no longer achieve the abatement of previous years.

It should also be noted that the Scheme Administrator has changed the methodology used to calculate demand to better account for the effect of demand side abatement NGACs on the calculation of Total State Demand. This change projects a lower demand in 2008 and 2009 than previously published.

In depicting the Scheme Administrator's projection for compliance years 2007 to 2012 three different scenarios on the supply side, have been developed against a single demand projection. These scenarios are presented in Figure 7.1.

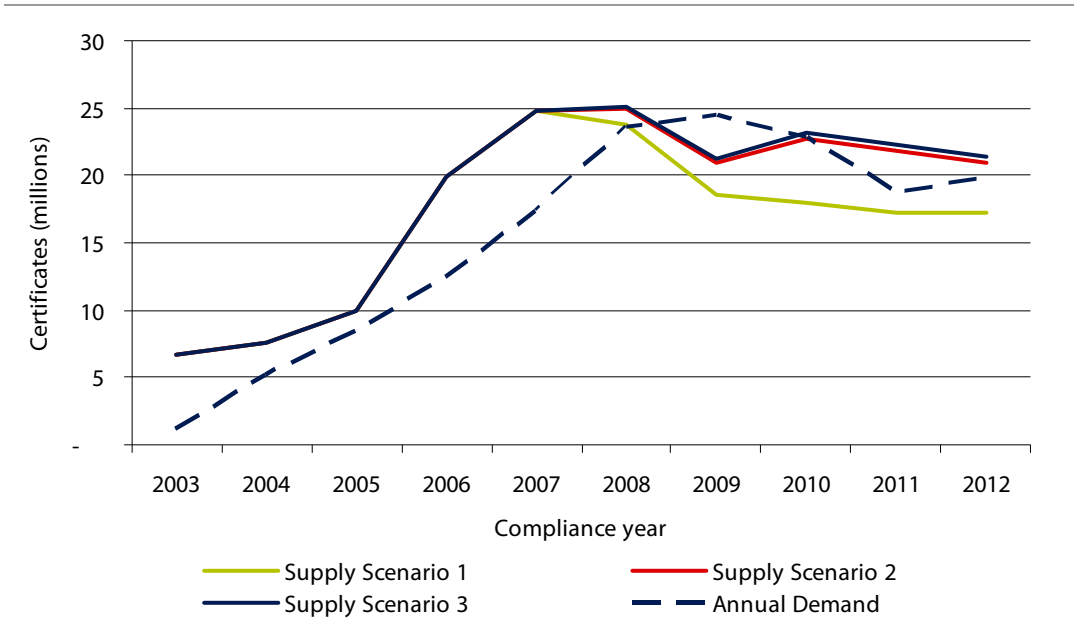
The annual supply scenarios have been prepared based upon the Scheme Administrator's knowledge of the potentially variable sources of supply for certificates. The following is a detailed description of each.

- **Scenario One:** The projected supply of certificates in this scenario is based on the abatement expected to be achieved by existing accreditations only, and excludes all future projects. This scenario is the low-range projection.
- **Scenario Two:** The projected supply of certificates in this scenario is based upon the abatement expected to be achieved by existing accreditations, including all accredited future projects. It is assumed that the accredited future project will commence abatement activities as anticipated by the project proponent. This scenario is the mid-range projection.
- **Scenario Three:** The projected supply of certificates in this scenario includes all accredited ACPs, accredited future projects (including the assumption that commencement of operation will be achieved as scheduled by the project proponent)

and all current applications for accreditation. This scenario is the upper-range projection.

The projected demand is depicted by a single scenario. While the demand projection is affected by projections in certificate supply under the DSA Rule, the three supply scenarios do not feature any DSA Rule related applications or future projects, that is, they all include forecasts from currently accredited projects only.

Figure 8 – Projected annual demand and supply of certificates*



As at 30 June 2008

All projections depict a supply that peaks in 2007 and remains high in 2008, owing to the likely continuing abatement occurring under the DSA Rule from energy efficiency projects. After the 2007 peak, supply trails downwards as projects in energy efficiency are assumed to decline (and eventually cease in mid-late 2009), as the contribution from compact fluorescent lamps is removed. Furthermore, in Scenario One from 2010 onwards, a number of generation projects come to a completion due to expiry of power purchase agreements (PPA), causing a further decline in annual supply. Scenario Two has the same downwards projection to 2009; however, the implementation of currently accredited future projects commences at approximately the same time. Assuming these future projects commence as scheduled, they will offset any reduction in supply resulting from the expiry of PPAs and changes to the DSA Rule.

Scenario Three, which includes all applications for accreditation (including future project applications), suggests that reduced supply from energy efficiency and from PPA expiry will be largely negated by an expected increase in certificate creation by future projects under the Generation Rule. However, this supply curve assumes that all existing accreditations (aside from energy efficiency) will continue largely unchanged until at least 2010, all current applications will be accredited, and all future projects, whether accredited or in application stage, will commence as scheduled.

The demand for abatement certificates is expected to continue to rise in the compliance period to 2009. This rise can primarily be attributed to:

- the State Greenhouse Gas Benchmark holding steady at 7.27t CO2-e abated per capita, whilst population and electricity demand increase
- the 2008 benchmark must be fully met by all benchmark participants without any allowable shortfall in 2008
- a steady increase in the NSW Pool Coefficient (the average intensity of emissions in CO2-e gases per MWh of electricity) is expected
- growth in certificate creation under the DSA Rule is expected to have peaked in 2007, declining marginally in 2008, and tapering off post 2008. This peak in DSA Rule certificates in 2007 yields the peak in demand in 2009, owing to the process in the Compliance Rule for adding energy savings back into state demand with a two-year lag.

Demand is projected to decline after 2009. While the per capita benchmark remains steady after this time, population is predicted to rise faster than demand for energy; and the Renewable Power Percentage will continue to rise (meaning benchmark participants can surrender a greater number of RECs in place of NGACs).

Under Scenario One, annual supply of certificates is less than annual demand from 2008 onwards. However, as certificates are bankable (ie they do not expire) it is likely that in Scenario One, the surplus of supply experienced in the first five years will assist in meeting the projected demand from 2008 onwards.

Scenario Two and Scenario Three show that annual supply is slightly larger than annual demand in 2008. As in Scenario One, the annual demand is greater than annual supply in 2009, but by 2010 supply has again risen above demand.

The projection is sensitive to small movements in some of the key factors used in determining the State and Territory greenhouse gas benchmarks. At the time the projections above were calculated (30 June 2008) there was significant uncertainty around the architecture and timing of commencement for the proposed national Carbon Pollution Reduction Scheme, and therefore the probability of future certificate creation levels. The Scheme Administrator expects that, as the framework for a national scheme is developed and the policy environment becomes clearer, the projections of supply and demand may change. In addition, the recent NSW Government announcement for a proposed NSW Energy Efficiency Trading (NEET) scheme (to commence in January 2009), may further affect the supply and demand projections below. As such, the Scheme Administrator cautions persons making decisions based upon the demand/supply balance depicted in Figure 8.