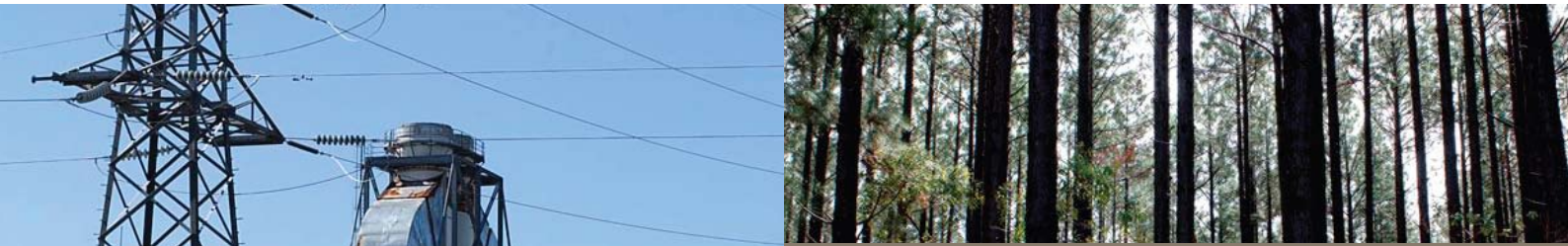




Australian Government
Department of Climate Change



NATIONAL CARBON OFFSET STANDARD **DISCUSSION PAPER**

DECEMBER 2008



www.climatechange.gov.au

Making a submission

The Department of Climate Change invites interested stakeholders to comment on the approach to a national carbon offset standard outlined in this paper. The Department is particularly interested in any comments on the design of the standard in the context of the introduction of the Carbon Pollution Reduction Scheme.

Submissions should be provided by 27 February 2009 to:

Offsets and Verification Team
Renewables, Offsets and COAG Branch
Department of Climate Change
GPO Box 854
CANBERRA ACT 2601

Email offset@climatechange.gov.au

Copies of this paper are available on the Department of Climate Change website at www.climatechange.gov.au. Hard copies are available on request.

Inquiries about this paper may be directed to:

Offsets and Verification Team
Renewables, Offsets and COAG Branch
Department of Climate Change

Telephone 02 6275 9898

Confidentiality

It will be assumed that submissions are not confidential and may be made publicly available. If you would like your submission, or any part of it, to be treated as confidential, please indicate this clearly when forwarding your submission.

Contents

Making a submission	ii
Contents	iii
1. Purpose of the Standard	2
1.1 Introduction	2
1.2 Purpose of the Standard	3
1.3 Proposed Standard	4
2. Carbon Pollution Reduction Scheme – implications for the voluntary market	5
2.1 The Carbon Pollution Reduction Scheme	5
2.2 Implications for carbon neutrality	7
2.3 Carbon Offsets	10
3. Carbon Neutral Calculation Standard	12
3.1 Carbon footprint calculation	13
4. Carbon Offset Standard	17
4.1 Voluntary surrender of carbon pollution reduction permits	17
4.2 Kyoto Units	18
4.3 Non-regulated International Offsets	19
4.4 Domestic Offsets – Uncovered Sources	22
4.5 Carbon Offset Principles	26
5. Accreditation	27
6. Supporting Processes	29
6.1 Verifying Carbon Footprint Calculations	29
6.2 Validating Domestic Offset Methodologies	29
6.3 National Registry	31
7. Implications for Greenhouse Friendly™	32

This discussion paper is prepared by the Department of Climate Change as a basis for consultation with interested stakeholders ahead of decisions on the design of the national carbon offset standard.

In particular, the introduction of the Carbon Pollution Reduction Scheme and Australia's ratification of the Kyoto Protocol raise complex issues regarding the concept of carbon neutrality and the range of credible offsets available to consumers.

The Department of Climate Change has undertaken some preliminary consultation with a small number of stakeholders, including some who provide offsets, purchase offsets to achieve carbon neutrality and non-government organisations. It has also received input from individual interested parties. It now seeks to consult more widely and welcomes views from all interested stakeholders.

1. Purpose of the standard

1.1 Introduction

The Government recognises the high priority in addressing climate change and is committed to taking action centred on a three pillar approach:

- reducing Australia's greenhouse gas emissions;
- adapting to climate change that we cannot avoid; and
- helping to shape a global solution that both protects the planet and advances Australia's long-term interests.

The key component of the Government's approach to reducing greenhouse gas emissions is an emissions trading scheme in the form of the Carbon Pollution Reduction Scheme (the Scheme). The Scheme is the centrepiece of Australia's domestic emissions reduction strategy. The Scheme is designed to meet Australia's emissions reduction targets in a flexible and cost effective manner while supporting an effective global response to climate change.

The *Carbon Pollution Reduction Scheme: Australia's Low Pollution Future White Paper* (the White Paper) outlines the structure and operation of the Scheme in Australia. Under the Scheme, aggregate emissions are capped at a level consistent with achieving the environmental outcome. The Government will set annual caps that apply a limit on the aggregate emissions from all sources of emissions covered by the Scheme. The Scheme will have broad coverage, with around 75 per cent of Australian emissions being covered from Scheme commencement. Broader coverage allows emissions reduction targets to be achieved at lower cost.

The Scheme will, for the first time in Australia, impose a carbon price across most of the economy which will drive emissions reductions over time.

This discussion paper is concerned with voluntary activity that occurs beyond that imposed by the mandatory or compliance market. It discusses the national carbon offset standard intended to apply to the voluntary carbon market and provide greater confidence to consumers who wish to purchase offset products.

Some individuals and entities may choose to reduce their impact on the environment by voluntarily offsetting carbon emissions. Offsetting refers to compensating for emissions

through the purchasing of ‘carbon credits’ or ‘offsets’ which have been generated by projects that cause a reduction of greenhouse gas emissions elsewhere.

The voluntary carbon market is concerned with the generation and sale of carbon credits for purposes that do not relate to the acquittal of a mandatory obligation under an emissions trading scheme. Buyers in the global voluntary carbon market include individuals (5 per cent), non-government organisations (13 per cent), businesses that purchase for investment or resale (29 per cent) and businesses that are final buyers (50 per cent).¹ Businesses buy carbon credits to offset particular products and services and to meet corporate commitments to social responsibility, including carbon neutrality. They may also purchase credits to offer carbon offsets to individual customers bundled with other goods or as an incentive to purchase goods from a specific supplier.² The types of offset credits that can be purchased worldwide are varied, including from the following sources: renewable energy (20 per cent); energy efficiency (18 per cent); fuel switching (9 per cent); and afforestation (8 per cent).³

The voluntary market is relatively small. The National Greenhouse Gas Inventory reports that Australia’s net greenhouse gas emissions were 576 million tonnes of CO₂ equivalent emissions in 2006. In 2007, the amount of annual voluntary offset credits transacted globally was 42.1 million tonnes CO₂ equivalents, with 7 per cent bought by Australia and New Zealand (2.9 million tonnes).⁴ Therefore Australian and New Zealand demand for voluntary offsets in 2007 was around 0.5 per cent of Australia’s emissions.

1.2 Purpose of the standard

In its election commitment of 6 June 2007, *Credibile Credits: A National Standard for Carbon Offsets*, the Government stated it “will set up a national standard for carbon offsets to ensure consumer confidence in the rapidly growing carbon offset market.”⁵ It committed to develop the standard by 31 December 2008 and stated that the national carbon offset standard will:

- build on existing schemes to minimise duplication;
- provide national consistency;
- include minimum standards for offsets;
- require ongoing management where necessary to ensure integrity;
- require credits to be cancelled when used to provide an offset;
- require all products on the market to be accredited;
- include appropriate verification and validation protocols;
- take international developments into consideration; and
- include standard carbon neutral calculations.

The standard is designed to ensure that consumers have confidence in the voluntary carbon offsets market and the integrity of the carbon offset products they purchase.

¹ Ecosystem Marketplace, New Carbon Finance, “Forging a Frontier State of the Voluntary Carbon Markets 2008”, p66

² Ibid, p65

³ Ibid, p33

⁴ Ibid, p7

⁵ <http://pandora.nla.gov.au/pan/22093/20071022-1405/www.alp.org.au/media/0607/msCCloo060ob3c.html>

The voluntary carbon market can provide a mechanism to reduce emissions further and encourage innovative methods of reducing carbon pollution. To do so effectively, consumers need to be confident in the integrity of the carbon offset products they purchase.

The Australian Consumer and Competition Commission (ACCC) notes that as the carbon offset market grows, concerns are emerging about what consumers and businesses are really purchasing when they buy carbon offsets⁶. Varied levels of understanding about carbon offsets and carbon neutrality and varied assessment methodologies can create confusion as to the legitimacy of claims and products. The ACCC stated support for the Government's development of a carbon offset standard. In mid 2008 it released its 'Carbon claims and the Trade Practices Act' to provide guidance to business to improve the accuracy of carbon related claims.

1.3 Proposed Standard

This paper aims to generate discussion around the design of the national carbon offset standard. It raises issues and considers various approaches. In summary, the discussion paper outlines a national carbon offset standard that:

- acknowledges that, while introduction of the Scheme alters the concept of carbon neutrality, entities will wish to engage in additional voluntary action;
- provides principles and specified emission factors for calculation and verification, using life cycle analysis, of the carbon footprint of products and services that entities may wish to offset in order to make claims about additional voluntary action;
- proposes carbon pollution reduction permits and particular Kyoto units as eligible offset credits;
- provides a process for assessing the credibility of any proposed methodologies for developing offsets from uncovered emissions sources of the domestic economy;
- proposes a means of tracking trade in offset credits in order to ensure against double counting;
- proposes what claims can be made by those who take additional voluntary action; and
- proposes that claims of compliance with the standard may be subject to assessment and consideration by the ACCC and that wrong claims risk contravening the *Trade Practices Act 1974*.

A draft standard based on these features is at Attachment C for the purpose of public consultation.

2. Carbon Pollution Reduction Scheme – implications for the voluntary market

When participating in the voluntary carbon market entities are motivated by a number of factors, but rank corporate responsibility and public relations/branding as most important.⁷ Across a variety of purchasing criteria entities regard additionality of offsets, the demonstrable ability to reduce emissions beyond levels that would otherwise have occurred, as one of the most important.⁸ Thus the integrity of carbon offsets is important to the reputation and public positioning of the purchasing entity.

An increasing number of entities have been purchasing offsets with the aim of making their product or service 'carbon neutral'. There is no universally accepted definition of carbon neutrality. However, a common understanding as defined by the Oxford English Dictionary is making no net release of carbon dioxide equivalent emissions to the atmosphere. Being able to claim carbon neutrality is one of the key motivating factors for participation in the voluntary carbon market.

On 11 March 2008 Australia's ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change came into force. On 15 December 2008 the Government released the White Paper outlining the structure and operation of an emissions trading scheme, the Carbon Pollution Reduction Scheme, in Australia.

Ratification of the Kyoto Protocol and adoption of the Scheme have implications for the concept of carbon neutrality and the range of offsets that can secure genuine environmental outcomes. The claim of carbon neutrality indicates that an individual entity has not added to the quantity of emissions in the atmosphere. However, as the Scheme places a cap on aggregate emissions from covered emissions sources it breaks the link between individual action and aggregate emissions. To understand these implications, it is important to understand how the Scheme works, particularly with respect to the link between individual action and aggregate emissions.

2.1 The Carbon Pollution Reduction Scheme

As described in the White Paper, an emission trading scheme restricts the quantity of emissions and allows the market to set the carbon price (reflected in the price of carbon pollution reduction permits).

A key benefit of an emissions trading scheme is that, in the context of imperfect information about the relationship between carbon prices and the quantity of emissions reductions, it secures the environmental objective by controlling the quantity of emissions directly. In addition, as Australia's international commitments are likely to continue to be defined as quantitative targets, this approach allows international obligations to be managed more effectively.

Indeed, it is a fundamental design feature of the Scheme that it restricts the quantity of emissions. Aggregate emissions are capped at a level that is consistent with the environmental objective; the lower the cap, the more abatement must occur. The cap sets a limit on the aggregate emissions from all the covered types and sources of emissions. Broader coverage reduces abatement costs.

⁷ Ecosystem Marketplace & New Carbon Finance, Forging a Frontier State of the Voluntary Carbon Markets 2008, p67

⁸ Ibid, p69

Therefore in covered sectors individual action could affect the carbon price but not the aggregate quantity of emissions. This does not mean that individual action does not assist in meeting the challenge of climate change. For example, owners of office buildings may achieve relatively low cost abatement by implementing energy efficiency measures. This will reduce their electricity bills, the demand for electricity, emissions from the electricity sector and therefore the demand for permits. This will in turn reduce the carbon price, reducing the cost to the economy of achieving the same level of abatement. As the cost to the economy decreases it becomes increasingly feasible to set more ambitious emissions reduction targets.

As described in Box 1.1, the Scheme will put a price on carbon throughout the economy by employing a cap and trade mechanism. Setting a limit on emissions means that the right to emit becomes scarce, raising the price. Entities responsible for emissions sources covered by the Scheme (liable entities) will be obliged to surrender a permit for each tonne of CO₂-e that they have emitted during the compliance period. The tradability of permits encourages the cheapest abatement to occur first and ensures that the emissions cap is achieved at least cost.

Box 2.1 Mechanics of a cap and trade scheme

Emitters of greenhouse gases need to acquire a permit or 'emissions unit' for every tonne of greenhouse gas that they emit.

The quantity of emissions produced by entities will be monitored and audited.

At the end of each year, each entity liable under the Scheme would need to surrender an emissions unit for every tonne of emissions that they produced in that year.

The number of permits issued by the Government in each year will be limited.

Entities compete to purchase the number of permits that they require. Entities that value the permits most highly will be prepared to pay most for them, either at auction, or on a secondary trading market. For some entities, it will be cheaper to reduce emissions than to buy permits.

Certain categories of entities might receive some permits for free, as a transitional assistance measure. These entities could use these permits or sell them.

By making emissions-intensive goods relatively more expensive a carbon price should also provide the incentive for businesses and consumers to adjust their behaviour and reduce emissions. For example, businesses may invest in low emissions technology while consumers may conserve energy in their homes in response to higher electricity prices.

As outlined in the White Paper, Scheme caps will be set equal to the indicative national emissions trajectory in the relevant year less the projected emissions from those sources not covered by the Scheme. The indicative national emissions trajectory is a function of the 2020 medium term target range which takes into account international outcomes and economic factors.

Allowable emissions from sources covered by the Scheme will only be able to exceed the cap if this is matched by the surrender of eligible international units, additional domestic permits issued as a result of forestry activities or additional permits issued under the price cap mechanism.

Scheme caps will not be adjusted once announced except where Scheme coverage is expanded. When new sources of emissions are added to the Scheme, the Scheme cap will have to be expanded to accommodate these. Over time, as coverage increases, the Scheme cap will progressively align with the indicative national emissions trajectory.

As caps are set five years in advance, future changes to Australia's international commitments may mean that the caps are not aligned with Australia's negotiated national targets. To provide certainty for businesses covered by the Scheme, the Government has decided that, once announced, Scheme caps will not be adjusted to align with new international targets. If necessary, the Government will make up any shortfall in internationally agreed targets by purchasing eligible international units.

Around 1,000 entities will have direct Scheme obligations. These entities would be expected to pass the cost of permits through to individuals and other businesses. For most entities the Scheme will, therefore, create an indirect incentive to reduce emissions by increasing the relative cost of emissions intensive goods and services. The Scheme will cover around 75 per cent of Australia's emissions, including all emissions from combustion of fossil fuels.

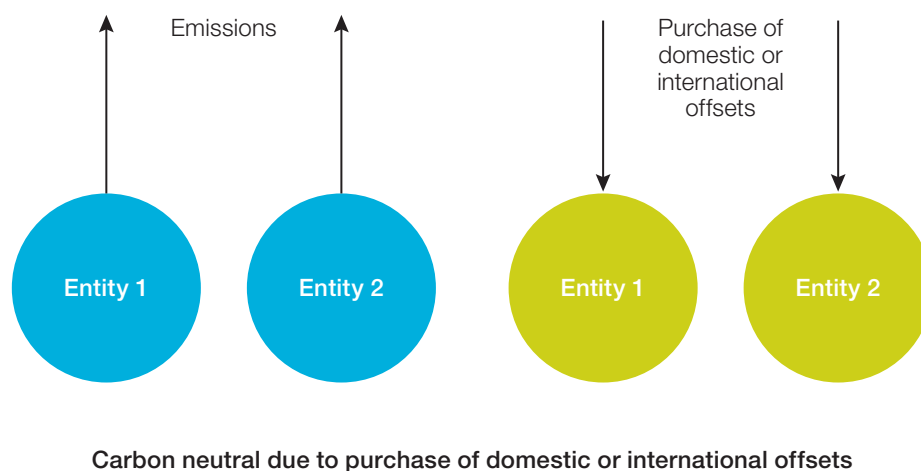
2.2 Implications for carbon neutrality

From a consumer's point of view, the environmental credibility of carbon neutrality comes from the fact that offsetting means an entity's activities do not increase aggregate emissions and therefore help to mitigate climate change. As described above, the effect of a cap on emissions from covered sources is to break the link between individual voluntary action and aggregate emissions.

Carbon neutrality in the absence of the Scheme

In the absence of the Scheme, carbon neutrality for an entity is driven by its own individual action to offset emissions arising from its operations through the purchase of voluntary carbon offsets. That is, an entity that did not undertake offsetting actions would increase emissions at the entity level as well as the aggregate level. If the entity took action to fully offset its emissions, there would be a reduction in the emissions released at the entity and aggregate levels, resulting in no net change in emissions. This latter activity can be considered carbon neutral in that it produces zero net emissions at the aggregate level.

Figure 1: Carbon neutrality in the absence of the Scheme



Carbon neutrality in the presence of the Scheme

The purpose of a cap is to drive aggregate emissions reductions below ‘business as usual’. Permits will be issued up to the cap, although extra permits will be issued for reforestation as this removes and sequesters carbon from the atmosphere.

Once there is a binding cap on emissions, individual actions in covered sectors may affect the price but not the quantity of aggregate emissions. Any increase in emissions from sources that are covered by the Scheme will increase the demand for permits. Increased demand will increase the permit price, driving emissions reductions by other liable entities where the cost of reducing emissions is cheaper than purchasing permits. In this way any increase in emissions is offset by a reduction in emissions elsewhere under the cap. As a result the net change in aggregate emissions is zero.

As all covered emissions are subject to the cap the link between individual entity action and aggregate emissions is broken. If we also consider that, under the cap, the net change in aggregate emissions is zero, if all an entity’s emissions were covered by the Scheme it could be considered ‘carbon neutral’ in the sense that individual emissions have had no net impact on aggregate emissions.

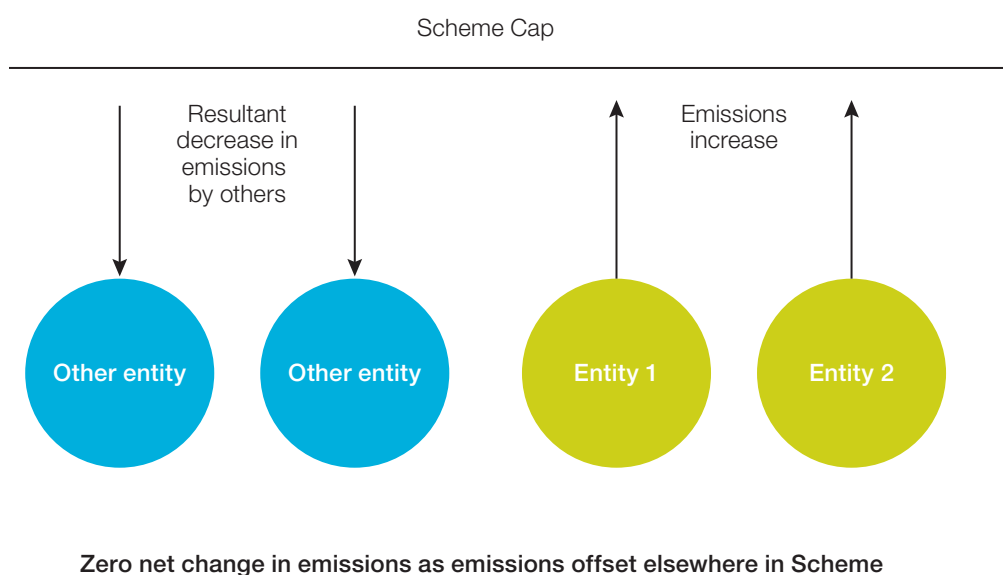
As a result of the Scheme, Australia’s aggregate emissions will be reduced, but total emissions will still be positive. While aggregate emissions are positive, no individual entity influences the level of aggregate emissions. Similarly, it would be incorrect to ascribe the aggregate outcome to an individual entity. Indeed, an individual entity could double its covered emissions (or cease production all together) and it would affect the price but not the quantity of aggregate emissions. Ascribing the individual outcome to the aggregate is an example of the ‘fallacy of composition’ – what is true for the individual is not necessarily true for the group (see Box 1.2) .

Box 2.2 Fallacy of composition^a

The fallacy of composition is a logical fallacy based on the assumption that what is true for one individual is necessarily true for a group of individuals. The assumption is not correct. A statement that is valid for an individual is not necessarily valid for the larger group. For example, an individual farmer who reaps a particularly large crop is likely to realise a sharp gain in income. But this statement cannot be generalised to farmers as a group. The individual farmer’s large crop will not noticeably influence (reduce) crop prices because each farmer produces a negligible fraction of total farm output. But for all farmers as a group prices decline when total output increases. Thus if all farmers reap large crops the total output of farm products will rise, depressing crop prices. Indeed, if the price declines are relatively large, total farm income might actually fall.

^a Adapted from Campbell R. McConnell, Stanley L. Brue, Economics: Principles, Problems, and Policies Published by McGraw-Hill Professional, 2005 (p 11)

Figure 2: Offsetting within the Scheme



If entities with emissions covered by the Scheme undertake voluntary action by offsetting their covered emissions through the purchase and retirement of offset credits generated outside the Scheme, this would reduce aggregate emissions. This is because the emissions associated with these activities have been offset twice: once by reductions elsewhere in the Scheme and a second time through their own voluntary action.

Entities that wish to offset emissions embodied in their domestic inputs will find that the emissions from the majority of these inputs will be covered by the Scheme. The Scheme will cover emissions from stationary energy, transport, industrial processes, waste and fugitive emissions. For this reason almost all emissions embodied in entities’ inputs would also have been subject to the operation of the Scheme cap.

However, other emissions, such as those embodied in inputs from uncovered emissions sources of the economy and embodied emissions in imported goods, would not be subject

to the operation of the domestic Scheme cap. Imported goods may be covered by a cap and trade scheme in other parts of the world.

Voluntary action beyond the Scheme

Some entities and individuals will wish to undertake additional voluntary activity beyond compliance with the Scheme. However, given the operation of the Scheme cap in driving emissions reductions elsewhere, is there still benefit in using the term ‘carbon neutral’? Is another labelling concept required that recognises the degree of voluntary effort undertaken? A concept that recognised that entities would be taking voluntary action beyond the Scheme may be more relevant from the commencement of the Scheme. It may be more appropriate to have recognition around the amount of emissions offset.

Is the term ‘carbon neutrality’ still meaningful in the context of a cap and trade scheme?

Rather than ‘carbon neutrality’ would another concept such as ‘additional voluntary action’ be more appropriate to recognise voluntary activity?

If all an entity’s emissions were covered by the Scheme, would it be sufficient for the entity to participate in the Scheme to be considered carbon neutral?

2.3 Carbon offsets

The White Paper states that the very broad sectoral coverage of the Scheme means that there is inherently less scope to pursue domestic offset activities that relate to voluntary activity outside of the Scheme. It states that offsetting should only be adopted where coverage under the Scheme is not possible, nor cost effective mitigation through alternative measures. The White Paper concludes that the scope for offsets within the Scheme from uncovered sources will be considered in 2013 when final decisions are made about Scheme coverage.

Purchasers of carbon offsets in the voluntary market report that the most important offset product criterion is additionality⁹. Additionality protects the environmental integrity of the offset product by ensuring that real, measurable and permanent emissions abatement has occurred and that the abatement is not occurring through projects that would have been implemented anyway.

The requirement of additionality applies to the Clean Development Mechanism (CDM) of the Kyoto Protocol. Article 12.5 of the Kyoto Protocol states that, among other things, CDM projects will be certified on the basis of “reductions in emissions that are additional to any that would occur in the absence of the certified project activity”. Attachment A illustrates the decision process to determine additionality adopted by the CDM.

Australia’s Greenhouse Friendly™ initiative has adopted the CDM approach in specifying the following tests for additionality:

1. Regulatory/compliance analysis. The project must not be implemented in order to comply with any legal, regulatory or licensing requirement under international or Australian national or state law;
2. Investment analysis. The project must rely on revenue generated by the sale of abatement credits to ensure its ongoing financial viability; or

3. Barrier analysis. The project faces a barrier preventing its implementation without approval as an offset project;
4. Common practice analysis. Demonstrate that the type of project proposed is not implemented elsewhere as part of common practice.
5. Impact of Greenhouse Friendly™ Initiative approval. The project requires such approval to enable it to be implemented.

Some countries with cap and trade emission trading schemes are considering offsets only from the regulated international market (Kyoto units) or uncovered domestic emissions sources. For example the United Kingdom released a *Code of Best Practice for Carbon Offset providers* in February 2008 listing Kyoto units (Certified Emissions Reductions and Emissions Reduction Units) and European Union Allowances as the only eligible offsets, with provision for the establishment of a voluntary emission reduction standard for small scale domestic abatement projects in non-covered emissions sources.

Given the issues for additionality posed by the Scheme, potential credible offsets for Australian entities include international offset credits, domestic offsets from uncovered sources where a robust methodology can be demonstrated and voluntary surrender of carbon pollution reduction permits. These options are discussed in Chapter 4.

3. Carbon neutral calculation standard

The Government's election commitment states that the national carbon offset standard will include 'standard carbon neutral calculations'. As shown in Chapter 2, introduction of the Scheme changes the concept of carbon neutrality because the scheme breaks the link between individual entities' actions and aggregate emissions.

As the emissions cap drives emission reductions in response to emission increases, the result is a zero net change in aggregate emissions. As such, activities producing emissions from covered sources at any point in the supply chain will not add to aggregate emissions.

This has implications for carbon neutral calculations. By extension, offsetting would be limited to emissions calculated from uncovered sources of the domestic economy and embodied in imports where they are not similarly covered by a cap and trade scheme in other parts of the world.

There are few uncovered sources of emissions and the Government's predisposition is to cover agricultural emissions from 2015. Calculating the embodied emissions in imported goods may be difficult, particularly distinguishing between countries with and without an emissions trading scheme.

Further, such an approach would differ from international practice in terms of calculating carbon neutrality. In other countries, such as the United Kingdom and New Zealand, carbon neutrality calculations are applied as they were before the introduction of an emissions trading scheme. In other words, entities calculate all the emissions associated with a particular good, service or organisation, for example using carbon footprint calculations.

It is recognised that many entities in Australia will wish to take additional action beyond meeting costs associated with the Scheme. Given that major motivating factors for doing so are to achieve corporate responsibility goals, for public relations or branding reasons and to facilitate the sale of products¹⁰, entities are likely to want to be consistent with international practice. Following international practice would allow consistency of approach and similar calculation methods for entities operating across different countries.

However, existing international practice appears not to have been formulated taking into account the operations of a cap and trade scheme. It ignores the environmental impact of an emissions trading scheme in driving emissions reductions elsewhere. As illustrated in Box 3.1, expecting entities to offset their emissions as they did before the Scheme would significantly increase the cost of claiming a product or service to be 'carbon neutral'. Once the Scheme is introduced, under this approach, liable entities will need to meet the cost of purchasing offsets equivalent to the calculated footprint in addition to the cost of purchasing permits. All entities will need to meet their offset costs in addition to paying prices that reflect the incorporation of a carbon price into the economy. Having to meet the financial cost of the Scheme as well as offset emissions along the lines of the UK and New Zealand approach is likely to reduce the appetite for achieving further voluntary action.

Although emissions reductions have been driven from within the Scheme, a product's carbon footprint may continue to be a useful benchmark to measure the degree to which an entity has undertaken additional voluntary action.

Box 3.1 Comparative cost of carbon neutrality for an entity under international practice

Assumes all emissions sources are covered by the Scheme

	Pre-Scheme#	Post-Scheme*
Emissions	100 CO ₂ e tonnes	100 CO ₂ e tonnes
Carbon price	n/a	\$20 per tonne
Cost of offset credit	\$20 per tonne	\$20 per tonne
Cost of permits	n/a	\$2,000
Cost of offsets	\$2,000	\$2,000
Total	\$2,000	\$4,000

assumes cost of offsets = permit price

*where further offsets are required to become carbon neutral.

Should calculation of a carbon footprint be based only on emissions from uncovered sources or should it be based on an individual activity's entire emissions?

3.1 Carbon footprint calculation

The term carbon footprint is commonly used to describe the total amount of CO₂ and other greenhouse gas emissions for which an individual product or service or organisation is responsible. The calculation standard will need to specify a preferred means of determining a carbon footprint and any tools required to assist entities in doing so. The standard should reflect and be consistent with existing Australian carbon emissions calculation and reporting requirements, for example those under the *National Greenhouse and Energy Reporting Act 2007* (NGER Act), including where it is strengthened to accommodate requirements of the Scheme.

Life cycle analysis

If an entity wishes to undertake voluntary action to reduce emissions equivalent to all or part of its carbon footprint, it must first calculate that footprint. The appropriate approach to calculating carbon emissions for this purpose is life cycle analysis (LCA), which forms the basis of current international standards for calculating carbon emissions and is utilised in Australia's Greenhouse Friendly™ initiative.

The GHG Protocol¹¹ produced by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) has identified three potential "scopes" for a greenhouse gas inventory. The calculation and reporting of emissions required of entities under the NGER Act is based on the GHG Protocol. The following definitions of 'scopes' are therefore taken from the NGER guidelines¹².

Scope 1 emissions: The release of greenhouse gas into the atmosphere as a direct result of an activity, or series of activities that constitute a facility.

¹¹ <http://www.ghgprotocol.org/>

¹² Department of Climate Change, "National Greenhouse and Energy Reporting Guidelines", 2008, p10

Scope 2 emissions: The release of greenhouse gas as a result of one or more activities that generate electricity, heating, cooling or steam that is consumed by a facility but do not form part of the facility.

Scope 3 emissions: The release of greenhouse gas into the atmosphere that occurs outside the boundary of a facility as a result of activities at a facility and are not Scope 2 emissions.

The calculation of a full life cycle analysis for any product, service or entity can be a costly and time consuming process. It is worth considering whether full application of life cycle analysis is appropriate for all circumstances. For example the calculation of a full life cycle analysis for an individual would be impractical and cost prohibitive.

Whilst the boundaries of Scope 1 and 2 emissions are quite clearly defined, Scope 3 accounting is more problematic – it requires an analysis that extends back through the many stages of the upstream supply chain. Consequently methodological and practical difficulties have inhibited consistent reporting of Scope 3 emissions and raised concerns over double counting.¹³

The GHG Protocol considers the quantification of Scope 3 emissions as optional when preparing an overall corporate GHG inventory, as do similar protocols such as the U.S. Environmental Protection Agency’s Climate Leaders Program.

However, WRI and others urge companies to quantify their Scope 3 inventory as a means of developing a more comprehensive view of the global warming implications of their activities and of their business model generally. Going through a Scope 3 analysis can also provide considerable insight into where companies might best focus their global warming mitigation efforts. Working through their supply chains, some companies can greatly leverage their mitigation efforts beyond what they would accomplish focusing only on their own Scope 1 and Scope 2 emissions.

In practice, companies approach Scope 3 in very different ways. Many select out a few components of Scope 3 to include in their inventory, often including things like corporate travel and employee commuting. It can be challenging and expensive to conduct an analytically rigorous Scope 3 analysis. Where carbon neutrality is a company’s objective, a full Scope 3 emissions inventory can be complex.¹⁴

Given the complexity involved, it may be reasonable for the estimation of emissions associated with organisations and possibly services to use a less comprehensive form of lifecycle analysis that makes calculation of Scope 3 emissions optional. It would be consistent with current practice for full life cycle analysis to be undertaken for estimation of emissions associated with products.

Does calculation of a carbon footprint represent a sound benchmark from which to determine the degree of voluntary action an entity may wish to undertake?

Should different approaches to lifecycle analysis be applied to organisations, products and services?

Should the calculation of Scope 3 emissions be optional for organisations and/or services and if so which, if any, Scope 3 emissions should be considered?

¹³ http://www.isa.org.usyd.edu.au/research/InformationSheets/ISATBLInfo17_new.pdf

¹⁴ <http://www.climatebiz.com/blog/2006/12/01/what-a-scope-3-ghg-inventory-and-how-much-do-i-need-worry-about-it>

Carbon calculation principles

It is possible to calculate life cycle emissions through application of a suite of principles or using an emissions calculation tool that applies those principles.

The complexity and variability involved in estimating emissions varies considerably for products, services, large and small businesses. Estimating emissions from some service-based small to medium businesses could also be relatively simple as most emissions would be associated with stationary energy and fuel use. In these cases use of a calculator may be appropriate.

However, larger businesses and those involved in industrial production face greater complexities in determining their carbon footprint. There is also greater variability, for example in the selection and calculation of emissions factors, which does not lend itself readily to the use of one calculation tool. For this reason the use of a suite of principles may be more appropriate in these cases.

The GHG Protocol outlines principles for ensuring that reported greenhouse gas emissions represent a true and fair account of an entity's greenhouse gas emissions¹⁵:

- a. **Relevance:** Ensure the greenhouse gas inventory appropriately reflects the greenhouse gas emissions of the organisation and serves the decision making needs of users – both internal and external to the company.
- b. **Completeness:** Account for and report all greenhouse gas emissions sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.
- c. **Consistency:** Use consistent methodologies to allow for meaningful comparisons of greenhouse gas emissions over time. Transparently document any changes to the data, boundary, methods, or any other relevant factors in the time series.
- d. **Transparency:** Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the calculation methodologies and data sources used.
- e. **Accuracy:** Ensure that the quantification of greenhouse gas emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

Under the Greenhouse Friendly™ initiative, LCA Assessment must be performed in accordance with the current Australian Standard for Life Cycle Assessment in the ISO 14040 series. The ISO 14040 Standards provide the general framework, principles and requirements for conducting and reporting LCA studies. The Standards deal with all the impacts of a product or service on all resources including for example the use of water, raw materials (such as metals or fibres), and energy. The LCA required for the Greenhouse Friendly™ initiative needs to determine the greenhouse gas emissions attributable to the product or service. The following steps, utilised in Australia's Greenhouse Friendly™ initiative (details at Attachment B) may constitute appropriate guidance.

¹⁵ World Business Council for Sustainable Development and World Resources Institute, "The Greenhouse Gas Protocol A Corporate Accounting and Reporting Standard Revised Edition", p7

1. **Provide a statement of scope:** indicate the scope of the life cycle analysis, including any limitations that may affect its validity. The scope could also describe the product or services' measurable parameters and system boundaries in accordance with AS/NZS ISO 14040 and incorporate all relevant stages of the life cycle for the product or service.
2. **Consider aspects of energy use:** including embodied energy in feedstock materials, process energy used in production, energy used to manufacture, transport and package a product, by services that form part of product distribution and supply, in operation of the product, to manufacture and supply consumables needed for operation of the product, to dispose of or recycle the product and energy credits, should materials be reused or recycled.
3. **Apply emission factors:** use a hierarchy of means to select emissions factors with the preferred approach being use of the National Greenhouse Accounts Factors.¹⁶
4. **Conduct an inventory analysis:** to outline the data collection and calculation procedures used to quantify the emissions associated with the product or service.
5. **Calculate emissions attributable to each stage of the life cycle of the product or services:** convert all energy consumption data into quantities of carbon dioxide equivalent emissions for each life cycle stage, which, when summed, constitute the total greenhouse emissions for the product or service.

Do the GHG Protocol principles and/or the Greenhouse Friendly™ initiative steps for Life Cycle Analysis constitute an appropriate basis for the calculation of a carbon footprint for organisations, products or services under the national standard?

4. Carbon offset standard

The Government has identified the need for an Australian standard to identify what constitutes a robust, permanent and verifiable carbon offset.

A national standard will provide a means of ensuring the integrity, for consumers and businesses alike, of the products available for taking additional voluntary action. It is intended that the standard will also assist consumers in making active choices in regard to offsetting. The standard will apply to operations within the voluntary market.

As Section 2.3 discusses, given the issues for additionality posed by the Scheme, potential credible offsets for Australian entities include voluntary surrender of Scheme carbon pollution permits, Kyoto units¹⁷, other international offset credits and domestic offsets from uncovered emissions sources.

4.1 Voluntary surrender of carbon pollution reduction permits

The White Paper states that “a permit could be held and traded by any legal or natural person” regardless of whether they have any legal obligations under the Scheme. It therefore makes feasible the purchase and surrender of permits for voluntary purposes.

If entities undertake voluntary action by purchasing and surrendering carbon pollution permits, they will increase the scarcity of permits and the permit price leading to greater abatement than would have occurred in the absence of such voluntary action. Voluntary surrender and cancellation of Kyoto units is a way of increasing Australia’s contribution to the global mitigation effort, beyond the commitment agreed to in international negotiations.

How the Government treats permits and Kyoto units voluntarily surrendered under the Scheme will determine if the surrendered permits will contribute to Australia’s obligations under the Kyoto Protocol.

The Kyoto Protocol allows for the voluntary ‘cancellation’ of Kyoto units. Once a Kyoto unit has been put into the voluntary cancellation account it cannot be removed or swapped with a different permit. Unlike a Kyoto unit that is put into the retirement account, a Kyoto unit that is put into the voluntary cancellation account cannot count towards discharge of Australia’s obligations under Article 3 of the Kyoto Protocol.

To provide clarity to voluntary market participants, where an entity voluntarily surrenders any type of Kyoto unit in the national registry, the White Paper states that unit will be cancelled by the Scheme regulator and not used by the Australian Government to meet its international obligations under the Kyoto Protocol. Further, when a carbon pollution permit is voluntarily surrendered under the Scheme, the Government will cancel a Kyoto unit before the end of the Kyoto true-up period. These approaches will ensure that the voluntary surrender of either a carbon pollution permit or a Kyoto unit will increase Australia’s contribution to the global mitigation effort, above and beyond the commitment agreed to in international negotiations.

The White Paper states that the Government will not impose any quantitative restriction on voluntary surrender at this time.

¹⁷ Kyoto units include certified emissions reductions (CERs) from the Clean Development Mechanism, emission reduction units (ERUs) from the Joint Implementation activities, removal units (RMUs) from land use, land use change and forestry and assigned amount units (AAUs).

4.2 Kyoto units

In meeting their Kyoto targets, countries have the option of using flexibility mechanisms such as the Clean Development Mechanism (CDM), Joint Implementation (JI) or emissions trading. These mechanisms form the compliance or regulated market and are subject to verification requirements under the Kyoto Protocol (see Box 4.1).

Credits from these mechanisms can be made available for purchase in the both the compliance and voluntary markets. Regulated market credits include Certified Emission Reductions (CERs) units generated from CDM abatement projects, Emission Reduction Units (ERUs) from JI projects, Removal Units (RMUs), which are issued on the basis of land use, land use change and forestry activities, or Assigned Amount Units (AAUs) from other countries. Each country is allocated AAUs based on its target under the Kyoto Protocol.

Box 4.1

Clean Development Mechanism^b

The Clean Development Mechanism (CDM) provides for third parties to implement emissions reduction projects in developing countries to receive certified emission reduction (CER) credits. In turn, projects under the CDM assist the host parties to achieve sustainable development and contribute to the ultimate objective of the United Nations Framework Convention on Climate Change.

Unlike other types of CDM projects, reductions arising from afforestation or reforestation activities receive either temporary certified emission reductions (tCERs) or long-term certified emission reductions (lCERs). These units have limited life – less than two commitment periods for tCERs and between 20 and 60 years for lCERs

The CDM recognises the importance of reducing emissions growth and promoting sustainable development in the developing world.

Joint Implementation

Joint Implementation (JI) provides for an Annex I party to implement projects (emission-reducing projects or projects that enhance carbon sinks) in the territory of another Annex I party and to count the resulting emission reduction units (ERUs) towards meeting its own Kyoto target.

To issue ERUs, the host country (the country in which the project occurs) must cancel an equivalent number of assigned amount units (AAUs) from its national registry. The reduction in AAUs is matched by a reduction in its national emissions inventory. Joint implementation is an indirect way of exporting AAUs.

^b <http://cdm.unfccc.int/index.html>

Credits generated from the regulated market can be regarded as credible offsets because they adhere to robust principles in their development and because they are certified under the Kyoto Protocol. Units that are accepted for compliance in the Scheme would also be credible offsets for the purposes of the voluntary carbon market.

The White Paper states that, in addition to carbon pollution permits, the following Kyoto units will be accepted for compliance within the Scheme.

- *Certified emission reductions* - The White Paper states that all CERs will be accepted under the Scheme except for long term CERs (lCERs) and temporary CERs (tCERs), because lCERs and tCERs are generated from afforestation or reforestation activities, only have a limited life and would eventually need to be replaced by other units as they expire. Due to this inherent liability associated with these CERs the White Paper does not support their use under the Scheme. Use of CERs generated from nuclear activities is prohibited under the Marrakech Accords.
- *Emission reduction units* - All ERUs are accepted for compliance within the Scheme, although ERUs converted from RMUs in the first commitment period will not be recognised for compliance purposes within the Scheme from 2012-13.
- *Removal Units* – Noting that few countries generate RMU's, which are issued on the basis of land use, land use change and forestry activities, the White Paper states that RMU's will be recognised for compliance purposes in the Scheme. However, RMU's issued in the first commitment period will not be accepted for compliance in the Scheme beyond 2012-13.

The White Paper states that Assigned Amount Units (AAU's) will not be accepted for compliance within the Scheme because of concerns that the large number of surplus AAUs may result in Scheme instability should trading in them occur.

The White Paper states that the Scheme will not initially allow for the voluntary surrender of units other than Scheme permits or Kyoto units. This approach would exclude the voluntary surrender of units that come from the currency of other domestic or regional emissions trading schemes such as European Union Allowances or New Zealand units. However, this approach may be revised in the future in light of international negotiations on the post Kyoto environment.

On this basis the following Kyoto units could be eligible offsets under the national carbon offset standard: CERs (except tCERs and lCERs); ERUs; and RMUs. It is proposed that, for the same reasons they are not accepted in the Scheme, AAUs from other countries, tCERs and lCERs would not be eligible offsets under the standard.

4.3 Non-regulated international offsets

Offsets generated in other countries can be considered additional because they do not contribute to the achievement of Australia's international obligations and they do not constitute business as usual for an Australian entity, provided they are not similarly covered by a cap and trade scheme elsewhere in the world.

Various voluntary carbon offset standards have emerged in recent years (see Box 4.2). They include¹⁸:

- Gold Standard (GS)
- Voluntary Carbon Standard
- VER+
- The Voluntary Offset Standard (VOS)

18 WWF Germany, Making Sense of the Voluntary Carbon Market: A Comparison of Carbon Offset Standards, March 2008, pp v

- Chicago Climate Exchange (CCX)
- The Climate, Community and Biodiversity Standards (CCBS)
- Plan Vivo System
- ISO 14064-2
- GHG Protocol for Project Accounting

In the voluntary market the most commonly used standards are VCS (29 per cent), CDM/JI (16 per cent), Gold Standard (9 per cent) and VER+ (9 per cent)¹⁹. The comparative table below provides a summary of the features of these four voluntary carbon offset standards.

Table 4.2 Comparison of four common standards

	Project Types	Price of Offsets⁵	Co-benefits⁶
UNFCCC CDM	All except REDD ¹ , HFC ² , nuclear ⁷	18 – 38 USD	Yes
Gold Standard	EE ³ and RE ⁴ only	VERs: 13-25 USD CERs: 13 USD premium	Yes
Voluntary Carbon Standard	All except new HFC	6-19 USD	No
VER+	As per CDM except large hydro projects	6-19 USD	No

Source: A. Kollmuss (SEI-US), H. Zink (Tricorona), C. Polycarp (SEI-US), *Making Sense of the Voluntary Carbon Market: A Comparison of Carbon Offset Standards*, WWF Germany, March 2008, px), Ecosystems Marketplace and Carbon Finance, *Forging a Frontier State of the Voluntary Carbon Markets*, May 2008, p 57)

1. REDD = Reducing emissions from degradation and deforestation in developing countries
2. HFC = Hydrofluorocarbon
3. EE = Energy efficiency
4. RE = Renewable energy
5. These prices taken from the WWF Report released in March 2008 in euros (based on exchange rate of Feb 5, 2008 of USD = .67 euros converted to USD based on exchange rate USD =0.79 euros at 5 December 2008
6. Benefits which go beyond greenhouse gas reduction benefits. They include job creation, improved local air quality, protected and enhanced biodiversity.
7. Use of CERs generated from nuclear activities is prohibited under the Marrakech Accords.

The Australian Government is supporting the development of an international market for REDD credits within a wider global carbon market under the UNFCCC. In June 2008, Australia and Indonesia agreed to develop the Roadmap for Access to International Carbon Markets. The Roadmap is a multi-phased strategy that is assisting Indonesia develop the necessary technical, system and financial pre requisites for participation in future international carbon markets for reducing emissions from deforestation and forest degradation (REDD).

Box 4.2 Voluntary carbon offset standards

Gold Standard^c

The Gold Standard exclusively focuses on renewable energy and energy efficiency projects with sustainable development benefits.

Applications for the Gold Standard accreditation process are managed by the GS Foundation. Projects are rated eligible by the project method, which requires the use of renewable energy and energy efficiency technologies that deliver local sustainable development. Projects are tested for environmental quality by registered third parties. The GS carbon credit label is awarded after third party validation and verification of the offset project.

Under the Gold Standard Designated Operational Entities (DOEs), entities accredited by the United Nations as competent project evaluators, validate and verify offset projects. These entities control the projects themselves to make sure that the carbon emission reduction has actually been achieved. The Gold Standard has developed validator manuals for the DOEs (voluntary and CDM/JI). Under the Gold Standard, DOEs also validate and verify information.

Voluntary Carbon Standard (VCS)^d

The VCS allows for the quantification, monitoring, reporting, validation and verification of greenhouse gas emission reductions or removals. The VCS's objectives include the development of tradable voluntary offset credits to stimulate innovation in emission reduction technologies. It aims to provide a chain of ownership in regard to voluntary offsets, preventing them from being used twice. The scope of the Program covers all those activities related to the generation of GHG emission reductions and removals. The VCS prescribes that eligible offsets should be real (proven to have genuinely taken place), measurable, permanent, additional, independently verified, unique (each VCU is only associated with a single GHG emission reduction or removal activity), transparent and conservative (conservative assumptions, values and procedures are employed) ensuring GHG emission reductions or removals) are not overestimated.

VER+^e

The VER+ follows the Kyoto Protocol's project-based mechanisms but unlike the CDM does not focus on sustainable development. The standard was designed for managing verified emissions reduction from a variety of other standards.^f The validation process is reviewed by a UNFCCC-accredited auditor and also approves any project. Unlike CDM the auditor performs both the validation and verification of the same project.

^c <http://www.cdmgoldstandard.org/>

^d <http://www.v-c-s.org/>

^e http://www.tuev-sued.de/uploads/images/1179142340972697520616/Standard_VER_e.pdf

^f WWF Germany, Making Sense of the Voluntary Carbon Market: A Comparison of Carbon Offset Standards, March 2008, pp 65

Voluntary Emission Reductions (VERs) credited under such standards are not recognised under the Kyoto Protocol and therefore their voluntary surrender would not contribute to Australia's or any other party's international obligations.

The Carbon Pollution Reduction Scheme Green Paper (The Green Paper) considered whether non-Kyoto units, including voluntary market credits, should be accepted for compliance under the Scheme. Accepting these units for compliance would increase the cost to Australia of meeting its Kyoto target and likely be a barrier to any future efforts to develop linkages with other emissions trading schemes in countries that have ratified the Kyoto protocol. The White Paper concludes that international units other than Kyoto units will not be accepted into the Scheme but states that this could be reviewed in the post 2012-13 period depending on the outcome of international negotiations on future commitment periods

The Government is working to contribute to a global solution to climate change by operating within the Kyoto framework and future international agreements. The draft standard at Attachment C limits the range of voluntary offsets to Kyoto units. This would provide consistency with that international framework and provides greater certainty that relevant offsets represent robust and verifiable abatement. To the extent that other types of carbon credits become recognised as part of international frameworks they could be considered for eligibility under the standard.

The United Kingdom's *Draft Code of Best Practice for Carbon Offset Providers*²⁰ released in February 2008 recommends the following units as eligible for its quality mark: CERs; ERUs; and European Union Allowances (EUAs). However, the code has provision for the establishment of a VER standard to verify small scale abatement projects based in the UK.

What types of international offset credits should be eligible under the standard?

4.4 Domestic offsets – uncovered sources

Offsets can only be generated from emissions sources that are outside the Scheme. The very broad sectoral coverage proposed for the Scheme means that there is inherently less scope to pursue offset activities. Nevertheless, some emissions sources are likely to remain outside the Scheme. For example, emissions from deforestation will not be covered and the government noted in the White Paper that emissions from savannah burning were unlikely to be covered.

A primary aim of the Scheme is to help Australia meet its emissions reduction targets in a flexible and cost effective way.

Australia's emissions reduction targets are specified in terms of *national* emissions. The National Greenhouse Gas Inventory (NGGI) records Australia's aggregate emissions. It takes into account all drivers of emissions and abatement in the country including voluntary abatement activities and the operation of polices such as the Carbon Pollution Reduction Scheme. Emissions from sources covered by the scheme will form only a subset of total national emissions.

As outlined in the White Paper, Scheme caps will be set equal to the indicative national emissions trajectory in the relevant year, less the projected emissions from those sources not covered by the Scheme. This ensures that the Scheme helps Australia meet its internationally agreed national targets, and accounts for mitigation occurring in uncovered sources.

As such, voluntary abatement activity as well as emissions from uncovered sources count toward Australia's national target (its Kyoto target and targets agreed in the future). Likewise the anticipated purchase of domestic offsets on the voluntary market will be taken into account in setting the Scheme cap and will contribute to Australia meeting its obligations under the Kyoto Protocol. This provides consistency of treatment between all abatement activity within the Kyoto framework, whether achieved via the purchase of a domestic offset from a third party or through voluntary action oneself.

If necessary, the Government will make up any shortfall in internationally agreed targets by purchasing eligible international units. As such, there is a question whether offsets in uncovered sectors are truly additional in the sense that the Government would need to purchase international units to meet Kyoto obligations if the abatement didn't occur.

To the extent voluntary activity is not anticipated in setting the scheme cap it would drive additional abatement beyond the Kyoto obligation. However, this could be taken into account in future projections that set the Scheme cap for the next period.

Having ratified the Kyoto Protocol, Australia is bound by its requirements in determining which emissions sources are counted toward achieving its national target. Where an emissions source is counted toward the target, while abatement may be additional at the project level, it may not be regarded as additional to the Kyoto target. This is because, if emissions reduction occurs in a source counted toward the Kyoto target and corresponding Assigned Amount Units (AAUs) are freed up by that action (are no longer required to be surrendered by Australia to meet its Kyoto target) this allows another entity within Australia to increase its emissions of counted sources while Australia still meets its target. The same environmental outcome would have been achieved under operation of the Kyoto target.

This is not the case for domestic offset credits generated from emissions sources that are uncovered by the Scheme and not included in Australia's Kyoto accounts, they would be genuinely additional to the Kyoto obligation.

Domestic offset credits generated from emissions sources that are uncovered and are counted toward Australia's Kyoto accounts. They could be additional to Kyoto obligations if the Government adopted a policy of cancelling AAUs equivalent to the credits. However, if AAUs were cancelled for voluntary activity occurring within the Kyoto accounts this would either increase the burden on entities within the Scheme (through a tighter cap) or increase the short cost to domestic taxpayers if Australia needs to purchase international units to make up the shortfall.

Sources not covered by the Scheme, as outlined in the White Paper, are given in Table 4.3. To the extent that entities responsible for uncovered emissions sources are acting in anticipation of future coverage, or as part of an obligation to contribute to abatement effort there may be difficulty in proving additionality.

Industry is able to bring forward methodologies for addressing uncovered sources in order to have them assessed as eligible offsets under the standard. They will be assessed in accordance with the principles for credible offsets given in section 4.5 and the process outlined in section 6.2.

Table 4.3 Uncovered sources

Source	Emissions	Counted towards Australia's Kyoto target
Land use and land use change and forestry	Forest management (plantation forests established before 1990 and all native forests on managed land that are maintained as forested land until 2012)	No
	Revegetation (establishment of woody biomass that does not meet forest criteria)	No
	Crop and grazing land management (net greenhouse gas emissions from soil, crops and vegetation)	No
Forestry can choose to opt in to the Scheme from 2010	Reforestation and afforestation	Yes
	Can receive free permits for Kyoto compliant forest for net sequestration after Scheme commencement	
Agriculture	Deforestation	Yes
	Enteric fermentation in livestock	Yes
	Manure management	Yes
	Rice cultivation	Yes
	Agricultural soils (eg fertiliser use and not including soil carbon)	Yes
	Field burning of agricultural residues	Yes
Waste	Prescribed burning of savannahs	Yes
	Emissions from landfill sites that closed prior to 30 June 2008	Yes
	Emissions from landfill site past waste streams (legacy emissions) will be excluded from the Scheme until 2018	Yes

Should domestic offsets from uncovered sources contribute to Australia's Kyoto obligations or should an Assigned Amount Unit be cancelled to provide additionality beyond the Kyoto obligations?

Reforestation

The White Paper states that the Scheme will cover, on a voluntary basis, reforestation as defined for the first commitment period of the Kyoto protocol. Reforestation meeting this definition will involve establishment of a forest of trees with a potential height of at least 2 metres, a crown cover of at least 20 percent, patches greater than 0.2 ha and establishment by direct human methods since 1 January 1990 on land that was clear of forest at 31 December 1989.

Carbon pollution permits generated by forestry projects that opt in could be sold in the compliance market and in the voluntary market and voluntarily retired. These permits would be in addition to the cap. Forest owners would have an obligation to surrender permits in the event that the forest is removed.

It would be technically possible to establish a separate mechanism for generating forestry credits outside the Scheme. The mechanisms could apply the same measurement methodologies that apply within the Scheme. However, this would likely require permanence and make good arrangements that would add to transaction costs for offset providers. Such credits would not be fungible into the Scheme.

For those who opt into the Scheme, the issue of permanence is addressed by opting into the Scheme because permits would need to be surrendered if forests were removed. The question arises as to whether the establishment of a separate mechanism is warranted if there is provision for providers to opt into the Scheme.

How should reforestation be treated under the standard?

Avoided deforestation

In Australia, an issue associated with this type of project is the difficulty in proving that the forest would have been cleared if it were not for the offset project.

As stated in the White Paper, the Government will not include deforestation in the Scheme because, among other reasons, announcing plans to include emissions from deforestation in the Scheme would create powerful incentives for pre-emptive land clearing if coverage was in prospect (where allowed under state and territory regulations) in order to avoid a future obligation. However, given the potential to reduce deforestation emissions at low cost, the Government will continue to investigate incentive-based mechanisms, including offsets, to further reduce emissions from deforestation.

Savannah burning

There are challenges in establishing an effective and practical savannah burning offset methodology, including issues around measurement, monitoring, and additionality. The White Paper states that the Government will facilitate the participation of Indigenous land managers in carbon markets and will further investigate the potential for offsets from reductions in emissions from savannah burning.

Agriculture

The White Paper states that the Government is disposed to include agriculture emissions in the Scheme by 2015 and will make a final decision in 2013. The Scheme will not include domestic offsets from agriculture emissions in the period prior to coverage of these emissions as there is unlikely to be sufficient time to establish offset mechanisms and for the industry to benefit from this in the short period prior to coverage.

The Government's predisposition to cover agriculture also raises questions regarding the additionality of pre-coverage agriculture offset activities.

There are few cost effective abatement opportunities currently available for agricultural emissions. A number of submissions to the Green Paper argued for offsets from agriculture, particularly soil carbon sequestration and including from use of biochar. Many acknowledge that the science of these methods is not fully developed.

Waste

While emissions from landfill sites that closed prior to 30 June 2008 are uncovered and legacy emissions will be excluded from the Scheme until 2018, the scope for genuinely additional offsets from the waste sector may be limited. This is because most state and territories have regulated or provided policy guidance that flaring of methane is required or advised if it can not be put to sustainable use. Any proposals that come forward for domestic offsets from this source would need to demonstrate the activity is not required by state or local government regulation.

Should domestic offset products other than carbon pollution reduction permits surrender be eligible under the standard? If so, from which sources?

4.5 Carbon offset principles

Principles for carbon offsets will allow the Government to assess over time whether particular offset products or standards offer credible offsets for Australian consumers. In particular, a core set of rigorous principles will allow the Government to assess any proposals that may be brought forward for methodologies for domestic offsets from uncovered emissions sources.

Many offset standards in the world regard the Clean Development Mechanism as the benchmark for the application of rigorous principles for the development, verification, crediting and tracking of credible carbon offset projects. The Government's Greenhouse Friendly™ initiative has also drawn from the CDM principles as its basis. The CDM principles would form a solid foundation for assessment by the Government of credible offsets under the national offset standard.

The principles adopted by Greenhouse Friendly™ initiative are that offset projects should be:

additional: that the abatement generated would be beyond what would be undertaken as part of business-as-usual investment or beyond what is required by regulation;

permanent: that the generation of offsets has actually occurred and the carbon stored or sequestered will not to be released into the atmosphere in the future.

measurable: that the methodologies used to quantify the amount of abatement generated are robust.

transparent: consumers and other interested stakeholders should be able to examine information on the projects supported on a publicly available website.

independently verified: to validate the eligibility of the project and the abatement achieved and to ensure that no conflict of interest occurs.

In addition current best practice requires that offsets involve **no double counting:** consumers need to have confidence that a system is in place to register and track credits to avoid double counting.

Are these appropriate principles for credible offsets under a national carbon offset standard?

5. Accreditation

It is important to provide assurance to consumers that they can confidently purchase genuine and legitimate carbon offsets and contribute effectively to mitigating climate change. This section deals with the claims that entities can make about compliance with the standard, who is entitled to make them and how they are upheld.

This section suggests that the standard provide guidance to the market and be voluntary. While a mandatory carbon offset standard would provide consumers with greater certainty, it is proposed that a voluntary standard will provide sufficient certainty for consumers to have confidence in the market without unduly restricting market activity.

Should the national carbon offset standard be voluntary or mandatory in nature?

The national carbon offset standard will provide consumers and businesses with assurance as to:

- claims of offsetting all or a proportion of the carbon emissions associated with a particular product, for example a brand of beer, or service, for example an airline flight, or the emissions associated with an entire business; and
- the emissions abatement products that are used to offset emissions.

Businesses that take action in accordance with this standard could state that they have offset a certain percentage of the carbon emissions associated with a particular product, service or entity in accordance with the requirements of the national carbon offset standard. Likewise, entities that market eligible carbon credits could state that they meet the national carbon offset standard. The standard would stipulate what nature of claim could be made. For example it would not be possible to say that a particular product or service was a 'government approved' product.

It is proposed not to have a quality mark or logo associated with these claims. Use of approved logos can be variable and entities often wish to use their own branding. There are also costs associated with developing and maintaining the relevant trade mark and enforcing the integrity of the logo.

To provide transparency and to substantiate any claims made about offsetting carbon emissions, entities should make the basis of their claims available to the public through reporting. Such reports should outline the boundary of the organisation, product or service emissions to be offset, how those emissions are calculated, a statement as to the proportion of emissions that the organisation intends to offset, records to prove that the acquired approved abatement is sufficient to offset the specified proportion of emissions, details of the quantity and type of credits, and the register into which they have been retired or cancelled.

In its publication, 'Carbon claims and the Trade Practices Act', the ACCC noted that any carbon offset claims need to be assessed against the requirements of the Trades Practices Act to avoid deceptive claims and damage to the public perception of the emerging carbon offsetting industry. The ACCC's report provides guidance as to the scope of the Trades Practice Act (the Act) to address false and misleading claims. Specifically, the Act prohibits misleading and deceptive conduct and conduct likely to mislead or deceive. It also prohibits false and misleading representations by businesses in regard to, among other things, sponsorship, approval, performance and benefits which are very relevant to carbon offset claims. Breach of the Act on such grounds can lead to serious penalties being imposed.

Moreover, in making claims about carbon offsets individuals and businesses need to be mindful of promoting their product in regard to the nature, the manufacturing process and suitability for purpose of a good and/or service as well as requiring any representation about future, aspirational claims, such as achieving carbon neutrality to be made on reasonable grounds.

As the national body responsible for administering the Act, the ACCC is responsible for protecting consumers and industry from misleading and deceptive business practices. Where businesses represent that they adhere to a voluntary standard the claims must be true and accurate or there is a risk the Act will be breached. The ACCC is able to assess environmental claims made by entities and in doing so may consider the requirements of the standard when considering whether there has been a breach of the Act.

Should there be a form of branding available to those entities which provide products or services that meet the standard?

Is further oversight of the standard required beyond the ACCC's administration and enforcement of the Trade Practices Act?

6. Supporting processes

6.1 Verifying carbon footprint calculations

The standard will specify principles and emission factors for calculation and verification of the carbon footprint.

In order for an entity to make claims about calculating a carbon footprint in accordance with the standard, the calculations must be independently verified. Potential administration of this part of the standard revolves around options for supplying verification services.

It will be up to the entity wishing to calculate a footprint to choose an independent verifier. Options exist for the standard to stipulate eligible verifiers. These are:

1. establishment by the Department of Climate Change of a panel of independent verifiers as currently exists under the Greenhouse Friendly™ initiative;
2. stipulating use of verifiers who have been accredited as Designated Operating Entities or Accredited Independent Entities under the United Nations Framework Convention on Climate Change. However, there is not a large number of accredited organisations and none operating in Australia; and
3. require independent verification by an organisation accredited under ISO 14065. JAS-ANZ (the Joint Accreditation System for Australia and New Zealand)²¹ is one of a number of organisations which offer accreditation of greenhouse gas (GHG) validation and verification bodies to ISO 14065 in Australia or New Zealand.

Should a panel of verifiers be established under the standard and/or should the standard specify a particular accreditation standard which eligible verifiers must meet?

6.2 Validating domestic offset methodologies

There a number of ways in which domestic offsets from uncovered emissions sources could be assessed. In Australia an existing approach to the approval of emissions abatement projects for the purpose of generating carbon credits is that applied under the Greenhouse Friendly™ initiative. Greenhouse Friendly™ procedures and approach are based on those of the Clean Development Mechanism (CDM). It may be appropriate to adopt its procedures for the assessment of new methodologies, with reference to the latest procedure for assessing new methodologies used by the CDM. Details of the Greenhouse Friendly™ initiative processes are given in the initiative guidelines at <http://www.climatechange.gov.au/greenhousefriendly/publications/gf-guidelines.html>.

Validation and verification of carbon offsets under the Greenhouse Friendly™ initiative

Step 1: Prepare and submit an eligibility statement for the project.

This step requires the proponent to demonstrate that the proposed methodology and project will generate truly additional abatement. Greenhouse Friendly™ initiative additionality

²¹ <http://www.jas-anz.com.au/>

criteria can be found at <http://www.climatechange.gov.au/greenhousefriendly/publications/gf-guidelines.html>.

Step 2: Prepare an emissions abatement study

The emissions abatement study must specify a baseline emission inventory that identifies the project boundary, emission sources, activity levels and emission factors, business as usual emission forecast, the project emissions forecast, forecast abatement for the project for each year of the project's approval period and project risks including any significant risks that could affect the estimate and the achievement of the forecast abatement and the actions taken to mitigate these.²²

Step 3: Develop a project monitoring plan

The emissions monitoring plan must specify how abatement generated by the project will be measured and monitored. It must include project parameters including emissions sources, activity levels and emission factors, details of any emission leakage and its likelihood, and variables in the baseline emissions that will be monitored. The plan must also specify operational control for the plan, training and competence of involved staff, procedures for corrective action, monitoring equipment to be used, methods for data collection and validation and means of recording the data.

Step 4: Have the eligibility statement, emission/abatement study and project monitoring plan independently verified

The Greenhouse Friendly™ initiative currently provides a panel of independent verifiers who are accredited for verification in line with guidelines for the Initiative and the approved Greenhouse Friendly™ verification procedure. Panel members are subject to a Code of Conduct, including strict confidentiality and conflict of interest requirements.

Step 6: The program administrator reviews documentation and makes a recommendation to the Department of Climate Change.

Step 7: The Department makes a decision on the application

Step 8: Maintain approval of the project

This step involves conducting ongoing monitoring of emissions from the project, making claims of emissions abatement and having them independently verified and annually reporting on progress.

Step 9: Re approval

Abatement projects are approved for a specified period of time and must be re-approved for ongoing activity.

Does the Greenhouse Friendly™ initiative abatement provider process form a good basis for the administrative procedures for the assessment of new methodologies for the generation of domestic offsets?

6.3 National registry

To avoid double-counting it is essential that transfers of offset credits are recorded in a registry. Carbon pollution permits and Kyoto units will be tracked using the Australian Kyoto Protocol National Registry. Options for registering offset credits generated by approved methodologies from the uncovered emissions sources of the domestic economy will be considered before the finalisation of the standard.

Carbon Pollution Reduction Scheme National Registry

Under the Scheme in order to hold a carbon pollution permit or a Kyoto unit, entities and individuals will have to open an account in the registry. The registry will be open to all entities and individuals regardless of whether they have obligations under the Scheme. A permit could be held and traded by any legal or natural person, subject to verifications of identity and measures to prevent criminal activity.

Each permit and Kyoto unit will be held in a registry account and identified by a unique identification number. As the National Registry will issue all Australian permits and units (i.e. carbon pollution permits under the Scheme and Australia's Assigned Amount Units and Removal Units under the Kyoto Protocol), this will allow each permit or unit to be given a specific identification number and to have its ownership recorded. Kyoto units issued by other countries' registries and the Clean Development Mechanism Registry also have unique identification numbers.

Registered users will also be able to transfer the ownership of carbon pollution permits and Kyoto units. They will be able to trade carbon pollution permits and Kyoto units within Australia and surrender them against Carbon Pollution Reduction Scheme liabilities. They will also be able to import Kyoto units from international markets and from other countries' registries and sell them on domestic and international markets.

Entities and individuals will be able to voluntarily surrender carbon pollution permits in the registry regardless of whether they have obligations under the Scheme. If a permit is voluntarily surrendered by an entity or individual the permit will be cancelled thereby reducing the number of permits in the Scheme.

7. Implications for Greenhouse Friendly™

Since 2001 the Greenhouse Friendly™ initiative has approved projects providing greenhouse gas abatement and products and certified services as being carbon neutral.

Greenhouse Friendly™ is composed of two interrelated parts. One part relates to product and service certification, whereby certified products and services are eligible to be labelled with the Greenhouse Friendly™ logo. Under the rigorous certification process, ‘cradle-to-grave’ greenhouse gas emissions associated with the production, use and disposal of certified products or services are fully offset by approved Greenhouse Friendly™ abatement. Consumer confidence is provided through an objective independent verification process that underpins Greenhouse Friendly™ certification.

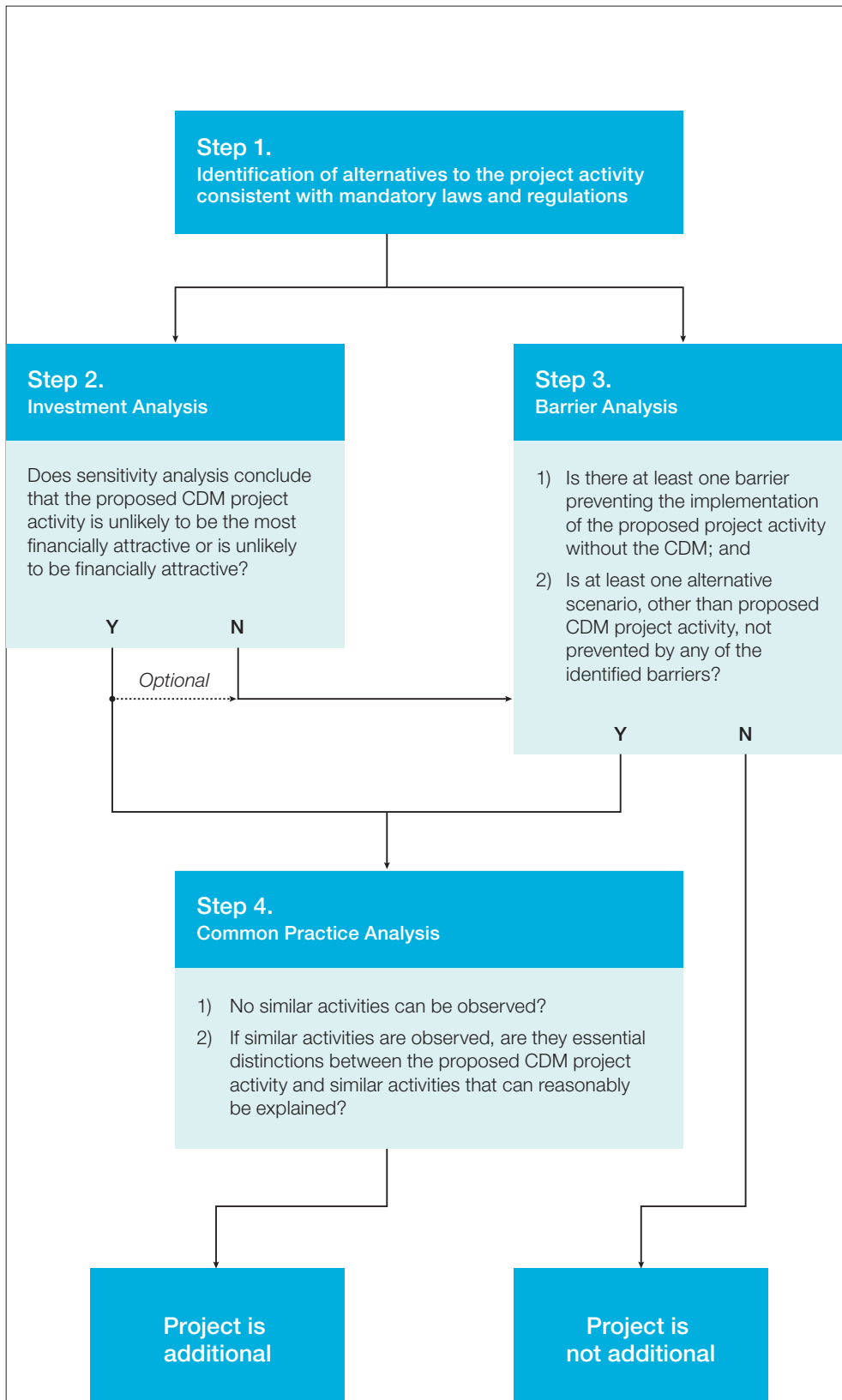
Greenhouse Friendly™ product and service certification creates part of the demand for the second part of the initiative – that is, abatement from Greenhouse Friendly™ approved abatement projects. These abatement projects must occur in Australia, and must generate additional, permanent and verifiable greenhouse gas emissions reductions or sequestration. Additional abatement projects are generally associated with an investment or behaviour change that would normally not be undertaken as part of the company’s established operating practices.

Examples of the types of abatement activities which have been approved under Greenhouse Friendly™ include energy efficiency measures, waste diversion and recycling, capture and flaring of land fill gas and other fugitive emissions, generation of renewable energy, and tree planting and avoided deforestation projects.

The Government is currently considering the implications of the Scheme for the Greenhouse Friendly™ program and will advise on how it will address them in early 2009.

Attachment A

Additionality under the Clean Development Mechanism



Attachment B

Greenhouse Friendly Program – Life Cycle Analysis

Under the Greenhouse Friendly Program guidance is provided for the preparation of LCA reports as follows

1. Scope

Provide a clear statement on the scope of the greenhouse gas LCA. The statement must indicate any limitations to the scope of the LCA (including geographical or temporal limitations) that may affect its validity.

Include a description of:

- the product or service including its function; and
- the product or service's measurable parameters and its system boundaries, in accordance with guidance provided by ISO standard AS/NZS ISO 14040.

Include all competencies required for the product or service's use in the description of the function.

An assessment should be made of the following greenhouse gases:

- Carbon dioxide;
- Nitrous Oxide;
- Perfluorocarbons;
- Methane;
- Hydrofluorocarbons; and
- Sulphur Hexafluoride.

Incorporate all relevant stages (production, delivery, use and disposal) of the life cycle of the product or service in the system boundaries for the LCA. Clearly define the system boundaries for the product or service with measurable parameters and state and justify the criteria used to select them.

Potentially relevant stages to be assessed in the life cycle of products include:

- raw material acquisition such as mining, extraction, harvesting and transport of raw material to the production stage;
- material production such as concentrating, refining, processing and transport of commodity materials (e.g. steel and aluminium billet, bulk petrochemicals, bolts of cotton);
- material processing such as secondary processing of materials;
- component production such as conversion of bulk materials into components for final assembly;
- final assembly;

- distribution, transport, warehousing and sale;
- use of the product; and
- product waste treatment such as recycling, incineration and disposal.

Potentially relevant stages to be assessed in the life cycle of services include:

- development or acquisition of physical assets required for the delivery of the service;
- acquisition and use of products and materials required for the delivery of the service;
- realisation of the service;
- use of the service;
- re-use including recycling; and
- disposal of any waste from performing the service.

Justify the exclusion of any life cycle stages in the LCA.

2. Energy use

Consider the following aspects of energy use when preparing your product or service's LCA:

- energy embodied in feedstock materials used in the manufacture of the product. Note that the energy used for running processes (feedstock energy) is excluded;
- process energy used in the production chain of feedstock materials;
- energy used to manufacture, transport and package products;
- energy used by services that form an integral part of distributions and supply of the product or service, for example, energy used at retail outlets;
- energy used in the operation of the product;
- energy used to manufacture and supply consumables needed for the operation of the product – for example tyres and maintenance of a car;
- energy used to dispose of or recycle the product; and
- energy credits if the materials are re-used or re-cycled and incorporated into another product.

3. Emission factors

Emission factors for calculating direct emissions are generally expressed in the form of a quantity of a given greenhouse gas emitted per unit of energy (kg CO₂ –e/GKJ), fuel (g CH₄/t coal) or a similar measure.

Use current emission factors and current estimates of manufacturing or supply emissions in your greenhouse gas LCA.

The following hierarchy (most preferable to least preferable) should be used to select the emissions associated with the product or service:

- the Department of Climate Change Emission factors as per the current version of the *National Greenhouse Accounts Factors* at www.climatechange.gov.au/workbook/index.html;

- actual site or source specific emission factors;
- actual emission factors from reproducible tests or other empirical data;
- calculated emission factors based on analysis of contributing processes for which there are actual or DCC greenhouse emission factors; or
- emission factors from Australian studies of the same or similar products or processes.

You must justify the basis for using particular emission factors in your LCA.

4. Inventory analysis

Outline the data collection and calculation procedures used to quantify the greenhouse gas emissions associated with the product or service (as defined in the ‘Scope’ section of your LCA – Step 1).

Provide the following information in line with ISO Standards for the processes in each stage of the life cycle of the product or service:

- the reference unit of the product or service for which the greenhouse gas emissions are calculated, for example, litre of fuel, unit of gas, one car;
- what the data includes and whether start-up shutdown and emergency conditions are included – that is, what productions or service delivery inputs are considered;
- geographical representativeness, for example, are there local or regional variations in the emissions data;
- data relevant for the allocation of greenhouse gas emissions amongst products or services that use the same process, that is, how have emissions been allocated amongst products or services that share a production or service delivery platform;
- the period during which the data has been collected;
- how data has been collected and how representative it is;
- the significance of possible exclusions and assumptions;
- the source of the data; and
- where relevant the uncertainty associated with key parameters.

State and justify all assumptions made about the source of fuels and electricity in your LCA report.

5. Emissions attributable to each stage of the life cycle of the product or service

Convert all energy consumption data into quantities of carbon dioxide equivalent emissions for each stage of the product or service assessed. These values when summed up will estimate the total attributable emissions for the greenhouse gas life cycle of the product or service. Quantify the uncertainty in the calculations for each stage of the life cycle.





Australian Government

Department of Climate Change

Draft National Carbon Offset Standard

19 December 2008

This draft Standard is prepared by the Department of Climate Change ahead of decisions on the design of a national carbon offset standard. Given the Discussion Paper consideration of the issue of carbon neutrality under the Scheme (chapter 2), the Standard does not specifically define what is required to achieve carbon neutrality in the context of a cap and trade scheme.

Contents

1.	Scope.....	4
2.	Normative reference.....	4
3.	Terms and definitions	4
4.	Elements of the Standard	7
5.	Carbon footprint calculation	7
5.1	Carbon footprint calculation principles	7
5.2	Carbon footprint calculation of an organisation	8
5.2.1	Boundary of an organisation.....	8
5.2.2	Greenhouse gas emissions sources	9
5.2.3	Greenhouse gas emissions factors and calculation methodology	10
5.3	Carbon footprint calculation of a product or service	10
5.3.1	Scope.....	11
5.3.2	System boundary.....	11
5.3.3	Greenhouse gas emissions sources within the system boundary	12
5.3.4	Greenhouse gas emissions factors and calculation methodology	13
5.3.5	Inventory analysis	13
5.3.6	Emissions attributable to each stage of the life cycle of the product or service ...	14
5.4	Verification of carbon footprint calculations.....	14
6	Carbon offsetting	15
6.1.	Eligible offset units	15
6.2	Domestic abatement projects	15
6.3	Retirement.....	21
6.4	Management Plan.....	21
7	Public disclosure	21
7.1	Reporting.....	21
7.2	Public statements	22

1. Scope

The National Carbon Offset Standard (the ‘Standard’) specifies the general principles and requirements for calculating the greenhouse gas emissions associated with an organisation’s activities, product or service, and the acquisition and retirement of carbon offsets in order to offset all, or a portion of, the associated emissions. The standard is intended to ensure that consumers have confidence in the voluntary carbon offset market and the integrity of the carbon offset products they purchase.

2. Normative reference

The Standard contains provisions which are based on existing Australian legislation and international standards. The editions of these documents, as referenced below, were current at the time of publication.

- International Standard ISO 14040 series - *Environmental management – Life cycle assessment*
- International Standard ISO 14064 series
- The Greenhouse Gas Protocol – *A corporate accounting and reporting standard (Revised edition)*
- National Greenhouse and Energy Reporting Act 2007 (NGERA)
- National Greenhouse and Energy Reporting Regulations 2008 (NGER Regulations)
- National Greenhouse and Energy Reporting (Measurement) Determination 2008 (NGER Determination)

Procedures for bringing forward proposals for domestic offsets are based on the relevant procedures under the Greenhouse Friendly™ initiative which are based on those utilised by the Clean Development Mechanism under the United Nations Framework Convention on Climate Change (UNFCCC).

All standards and legislation are subject to revision. Organisations should ensure that they apply the most recent edition of the Standard, as well as the Australian legislation and international standards referenced above.

3. Terms and definitions

Abatement: Reduction of greenhouse gas emissions, or enhancement of greenhouse gas removal from the atmosphere by sinks.

Additionality: A requirement that a project or activity provide abatement that is additional to any that would occur in the absence of the project or activity.

Annex I countries: Countries listed in Annex I to the UNFCCC, including all developed (OECD) countries and the countries in transition in central and eastern Europe (including Russia and Ukraine). In the context of the Kyoto Protocol, 'Annex 1 country' is used to refer to a party included in Annex 1 to the UNFCCC with a commitment inscribed in Annex B to the Kyoto Protocol.

Annex II countries: The group of countries included in Annex II to the UNFCCC, including all OECD countries. Under Article 4.2 (g) of the Convention, these countries are expected to provide financial resources to assist developing countries to comply with their obligations, such as preparing national reports. Annex II countries are also expected to promote the transfer of environmentally sound technologies to developing countries.

Carbon dioxide equivalence (CO₂-e): A standard measure that takes account of the different global warming potentials of greenhouse gases and expresses the cumulative effect in a common unit.

Carbon footprint: A measure of the carbon dioxide equivalent emissions attributable to an activity; it is commonly used at an individual, household or organisation, product and service level.

Carbon neutrality: Commonly refers to a situation where the net emissions associated with an organisation's activities, product or service are zero.

Carbon offset: Represents a reduction in greenhouse gases relative to a business-as-usual baseline. Carbon offsets are tradeable and often used to negate (or offset) all or part of another entity's emissions.

Certified Emission Reduction (CER) unit: A Kyoto unit corresponding to one metric tonne of carbon dioxide equivalent emissions, and issued for verified emission reductions or removals achieved by projects approved under the Clean Development Mechanism.

Clean Development Mechanism (CDM): The CDM allows greenhouse gas emission reduction projects to take place in countries that have no emission targets under the *United Nations Framework Convention on Climate Change (UNFCCC) Kyoto Protocol*, yet are signatories.

DCC: Department of Climate Change

Emission factor: A Kyoto unit corresponding to one metric tonne of carbon dioxide equivalent emissions, and issued for emission reductions and removals generated from joint implementation projects.

Emissions Reduction Unit (ERU): Equal to one metric tonne of CO₂-e emissions reduced or sequestered arising from a Joint Implementation (defined in Article 6 of the Kyoto Protocol) project.

Facility: An activity, or a series of activities (including ancillary activities), that involve the production of greenhouse gas emissions, the production of energy or the

consumption of energy and that form a single undertaking or enterprise and meet the requirements of the NGER Regulations.

Global Warming Potential (GWP): A system of multipliers devised to enable warming effects of different gases to be compared. For example, over the next 100 years, a gram of methane in the atmosphere is currently estimated as having 21 times the warming effect as a gram of carbon dioxide; methane's 100-year global warming potential is thus 21.

Greenhouse gases: The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆).

Joint Implementation (JI): A market-based implementation mechanism defined in Article 6 of the Kyoto Protocol, allowing Annex I countries or companies from these countries to implement projects jointly that limit or reduce emissions or enhance sinks, and to share the Emissions Reduction Units. JI activity is also permitted in Article 4.2(a) of the UNFCCC.

Kyoto Protocol: An international treaty created under the UNFCCC in 1997. It entered into force in 2005. Among other things, the Kyoto Protocol sets binding targets for the reduction of greenhouse gas emissions by developed countries. It includes individual emission reduction targets for Annex I countries to be met within the first commitment period of 2008-12.

Offset: See Carbon offset.

Operational control: The greatest authority to introduce and implement any or all of the following for the facility: (i) operating policies; (ii) health and safety policies; (iii) environmental policies.

Permanence: With regard to offsets, requires the generation of offsets to have actually occurred and the carbon stored or sequestered not to be released into the atmosphere in the future.

Removal unit (RMU): A Kyoto unit corresponding to one metric tonne of carbon dioxide, and issued for removals of carbon dioxide from the atmosphere by eligible land use, land-use change and forestry activities undertaken in a Kyoto Party.

Scope 1 emissions: The release of greenhouse gas into the atmosphere as a direct result of an activity, or series of activities that constitute a facility.

Scope 2 emissions: The release of greenhouse gas as a result of one or more activities that generate electricity, heating, cooling or steam that is consumed by a facility but do not form part of the facility.

Scope 3 emissions: The release of greenhouse gas into the atmosphere that occurs outside the boundary of a facility as a result of activities at a facility and are not scope 2 emissions.

Sequestration: The removal of atmospheric carbon dioxide, either through biological processes (for example, photosynthesis in plants and trees), or geological processes (for example, storage of carbon dioxide in underground reservoirs).

The Standard: National Carbon Offset Standard.

United Nations Framework Convention on Climate Change (UNFCCC):

An international treaty, adopted in 1992, aimed at achieving the stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

4. Elements of the Standard

The Standard comprises six key elements:

- carbon footprint calculation principles;
- carbon footprint calculation (calculation of greenhouse gas emissions) of an organisation;
- carbon footprint calculation (calculation of greenhouse gas emissions) of a product or service;
- verification of carbon footprint calculations;
- eligible offset units and their retirement; and
- public disclosure.

5. Carbon footprint calculation

5.1 Carbon footprint calculation principles

The calculation of the carbon footprint of an organisation, product or service should be performed in accordance with the following principles which are based upon those outlined in the *Greenhouse Gas Protocol*:

- (a) **Relevance:** Ensure the greenhouse gas inventory of an organisation, product or service appropriately reflects the greenhouse gas emissions attributed to that organisation, product or service.
- (b) **Completeness:** Account for and report all greenhouse gas emissions sources and activities within the defined boundary of the organisation, product or service. Disclose and justify any specific exclusions.
- (c) **Consistency:** Use consistent methodologies to allow for meaningful comparisons of greenhouse gas emissions over time. Transparently document any changes to the data, boundary, methods, or any other relevant factors.
- (d) **Transparency:** Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and

make appropriate references to the calculation methodologies and data sources used.

- (e) **Accuracy:** Ensure that the quantification of greenhouse gas emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

5.2 Carbon footprint calculation of an organisation

- (a) An organisation should apply the following steps outlined in the Standard in order to calculate the greenhouse gas emissions attributable to its operations. The approach set out in the Standard for the carbon calculation of an organisation is consistent with the requirements of the NGER Act.
- (b) An organisation requiring further guidance should refer to the NGER Act and associated subordinate legislation and guidelines.

5.2.1 Boundary of an organisation

The boundary of an organisation defines the activities that an organisation should include in its carbon footprint calculation.

- (a) An organisation's boundary should be defined to include:
 - i. all corporate group members; and
 - ii. all facilities under the operational control of corporate group members.
- (b) An organisation's corporate group members include:
 - i. the controlling corporation;
 - ii. subsidiaries;
 - iii. joint ventures; and
 - iv. partnerships.
- (c) A corporate group member will have operational control over a facility if it has the authority to introduce or implement any or all of the following for that facility:
 - i. operating policies;
 - ii. health and safety policies; or
 - iii. environmental policies.

Other boundary approaches consistent with those outlined in the *Greenhouse Gas Protocol* can be used. In all cases the approach used should be transparently documented and disclosed.

5.2.2 Greenhouse gas emissions sources

- (a) An organisation should calculate all Scope 1 and Scope 2 emissions attributable to sources within its boundary.

Scope 1 emission sources are divided into the following main sectors, as classified by the 1996 IPCC (Intergovernmental Panel on Climate Change) *Guidelines for National Greenhouse Inventories* and used in Australia's National Greenhouse Accounts:

- the combustion of fuel for energy;
- the extraction, production, flaring, processing and distribution of fossil fuels;
- industrial processes where a mineral, chemical or metal product is formed using a chemical reaction that generates greenhouse gases as a by-product; and
- waste disposal – either in landfill, as management of wastewater or from waste incineration.

Scope 2 emissions result from activities that generate electricity, heating, cooling or steam that is consumed by a facility but do not form part of the facility.

- (b) An organisation may voluntarily elect to calculate Scope 3 emissions attributable to sources within its boundary. This may provide the organisation with a more comprehensive view of the greenhouse gas emissions attributable to its activities.

An organisation should refer to the *Greenhouse Gas Protocol* which provides the following guidelines for determining the relevance of Scope 3 emissions to assist their decision to calculate Scope 3 emissions:

- the Scope 3 emissions from a particular source are large relative to the organisation's Scope 1 and Scope 2 emissions;
- the Scope 3 emissions from a particular source contribute to the organisation's greenhouse gas risk exposure;
- the Scope 3 emissions from a particular source are deemed critical by key stakeholders; and
- the organisation could undertake or influence the potential reduction of Scope 3 emissions from a particular source.

- (c) An organisation should calculate the six greenhouse gases included under the Kyoto Protocol.

5.2.3 Greenhouse gas emissions factors and calculation methodology

- (a) An organisation should collect activity data relating to the greenhouse gas emissions sources within its boundary.
- (b) An organisation should calculate the greenhouse gas emissions resulting from the sources within its boundary in accordance with one of the following options:
 - i. using default emissions factors derived from the latest version of the *National Greenhouse Accounts (NGA) Factors*;
 - ii. direct measurement using industry practices for sampling and Australian or equivalent standards for analysis;
 - iii. direct measurement using Australian or equivalent standards for sampling and analysis; and
 - iv. direct measurement using continuous or periodic emissions monitoring.

Specific guidance for use of these options is provided in the NGER Determination.

- (c) An organisation should apply the calculation approach selected in 5.2.3(b) to calculate the greenhouse gas emissions attributable to sources within its boundary during a specified period of time (e.g. a 12 month period). Collectively, the greenhouse gas emissions attributable to each source will provide an estimate of the greenhouse gas emissions attributable to the organisation during a specified period of time.
- (d) An organisation should assess the uncertainty of greenhouse gas emissions estimates in accordance with the NGER Determination.

5.3 Carbon footprint calculation of a product or service

- (a) An organisation should undertake a Life Cycle Analysis (LCA) assessment in accordance with the current Australian Standard in the ISO 14040 series and with reference to the following steps outlined in the Standard, in order to calculate the greenhouse gas emissions attributable to a product or service.
- (b) An organisation should prepare a LCA report which contains the following components:
 - i. scope;

- ii. system boundary;
- iii. greenhouse gas emissions sources within the system boundary;
- iv. greenhouse gas emissions factors and calculation methodology;
- v. inventory analysis; and
- vi. calculated greenhouse gas emissions attributable to each stage of the life cycle of the product or service.

5.3.1 Scope

- (a) The Scope of the LCA report should include a description of:
 - i. the product or service and its function; and
 - ii. the measurable parameters and system boundary of the product or service, including a justification of the proposed boundary and parameters.

5.3.2 System boundary

The system boundary of a product or service defines the scope for calculating the greenhouse gas emissions attributable to a product or service over its life cycle.

- (a) An organisation should include all relevant stages of the life cycle of the product or service in the assessment, including:
 - i. production;
 - ii. delivery;
 - iii. use; and
 - iv. disposal.

Potentially relevant stages to be included and assessed in the life cycle of the **product** include:

- the acquisition of raw materials, such as mining, extraction, harvesting and transport of raw materials to the production stage;
- the production and processing of materials, such as concentrating, refining, processing and transport of commodity materials;
- the production of components, such as the conversion of bulk materials into components for final assembly;
- final assembly;

- distribution, transport, warehousing and sale;
- use of the product (including maintenance); and
- product waste treatment such as recycling, incineration and disposal.

Potentially relevant stages to be included and assessed in the life cycle of the **service** include:

- the development or acquisition of physical assets required for delivery of the service;
- the acquisition and use of products and materials required for delivery of the service;
- realisation of the service;
- use of the service;
- re-use including recycling; and
- disposal of any waste from performing the service.

5.3.3 Greenhouse gas emissions sources within the system boundary

- (a) An organisation should consider the following sources of greenhouse gas emissions from within the system boundary of the product or service, with reference to the potentially relevant stages of the life cycle listed above:
 - i. greenhouse gas emissions resulting from the transformation, production, processing and acquisition of raw materials;
 - ii. greenhouse gas emissions resulting from manufacture, production and final assembly;
 - iii. greenhouse gas emissions resulting from the operation of premises;
 - iv. greenhouse gas emissions resulting from all methods of transport;
 - v. greenhouse gas emissions resulting from warehousing and sales;
 - vi. greenhouse gas emissions resulting from services that form an integral part of distribution and supply;
 - vii. greenhouse gas emissions resulting from the operation of the product and provision of the service; and
 - viii. greenhouse gas emissions resulting from the disposal or recycle of the product.

- (b) An organisation should calculate the six greenhouse gas emissions included under the Kyoto Protocol.

5.3.4 Greenhouse gas emissions factors and calculation methodology

- (a) An organisation should collect activity data relating to the greenhouse gas emissions sources within the system defined for the product or service.
- (b) An organisation should calculate the greenhouse gas emissions resulting from the sources within the system boundary of the product or service in accordance with one of the following options:
 - i. using default emissions factors derived from the latest version of the *National Greenhouse Accounts (NGA) Factors*;
 - ii. direct measurement using industry practices for sampling and Australian or equivalent standards for analysis;
 - iii. direct measurement using Australian or equivalent standards for sampling and analysis; and
 - iv. direct measurement using continuous or periodic emissions monitoring.
- (c) An organisation should calculate the greenhouse gas emissions attributable to each stage of the life cycle of the product or service. Collectively, the greenhouse gas emissions attributable to each stage of the life cycle will provide an estimate of the greenhouse gas emissions attributable to the life cycle of the product or service.
- (d) An organisation should assess the uncertainty of greenhouse gas emissions estimates in accordance with the NGER Determination.

5.3.5 Inventory analysis

The inventory analysis of a LCA report outlines the data collection and calculation procedures used to calculate the greenhouse gas emissions attributable to a product or service.

- (a) An organisation should provide the following information for each stage of the life cycle of the product or service:
 - i. the reference unit of the product or service for which the greenhouse gas emissions are calculated, e.g. litre of fuel, unit of gas, one car, etc;
 - ii. what the data includes and whether start-up/shutdown and emergency conditions are included, i.e. what production or service delivery inputs are considered;

- iii. geographical representativeness, e.g. local or regional variations associated with the calculated greenhouse gas emissions;
- iv. the allocation of greenhouse gas emissions amongst products or services that share a production or service delivery platform;
- v. the period during which the information has been collected;
- vi. the process used to collect the information;
- vii. the significance of possible exclusions and assumptions;
- viii. the source of the information; and
- ix. where relevant, the uncertainty associated with key parameters.

5.3.6 Emissions attributable to each stage of the life cycle of the product or service

- (a) Convert all energy consumption data into quantities of carbon dioxide equivalent (CO₂e) emissions for each life cycle stage of the product or service assessed. These values, when summed up, will estimate the total attributable emissions for the greenhouse life cycle of the product or service.
- (b) Quantify the uncertainty in the calculations for each stage of the life cycle. This will help determine the total emissions, for accounting purposes, and the amount of abatement needed to be acquired to offset the emissions associated with the product or service.

5.4 Verification of carbon footprint calculations

A robust and transparent verification model is fundamental to provide confidence to users of greenhouse gas emission data.

Audit provisions for the Carbon Pollution Reduction Scheme and the NGER Act are under development at the time of release and should be used as a guide to verification and auditing when they are available. Until then verification should be undertaken in accordance with the AS ISO 14064 series.

Independent verification and review should be conducted by an entity accredited under *International Standard* ISO 14065. JAS-ANZ (the Joint accreditation System for Australia and New Zealand) is one of a number of organisations offering accreditation against ISO 14065.

6 Carbon offsetting

6.1. Eligible offset units

The following units will be accepted under the Standard for the purposes of voluntary carbon offsetting:

- (a) Australian carbon pollution permits;
- (b) Certified Emissions Reductions (CERs) except long term (ICERs) and temporary (tCERs);
- (c) Emission Reduction Units (ERUs); and
- (d) Removal Units (RMUs).

The Government reserves the right to amend eligible offset units as required in light of the development of new international standards, and other policy developments.

6.2 Domestic abatement projects

Domestic offset units may potentially be generated from sources not covered under the Carbon Pollution Reduction Scheme (CPRS) or required by local or state regulations. This creates an opportunity for proponents to propose potential abatement projects within Australia on the understanding that they meet the carbon offset eligibility criteria outlined below.

In order for domestic abatement projects to be considered valid, the Standard requires the projects to be:

(a) Additional

Abatement generated must be beyond what would be undertaken as part of business-as-usual investment or beyond what is required by regulation.

The level of additional abatement generated by a project is the difference between the emissions associated with the project (or project emissions) and the emissions under the business-as-usual scenario. Demonstrating the additionality of a proposed domestic abatement project requires satisfying several steps outlined in international law.¹ The Greenhouse Friendly Guidelines provide further guidance on additionality.²

(b) Permanent

¹ UNFCCC - http://cdm.unfccc.int/methodologies/PAMethodologies/AdditionalityTools/Additionality_tool.pdf

² Greenhouse Friendly - <http://www.climatechange.gov.au/greenhousefriendly/publications/pubs/additionality-guidance.pdf>

Emission reductions must be permanent. In the case of sinks, this requires that the carbon stored is sequestered and will not be released into the atmosphere in the future.

(c) Measurable

Methodologies used to quantify the amount of abatement generated must be robust.

(d) Transparent

Consumers and other interested stakeholders must be able to examine information on projects by accessing a publicly available website.

(e) Independently verified

Eligibility of the project and abatement subsequently generated must be validated by a non-interested third party. Existence of a conflict of interest should also be determined.

(f) Registered

Units generated must be registered and tracked in a publicly transparent registry.

In order to propose a domestic abatement project, the following must be undertaken:

(a) Preparation and submission of an Eligibility Statement for the project

Abatement projects must meet the carbon offset eligibility criteria to be considered for approval. The DCC will review the information submitted in the Eligibility Statement against the eligibility criteria, and will provide preliminary non-binding comments with respect to eligibility of the proposed project. The eligibility statement must address the following eligibility criteria. The project must:

- i. occur within Australia;
- ii. result in additional greenhouse gas abatement;
- iii. not be implemented to meet regulatory compliance obligations under any Australian laws or regulations;
- iv. not result in a shift of emissions to other locations within Australia or overseas; and
- v. produce abatement capable of being verified to an acceptable standard.

(b) Preparation of an Emission / Abatement Study for the project

An Emission / Abatement Study facilitates calculation of the abatement that will be achieved by the project, and forecasting future abatement. The Emission / Abatement Study can be conducted in-house or externally by way of a consultant to either prepare the Emissions / Abatement Study or provide technical advice.

The Emission / Abatement Study must include:

- i. a baseline emissions inventory that identifies the project boundary, emissions sources, activity levels and emission factors;
- ii. the 'business-as-usual' emission forecast that is calculated by multiplying the baseline emission factors with the expected activity levels;
- iii. the project emissions forecast to determine the total emissions for the project over the five-year approval period;
- iv. forecast abatement for the project, that is, the expected abatement for each year of the project's five-year approval period, and the total expected abatement. The uncertainty associated with the abatement calculations must also be determined; and
- v. Project risks including any significant risks that could affect the estimate and achievement of the forecast abatement and the actions to be taken to mitigate these risks.

(c) Development of a Project Monitoring Plan

A project monitoring plan demonstrates how the project and abatement generated will be monitored. The Project Monitoring Plan should include the following information.

- i. Project organisation
 - Identify project parameters (including emissions sources, activity levels and emission factors), operations and activities that will be monitored to ensure accurate measurement of the abatement achieved by the project;
 - Provide details of the transfer of emissions to other sites or locations (leakage) as a result of the abatement project, including an indication of the likelihood of leakage occurring. If leakage is identified, or there is uncertainty about leakage occurring, this should be monitored appropriately in the Project Monitoring Plan and subsequently factored into the abatement calculations for the project;
 - Identify variables in the baseline emissions inventory that will be monitored. Include any variables that could affect the validity of the baseline (refer to the risks identified in the Emission / Abatement study); and

- Ensure responsibilities and authorities have been defined and appropriate resources for management of the abatement project will be provided.

ii. Operational control

- Identify project operations and activities that, if not controlled, could affect the abatement achieved;
- Provide evidence that these operations and activities would be carried out under specified conditions and document any of the relevant operational criteria; and
- Identify the measures put in place to control any risks to the abatement being generated by the project (as identified in the Emission / Abatement Study).

iii. Training and competence

- Identify staff that will have responsibility for monitoring and taking timely action to ensure that the achieved abatement is accurately monitored and measured;
- Identify the minimum qualifications, training and experience required for monitoring staff;
- Specify how it will be ensured that personnel performing tasks (that can affect the achievement of the forecast abatement) are competent; and
- Specify how it will be ensured that these persons maintain the relevant qualifications / training / experience throughout the abatement project's lifetime.

iv. Corrective and preventative action

- Identify procedures that will be established and implemented to identify situations where corrective action is required; and
- Identify personnel responsible for and with authority to investigate correction action, and for taking action to return the project to planned operating conditions.

Note that the DCC must be notified of any situation that is likely to result in material changes to abatement forecast.

v. Monitoring equipment (as applicable)

- Set out how equipment used for emissions monitoring will be calibrated and maintained in accordance with the equipment manufacturer's instructions and how all relevant records will be maintained; and

- Provide evidence that equipment will not be expected to monitor data at a higher accuracy than that for which it is designed.

vi. Data

- Describe the methods and procedures in place for measuring and monitoring data (either by using national, international or other scientifically valid test methods);
- Identify any accredited laboratories to be used;
- Identify intended sampling practices;
- Identify methodologies for estimating and controlling uncertainty and statistical error; and
- Identify the quality control practices that will be put in place to ensure data is valid and accurate.

vii. Records

- Identify the records required to monitor the achieved abatement, and the processes in place to establish and maintain these;
- Create a clear and transparent audit trail of documents, data and records that support any calculations, assumptions or decisions reached in relation to the abatement project. This will allow verifiers to ascertain how and why decisions have been reached and to verify the accuracy of calculations made;
- Specify how suitable records will be maintained to demonstrate that the monitoring data is valid and accurate; and
- Specify how records related to the abatement project will be made available to verifiers as required.

(d) Independent verification of the Eligibility Statement, Emission / Abatement Study and Project Monitoring Plan

Independent verification is a critical part of the approval process. Independent verification validates the eligibility of the project and the amount of abatement the project is forecast to achieve, and helps ensure the adequacy of the Project Monitoring Plan.

Verification must be undertaken by a suitably qualified independent entity and in accordance with Section 5.4.

(e) Submission of an application to the DCC

The application must comprise;

- i. the Eligibility Statement
- ii. the Emission / Abatement Study

- iii. the Project Monitoring Plan; and
- iv. the independent verification report for the Eligibility Statement, Emission / Abatement Study and Project Monitoring Plan.

Following submission of an application, the DCC will appoint an appropriate third party with suitable expertise to independently assess the validity of the application, and make a recommendation to the DCC regarding approval. The DCC may approve or reject the independent assessor's recommendation, and reserves the right to approve, reject, request further information, or defer an application for abatement project approval at the DCC's absolute discretion.

If approval is granted, an applicant will be required to sign a *Deed of Approval* with the DCC. This Deed will set out the ongoing obligations as a provider of domestic abatement credits. Once a *Deed of Approval* is signed, the applicant will be able to enter into direct arrangements with organisations seeking to purchase approved domestic abatement.

In order to maintain an approved domestic abatement project, the following must be undertaken.

(a) Ongoing emissions monitoring

Monitor the emissions associated with the approved project according to the Project Monitoring Plan. Update the Emission / Abatement Study to account for any relevant changes and notify the DCC of any situation that is likely to result in the project not continuing to meet the abatement forecast in the Emissions / Abatement Study.

(b) Independent verification of the abatement project

Once the project is approved and generating abatement, the abatement must be independently verified at least once every 12 months. If it is considered that the abatement generated is not suitable for the purposes of verification (ie. the verification costs cannot be justified against the abatement claim), a case must be presented to the DCC outlining reasons for this.

Abatement providers are responsible for having an abatement claim verified as well as bearing the cost of the verification. It is best practice to maintain all appropriate records to allow abatement from the project to be verified.

(c) Register carbon offsets

All domestic carbon offsets generated are required to be formally registered on an independent registry. Once purchased, these offsets must be retired or surrendered within the appropriate time frame (see Section 6.3 below).

(d) Annual reporting

For all domestic abatement generated report to the Department of Climate Change on:

- i. the date and quantity of abatement;

- ii. the quantity of abatement sold, the name of the purchasers, the date of sale; and
- iii. the year in which the sold abatement was generated

6.3 Retirement

Organisations should voluntarily surrender and retire the equivalent number of eligible units to offset the total emissions associated with any product or service, or organisation within 3 months following the annual reporting period.

6.4 Management Plan

Organisations that calculate their emissions footprint and purchase offsets to balance their emissions should develop a management plan to demonstrate that appropriate systems are in place to monitor reduce greenhouse gas emissions associated with the relevant product, service or organisation, and to purchase and retire the equivalent carbon offsets.

A management plan must identify:

- (a) the greenhouse gas emissions attributable to an organisation's activities, product or service within each reporting year;
- (b) the equivalent quantity of carbon offsets required to offset the emissions attributed to the product, service or organisation for each reporting year;
- (c) records required, and the process for establishing and maintaining those records, to ensure that the greenhouse gas emissions attributable to the product, service or organisation, and any changes in these, are recorded in a timely manner; and
- (d) quality control practices in place to ensure data quality is maintained.

7 Public disclosure

7.1 Reporting

An annual report should be made publicly available to communicate progress on carbon offsetting activities.

The annual report should be made against a Management Plan and should include the following:

- (a) the total amount of greenhouse gas emissions generated from the product sold, service provided, or the organisation's activities in the reporting year, including any actions taken to reduce it;

- (b) records to prove that the acquired approved abatement is sufficient to offset the proportion of the total greenhouse emissions associated with the organisation's activities, products or service committed to be offset;
- (c) details of the quantity and type of credits purchased, and appropriate register into which they have been retired, or cancelled.

7.2 Public statements

Organisations that take voluntary action to calculate their carbon footprint, and offset emissions in accordance with this Standard are entitled to make appropriate public statements.

Examples of acceptable claims include:

"The greenhouse gas emissions generated from this product have been calculated and offset in accordance with the National Carbon Offset Standard";

"We are committed to offsetting our carbon footprint consistent with the National Carbon Offset Standard"; and

"This offset meets the National Carbon Offset Standard".

The Australian Competition and Consumer Commission (ACCC) will assess compliance with the Standard. Incorrect claims risk contravening the *Trade Practices Act 1974*.

