Local Government Association of South Australia

Briefing Paper – Local Governments and the National Carbon Offset Standard 2009

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Contents

Terms and Definitions

Australian Emissions Unit (AEU): An emissions unit issued under the proposed Carbon Pollution Reduction Scheme (CPRS), also referred to as a 'carbon pollution permit'.

Business unit: A unit that is recognised by an entity as having administrative responsibility for one or more facilities of the corporation.

Carbon dioxide equivalence (CO_2-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 commonly used at an individual, household, organisation or product level.

Carbon neutrality: Commonly refers to a situation where the net emissions associated with a product or an organisation's activities are equal to zero through the acquisition and retirement of carbon offsets that meet additionality criteria.

Carbon offset: Represents a reduction in greenhouse gases, or enhancement of greenhouse gas removal from the atmosphere by sinks, 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): 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 (CDM). CDM projects undertaking afforestation and reforestation activities issue temporary and long term units known as tCERs and lCERs, which must be replaced after a specified period.

Clean Development Mechanism (CDM): The CDM allows greenhouse gas emission reduction projects to take place in countries that have no emission targets under the Kyoto Protocol, yet are signatories. The CDM is defined in Article 12 of the Kyoto Protocol.

Emission factor: A factor that gives the kilograms of carbon dioxide equivalent emitted per unit of activity.

Emissions Reduction Unit (ERU): A Kyoto unit corresponding to one metric tonne of carbon dioxide equivalent 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 National Greenhouse and Energy Reporting (NGER) Regulations.

Greenhouse gases: The atmospheric gases responsible for causing global warming and climate change. The six Kyoto Protocol classes of greenhouse gases are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydro-fluorocarbons (HFCs), per-fluorocarbons (PFCs) and sulphur hexafluoride (SF_6).

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 ERUs.

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 and countries in transition. It includes individual emission reduction targets for Annex I countries to be met within the first commitment period of 2008-12.

Kyoto unit: An emissions unit recognised for compliance under the Kyoto Protocol. Kyoto units include Assigned Amount Units (AAUs), CERs (including tCERs and lCERs), ERUs and Removal Units (RMUs).

Life cycle assessment: The compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle.

National Greenhouse and Energy Reporting (NGER) System: The national reporting framework for information related to the greenhouse gas emissions, and energy production and use of corporations operating in Australia. The framework is established under Commonwealth legislation, which makes registration and reporting mandatory for corporations whose greenhouse gas emissions or energy production or use meet certain thresholds.

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. Only one corporation can have operational control over a Facility at any time.

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

Scope 1 emissions: The release of greenhouse gas into the atmosphere as a direct result of activities at a Facility.

Scope 2 emissions: The release of greenhouse gas as a result of electricity generation, heating, cooling or steam that is consumed by a Facility.

Scope 3 emissions: The release of greenhouse gas into the atmosphere that is generated in the wider economy as a consequence of a facility's activities but that are physically produced by another Facility.

The Standard: National Carbon Offset Standard.

Voluntary Carbon Unit (VCU): A unit corresponding to one metric tonne of carbon dioxide equivalent emissions reduced, certified and issued under the Voluntary Carbon Standard.

Voluntary Emissions Reduction (VER): Emission reduction units that have been generated according to defined voluntary standards.

Executive Summary

Due to take effect from 1 July 2010, the National Carbon Offset Standard (NCOS) provides guidance on what constitutes a genuine, additional voluntary offset in the context of the Carbon Pollution Reduction Scheme. It sets a voluntary minimum standard for:

- carbon offset eligibility and generation
- carbon footprint calculation;
- achieving carbon neutrality; and
- audit and verification of carbon claims

With a direct link to local communities and business, local government is well placed to provide leadership in the area of energy efficiency and carbon management. As a result, many local governments have begun to measure their energy consumption and greenhouse gas (GHG) emissions, develop management strategies and report on their progress towards reduction commitments. Until recently, many local governments throughout Australia were participating in the International Council for Local Environmental Initiatives (ICLEI) – Cities for Climate Protection Program. With the recent cessation of this program many have moved to align their inventories with the National Greenhouse and Energy Reporting Act 2007 (NGER Act) framework for accounting and reporting energy consumption and GHG emissions. However, at present, most local governments are unlikely to have reporting obligations under the NGER Act. This is because the Act applies only to constitutional corporations and local governments in most cases are not considered to be constitutional corporations.

While the NGER Act provides a national framework for energy and emissions accounting and reporting, it does not provide guidance on carbon offsetting activities or achieving carbon neutrality. It is a framework for energy producers, consumers or GHG emitters, who trigger mandatory thresholds and is not intended for use by organisations wishing to take voluntary action to reduce their impact on climate change.

That said, an organisation currently building or maintaining an energy and GHG emissions inventory to the standards set under the NGER Act should note that the NCOS is based on a consistent framework. The determination of boundaries, inclusion of sources, factors and calculation methodology are essentially the same. The key difference is that the NCOS provides broader specification for energy and GHG emissions measurement, management and mitigation including the following key Local Government considerations:

- Preparing an Emissions Management Plan (EMP);
- Purchasing eligible offset units;
- Retiring eligible offset units;
- Reporting the emissions profile; and
- Auditing and validation of claims

It is important to recognise that the NCOS is a 'living' document that will be regularly reviewed and updated to reflect the dynamic nature of the voluntary carbon market and provide ongoing opportunities for Australian businesses.

For further information on the NCOS or related references and standards, organisations should consult the Department of Climate Change and Energy Efficiency website: www.climatechange.gov.au/en/government/initiatives/carbon-offset

Introduction

The National Carbon Offset Standard (NCOS) 2009, which is due to come into effect on 1 July 2010, is intended to ensure that consumers have confidence in the voluntary carbon offset market and the integrity of carbon offset and carbon neutral claims. It sets minimum requirements for the verification and retirement of voluntary carbon credits and provides guidance for calculating the carbon footprint of an organisation or product for the purpose of achieving 'carbon neutrality'. This briefing paper is designed to assist local governments understand the requirements of the standard and its application in the context of their operations.

At present, most local governments are unlikely to have reporting obligations under the National Greenhouse and Energy Reporting (NGER) Act 2007. While many local governments have been applying the specifications of the Act in relation to measurement and reporting of energy and GHG emissions, there are significant limitations in the context of local government. As a formal standard for the voluntary carbon market in Australia, NCOS provides certainty in relation to carbon offsets, footprint calculation, reductions and verification of claims.

This briefing paper explains the specifications of the standard and how local governments may achieve best practice carbon management via the application of its principles. It covers the following broad areas:

- What is the NCOS standard?
- Who needs to apply the standard?
- How does NCOS link with the NGER Act and the proposed CPRS?
- How do the NCOS requirements apply to local governments?
- Where can I find further information?

The information presented in this briefing paper is for general advice only. The NCOS provides considerable and specific detail on the specifications of its application. As local governments can differ significantly in their goals and control over greenhouse gas sources and energy use or production, applying the standard can be complex. It may require detailed and attentive reading of the standard and its normative references. Additionally local governments may choose to engage the services of a third party consultant to assist in one or more aspects of inventory construction, data collection, emissions calculations, reporting, offsetting and ongoing management.

1. What is the National Carbon Offset Standard?

The National Carbon Offset Standard provides guidance on what constitutes a genuine, additional voluntary offset in the context of the Carbon Pollution Reduction Scheme. It sets minimum requirements for the verification and retirement of voluntary carbon credits and provides guidance for calculating the carbon footprint of an organisation or product for the purpose of achieving 'carbon neutrality'.

The National Carbon Offset Standard also provides a voluntary standard for organisations to use in becoming carbon neutral or developing carbon neutral products. The standard provides a means of ensuring the integrity of offsets and carbon neutral products available for consumers and businesses alike. It enables consumers to make effective choices in regard to offsetting and interpreting

carbon neutral claims. It also provides guidance for businesses for determining their carbon footprint and for purchasing robust offsets.

The Standard specifies:

- the types of carbon offsets that constitute genuine, additional emissions reductions in the context of the proposed CPRS;
- the general principles and requirements for calculating the carbon footprint of a product or organisation;
- requirements for transparent recording of the carbon footprint, measures taken to reduce emissions and the amount reduced and the emissions amount offset and the type of carbon offsets purchased and retired; and
- requirements for auditing the veracity of carbon footprint calculations and offset claims

A robust and transparent audit model is fundamental to provide confidence in offset projects and carbon neutral claims. Independent audit validates the eligibility and robustness of offset project methodologies, the amount of emissions reductions offset projects achieve, and the accuracy and completeness of carbon footprint calculations.

Those organisations achieving carbon neutrality will purchase a range of eligible offset credits under the National Carbon Offset Standard, including:

- Carbon pollution permits, including those from forestry projects opting into the Carbon Pollution Reduction Scheme
- Kyoto units recognised and accepted under the Carbon Pollution Reduction Scheme
- Credits issued under the internationally recognised Voluntary Carbon Standard and Gold Standard, where these meet specific requirements
- Credits issued by domestic offset projects that reduce emissions from sources currently not counted towards Australia's Kyoto Protocol target.

The National Carbon Offset Standard is a 'living' document that will be regularly reviewed and updated to reflect the dynamic nature of the voluntary carbon market and provide ongoing opportunities for Australian businesses.

The list of eligible offsets and eligible emissions sources for domestic offsets is therefore likely to change over time in line with domestic and international carbon market developments and changes in international emissions accounting rules.

The Australian Competition and Consumer Commission (ACCC) has noted that as the voluntary carbon market has grown, concerns have emerged about what consumers and businesses are really purchasing when they buy carbon offsets. 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 Standard addresses consumer concerns that some of the offset products being sold in the voluntary carbon market are not genuine, that they have been illegitimately resold, or will not

achieve the emissions reductions claimed. It also clarifies for businesses and providers of offset and carbon neutral products what constitutes a credible carbon offset and carbon neutral claim within the context of the Carbon Pollution Reduction Scheme.

2. Who needs to apply the standard?

The National Carbon Offset Standard applies to the voluntary carbon market, which is complementary to, but operates outside of, the Carbon Pollution Reduction Scheme.

The NCOS is intended to provide a benchmark for consumers, government bodies and businesses to assess claims of carbon neutrality or the credibility of offset products available for sale in the voluntary carbon market.

The standard may be applied by any organisation for the purposes of:

- Carbon footprint calculation of the organisation
- Defining the boundary of an organisation
- Determining emissions sources associated with the organisation boundary
- Applying appropriate emissions factors and calculation methodology
- Determining emissions attributable to the organisation
- Carbon footprint calculation of a product
- Defining the scope and system boundary of a product life cycle
- Determining emissions sources within the system boundary
- Product inventory analysis
- Determining emissions attributable to the life cycle of the product

In addition to the above, the standard should be applied in order to achieve carbon neutrality at an organisational or product level in Australia. It provides specification in relation to:

- Preparing an Emissions Management Plan (EMP)
- Purchasing eligible offset units
- Retiring eligible offset units
- Reporting the emissions profile
- Audit and validation of claims

3. Linkages with the National Greenhouse and Energy Reporting Act

The NGER Act 2007, and its subordinate legislation, establishes a national framework for mandatory reporting by corporations of their energy production, energy use, and greenhouse gas emissions. While any organisation may apply the specifications of the Act, only corporations whose energy production, energy use or greenhouse gas emissions are large enough to meet certain thresholds are required to report.

The primary objective of the Act is to streamline the capture of energy and emissions information in order to:

- Inform government policies and activities relating to energy and climate change

- Assist in meeting international emissions and energy reporting obligations
- Underpin the introduction of the proposed CPRS

While the NGER Act makes no provisions for any aspect of the voluntary carbon market in Australia, there are some linkages between its subordinate legislation and guidelines and NCOS. Table 1 (below) provides a broad summary of the linkages between the NGER Act and NCOS. Key similarities are as follows:

- NGER boundary definitions are applied under NCOS. However, other approaches (equity share and financial control approaches) defined in the GHG Protocol are also applicable under NCOS
- Operating landfills are captured if they are under the operational control of the organisation in question
- National Greenhouse and Energy Reporting (Measurement) Determination emissions factors and calculation methodology may be utilised under NCOS

Overall, there is no direct link between the NGER Act and NCOS given that the former provides for the calculation and reporting of energy and emissions to the federal government. NCOS on the other hand, is provided as a guide for the voluntary market in footprint calculation and achievement of carbon neutrality.

Table 1: Comparison of the key differences and similarities between the NGER Act and NCOS

Element	NGER Act (current)	NCOS
Effective from	1 July 2008	1 July 2010
Entities covered	Constitutional corporations	Any organisation or product
Emissions covered	Scopes 1 and 2	Scopes 1 and 2 as well as selected scope 3
Facility thresholds	Emissions: 25ktCO2-e Energy: 100TJ	Not applicable
Corporate thresholds (2009/10)	Emissions: 87.5 ktCO2-e Energy: 350TJ	Not applicable
Energy production and consumption reporting	Required	Not required
Landfills and landfill emissions covered	Operating landfills	Operating landfills where captured within the chosen boundary
Eligible offset units	Not applicable	(a) Australian Emissions Units (AEUs); (b) Certified Emissions Reductions (CERs) except long term (lCERs) and temporary (tCERs); (c) Emission Reduction Units (ERUs); (d) Removal Units (RMUs); (e) Voluntary Emissions Reductions (VERs) issued by the Gold Standard; (f) Voluntary Carbon Units (VCUs) issued by the Voluntary Carbon Standard; (g) Offsets generated from emissions sources in Australia not counted toward Australia's Kyoto Protocol target, where they meet eligibility criteria and use a methodology that has been approved under the Standard.
Organisational boundary determination	All corporate group members; and all facilities under the operational control of corporate group members	Whole or part of the organisation according to the NGER Act definition. Partial boundaries may cover: • Business unit; • Facility; • Sub-facility; or • Activity According to their definition under the NGER Act. The GHG Protocol outlines additional corporate level boundaries not covered by the NGER Act that are also suitable for calculating a carbon footprint for carbon neutrality purposes. They are the equity share and financial control approaches.
Emissions factors and calculation methodology	National Greenhouse and Energy Reporting (Measurement) Determination	(a) National Greenhouse Account Factors; or (b) a method using industry sampling and Australian or international standards listed in the NGER (Measurement) Determination or equivalent; or (c) using Australian or international standards listed in the Determination or equivalent standards for both sampling and analysis of fuels and raw materials; or (d) direct measurement using continuous or periodic emissions monitoring
Carbon neutrality definition	Not applicable	Specifications for carbon neutrality provided including: • Emissions Management Plan (EMP) • Retirement of eligible offsets • Reporting
Audit	Determined on case by case basis by Greenhouse & Energy Data Officer (GEDO)	Emissions reductions and offsetting activities should be reported and independently audited on a regular basis. Audited progress reports should be made publically available

Source: www.climatechange.gov.au, Department of Climate Change and Energy Efficiency (2009) *National Carbon Offset Standard*, Canberra

4. The NCOS and the proposed Carbon Pollution Reduction Scheme (CPRS)

The Carbon Pollution Reduction Scheme (CPRS or 'Scheme') is the emissions trading scheme proposed by the Australian Government to help reduce Australia's greenhouse gas emissions. Under the Scheme, large emitters of greenhouse gases will have to purchase and surrender a permit for every tonne of emissions that they emit.

Monitoring and reporting of the emissions generated by Scheme participants is integral to the administration of the CPRS, in order to ensure that participants surrender the correct number of permits. The CPRS draft legislation proposes to use the NGER Act's emissions reporting framework to handle these activities.

The CPRS requires participation by any entity that has operational control over a facility that emits more than 25 kilotonnes CO_2-e scope 1 emissions per year in the covered sectors. A lower threshold of 10 kilotonnes CO_2-e will apply to landfills within a prescribed distance from each other, which has yet to be determined. Unlike the current form of the NGER Act, it is proposed that the CPRS will apply to any entity, not just to constitutional corporations. This means that local governments with large scope 1 emissions sources will need to participate in the CPRS.

For a local government considering the application of the NCOS standard in the management of their emissions, the organisation should consider whether they may be required to participate in the CPRS should it pass parliament in its current proposed form. Table 1 (above) shows that if an organisation follows the NCOS guidance by:

1. determining the organisational boundary according to the NGER Act definition (i.e. whole organisation)
2. capturing scope 1 and scope 2 emissions in line with the NGER (Measurement) Determination; and
3. calculating scope 1 and scope 2 emissions in accordance with the methods and guidance provided in the NGER (Measurement) Determination

The inventory will meet the requirements of the NGER Act and any reporting or participation obligation under the Act or proposed CPRS could be met by simply excluding scope 3 emissions required under the NCOS. Therefore, aligning your organisation's energy and emissions inventory with the requirements of the NCOS will not affect your ability to meet the requirements of the NGER Act or simply compare/report emissions using this framework.

5. How do the NCOS requirements apply to local governments?

As mentioned on page 5 of the ICLEI CCP Australia Briefing Paper (2009) entitled 'Local Governments and the National Greenhouse and Energy Reporting (NGER) Act':

> *Only a very small number of local governments are likely to meet the participation requirements of the NGER Act. This is because:*
>
> 1. *Most local governments are not likely to be considered constitutional corporations*
> 2. *Local governments generally do not have operational control of large sources of scope 1 or scope 2 emissions*

Despite this, some organisations may choose to apply the accounting and reporting aspects of the Act in construction of their energy and GHG emissions inventories. This has several benefits to local governments, including (but not limited to):

- establishing clear organisational and operational boundaries as they relate to best practice emissions accounting and reporting;
- establishing a GHG emission inventory in line with national legislation;

- gaining an accurate account of the GHG emission profile associated sources under the direct operational control of the organisation;
- building an energy and emissions inventory that is comparable across all levels of government and industry both locally and nationally; and
- aligning with the existing and emerging aspirations of key clients and other stakeholders in the region in relation to GHG emissions measurement, management and mitigation

Despite the clear benefits associated with the strict application of the NGER Act in a local government context, there are several important considerations that weigh in favour of application of the NCOS instead. This section covers the specific considerations for local governments when considering the application of either standard for the purposes of energy and GHG emissions accounting and reporting. In any case, the specific needs of the organisation should be assessed in consultation with relevant stakeholders and external advice should be sought.

5.1 Organisational boundary determination

Organisational boundary determination is covered in section 4.2.1 of NCOS (pp. 7-8). The standard states that if an organisation wishes to calculate the carbon footprint for the entire organisation, it should choose to use the definition listed under the NGER Act. However, NCOS also provides specification for the scope of an inventory to be reduced to capture only part of the organisation at the business unit, facility, sub-facility, or activity level. While other GHG Protocol corporate level boundaries (equity share and financial control) are also accepted, it is recommended that the operational control approach specified under the NGER Act is adopted to maintain consistency. Overall, there is no difference in the application of either the NGER Act or NCOS for determination of a local government's organisational boundaries.

5.2 Emissions sources associated with the organisation boundary

The determination of emissions sources associated with the organisation boundary is covered in section 4.2.2 of the NCOS (pp. 8 -10). Again, the application of the NGER Act (specifically the NGER (Measurement) Determination) is required and all direct emissions (scope 1) and indirect emissions (scope 2) attributable to sources within the *chosen* boundary should be included. However, in addition to scope 1 and 2 emissions, the NCOS also states that:

> *"An organisation should consider calculation of other indirect (scope 3) emissions, which occur outside the boundary of a Facility as a result of activities at a Facility"*
>
> Sec 4.2.2(b), p.9

Under the NCOS (Section 4.2.2(b), p.9), an organisation should include the following scope 3 emissions as a minimum:

- business travel of employees;
- disposal of waste generated by the organisation; and
- use of paper in the course of its business.

In addition to the above, NCOS also recommends consideration of the following sources of emissions:

- extraction, production and transport of purchased fuels;

- extraction, production and transport of purchased materials or goods;
- disposal of wasted generated in the production of purchased fuels, materials and goods;
- outsourced activities; and
- cost of equipment, consumables, building lease, repairs, maintenance and communications.

In considering the calculation of scope 3 emissions, NCOS specifies that an organisation should refer to the GHG Protocol which provides the following guidelines for determining the relevance of scope 3 emissions sources:

- the scope 3 emissions from a particular source are large or believed to be 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.

Source: WRI/WBCSD 2001. The Greenhouse Gas Protocol, Revised Edition, Chapter 4, p. 30

The consideration of scope 3 emissions is a critical consideration for local governments in the accounting and reporting of emissions. Firstly, an organisation currently maintaining or building energy and GHG emissions inventory to the standards set under the NGER Act, will not be capturing any scope 3 emissions. This has implications for any local government that is considering perusing carbon neutrality or simply looking to align their inventory with the NCOS. Secondly, following the GHG Protocol guidance for consideration of scope 3 emissions sources, poses many unique questions for local governments which could drastically increase the scope of an emissions inventory. Table 2 (below) details some of the common sources of scope 3 emissions that should be considered by local governments when applying the NCOS.

Table 2: Key sources of local government scope 3 emissions

Source	Large relative to scope 1 and scope 2 emissions	Contribute to the organisation's GHG risk exposure	Deemed critical by key stakeholders	Organisation could undertake or influence reductions	Required inclusion under NCOS
Business travel			×	×	×
Waste generated by the organisation	×		×	×	×
Use of paper			×	×	×
Extraction, production and transport of purchased fuels				×	
Leased assets		×	×	×	
Outsourced activities	×	×	×	×	
Street lighting (State government or corporate controlled)	×	×	×	×	
Employee commuting				×	

Note: The above list of common local government scope 3 emissions sources is not exhaustive. Individual organisations should perform their own analysis of the significance of scope 3 emissions sources in consultation with relevant stakeholders and with consideration of the organisation's specific situation and goals

Capturing the minimum requirements under NCOS with regard to scope 3 emissions sources (business travel, waste and paper) is, in most cases, easily achievable due to the availability of data on each. Due to the emissions intensive nature or air-travel and waste sent to landfill, inclusion of these sources can significantly increase an organisation's emissions profile. Paper consumption, on the other hand, is relatively insignificant even among large users. Given the ability of local governments to influence behaviour and policy in relation to business travel, waste and paper, these sources can be managed or influenced in order to achieve reductions. However, in considering the inclusion of a wider range of scope 3 emissions sources following GHG Protocol guidelines, table 2 (above) shows that there are some important considerations that are common across most local governments. Leased assets, outsourced activities, and street lighting are critical considerations for inclusion in a local government energy and emissions inventory. In many cases they: are large in comparison to scope 1 and scope 2 emissions sources; contribute to the organisation's risk exposure; are deemed critical by key stakeholders (i.e. elected members, community); and could be influenced by the organisation through policies and initiatives etc. While recommended, the inclusion of these sources of scope 3 emissions could add significantly to the scope of the inventory and the following should be considered:

- the availability of data and ongoing reporting of activities;
- engaging stakeholders such as facility managers, utility companies, state government and contractors to provide data and support reduction;
- the factors and methods available for accurate estimation of scope 3 emissions sources; and
- the level of uncertainty inherent in scope 3 activity data and emissions factors

5.3 Emissions factors and calculation methodology

Section 4.2.3, p. 10 of the NCOS states that direct and indirect greenhouse gas emissions (scope 1 and scope 2) should be calculated in accordance with the methods and guidance provided in the NGER (Measurement) Determination. Under Section 1.4, p.19 of the Determination (2008), options for calculating emissions include:

(a) Method 1 – using default emissions factors derived from the latest version of the National Greenhouse Account Factors;
(b) Method 2 – a method using industry sampling and Australian or international standards listed in the NGER (Measurement) Determination or equivalent for analysis;
(c) Method 3 – a method using Australian or international standards listed in the Determination or equivalent standards for both sampling and analysis of fuels and raw materials. Method 3 is very similar to method 2, but it requires compliance with Australian or equivalent documentary standards for sampling; and
(d) Method 4 – direct measurement using continuous or periodic emissions monitoring.

The uncertainty of direct (scope 1) greenhouse gas emissions estimates should be estimated in accordance with the NGER (Measurement) Determination.

No specific guidance on calculation of scope 3 emissions is provided but it is recommended that organisations consult the National Greenhouse Account Factors and GHG Protocol. Through direct correspondence with the Department of Climate Change and Energy Efficiency, the following recommendation was made with regard to scope 3 emissions factors and methods:

> *"Under the NCOS, an organisation undertaking an emissions inventory must use NGA Factors in the first instance. If relevant NGA factors are not available for specific scope 3 emissions, other reputable sources can be used; however we do not recommend any specific source. The factor chosen must be justified in the organisation's inventory and verified by an independent auditor before it would be accepted under the NCOS"*
>
> Source: Hogan, T. (2010) FW: National Carbon Offset Standard – Scope 3 emissions (Use of paper) and Credits (Greenhouse Friendly), e-mail to S. Gundy (stewart@balancecarbon.com), 15 Feb. [15 Feb 2010].

6. Achieving carbon neutrality in local government

As mentioned previously, the NCOS contains the minimum standard requirements for organisations or products in achieving carbon neutrality in Australia. According to NCOS requirements there are essentially four key requirements for organisations in achieving carbon neutrality. The following section outlines those requirements in a local government context.

To be carbon neutral commonly means that the net emissions associated with a product or an organisation's activities are equal to zero. For an organisation or product to become carbon neutral, it is generally accepted as best practice that an organisation would:

1. *measure its carbon footprint;*
2. *reduce emissions; and*
3. *offset any residual emissions.*

Through this approach a company's investment in measurement of its carbon footprint can serve multiple goals. When greenhouse gas emissions are measured and reported, they are generally better managed.

Best practice also requires that an organisation make transparent to the public steps taken to measure, reduce and offset emissions so that any carbon neutral claims can be objectively assessed.

-National Carbon Offset Standard 2009, p. 1

6.1 Emissions Management Plan (EMP)

Under the NCOS, local governments wishing to achieve carbon neutrality must prepare an Emissions Management Plan to demonstrate that appropriate systems are in place to monitor and reduce the greenhouse gas emissions associated with the organisation. Section 5.1, p. 14 specifies that an Emissions Management Plan must identify:

- the greenhouse gas emissions attributable to the activities of an organisation (or specified part of an organisation) or product within a given period;
- an emissions reduction strategy including the emissions reduction measures undertaken and quantity of emissions reduced;
- the equivalent quantity of carbon offsets required to offset the remaining emissions attributed to the product or organisation for each reporting period;
- records required, and the process for establishing and maintaining those records, to ensure that the greenhouse gas emissions attributable to the product or organisation, and any changes in these, are recorded in a timely manner; and
- quality control practices in place to ensure data quality is maintained.

Local governments should consider how an emissions management plan can be developed into their existing policies and procedures. For example, specific emissions related policies and actions can be built into existing policies in place at the organisation.

6.2 Retirement of eligible offsets

Under the NCOS, local governments wishing to become carbon neutral must purchase and surrender eligible offsets to cover the reported emissions profile for the period in question (i.e. 2009/10 financial year). Eligible offset units accepted under the NCOS are detailed in table 1 (above) with more detailed information available in section 3.1, pp. 3-4 of the NCOS. Organisations should consult with the Department of Climate Change and Energy Efficiency to set up a carbon offset registry in their name to facilitate the accurate and transparent retirement of eligible offsets.

6.3 GreenPower™ and NCOS

GreenPower™ and other renewable energy purchases are not NCOS approved offsets because they relate to an emissions source (stationary energy) covered by the proposed CPRS. Only abatement achieved in emissions sources not covered by the CPRS and not counted towards Australia's Kyoto Protocol target can be offsets under the NCOS.

However, GreenPower™ and other renewable energy purchases can be treated as zero emission sources of electricity under the NCOS for the purpose of calculating a carbon footprint for carbon neutrality. For example, if an organisation purchases 100 per cent GreenPower™ for all its electricity

requirements, then its carbon footprint will include no emissions from electricity consumption. It would then need to purchase fewer offset credits to achieve carbon neutrality.

Under the Government's proposed CPRS, all purchases of GreenPower will be taken into account when tightening future caps. The Government has also committed to cancel an equivalent amount of international units to ensure that these GreenPower purchases achieve an emissions reduction beyond Australia's national targets.

Source: www.climatechange.gov.au

6.4 Reporting

Where a local government wishes to become carbon neutral, a periodic report needs to be made publically available online to communicate progress on emissions reduction activities and offsetting. The NCOS (section 5.3, pp. 14-15) specifies that this report should be made against an EMP and should include:

(a) The total carbon footprint of the activities of the organisation (or specified part of the organisation) in the given period, including any actions taken to reduce total greenhouse gas emissions before offsetting;
(b) A statement on the emissions reduction activities undertaken in accordance with the emissions reduction strategy and the resulting quantity of emissions reduced;
(c) Records to prove that sufficient eligible offsets have been acquired to offset the proportion of the total carbon footprint associated with the activities of the organisation (or specified part of the organisation) committed to be offset;
(d) Details of the quantity and type of offset units purchased and register into which they have been retired, or cancelled.

6.5 Audit

Under the NCOS, Audits of offset methodologies, projects and carbon footprint calculations are required to be undertaken by a suitably qualified auditor. In the final section of the NCOS (p. 16) suitably qualified auditors are defined as individuals or bodies that:

(a) Are registered under the greenhouse and energy audit framework currently being established by the Department of Climate Change for the NGER Act and proposed CPRS;
(b) Have demonstrated knowledge and expertise in the relevant Australian and international and standards, specifically AS ISO 14064 and ISO 14040 series; or
(c) Are accredited to the international standard ISO 14065:2007 or recognised international standards based on ISO 14040.

The NCOS does not specify timelines for audits to occur simply stating that: *"emissions reductions and offsetting activities should be reported and independently audited on a regular basis"*. Additionally, audited progress reports should be made publically available alongside inventory reports. Further, the NCOS states that: *"appropriate records must be maintained to allow emissions reductions and carbon neutral claims to be audited"*. BalanceCarbon recommends the implementation of an appropriate records management system is implemented as part of the

emissions management plan. It is also recommended that audits are carried out annually to coincide with financial reporting cycles.

7. Discussion

The National Carbon Offset Standard is due to come into effect on 1 July 2010. It sets minimum requirements for the verification and retirement of voluntary carbon credits and provides guidance for calculating the carbon footprint of an organisation or product for the purpose of achieving 'carbon neutrality'. This briefing paper has attempted to assist local governments understand the requirements of the standard and its application in the context of their operations.

The NCOS is closely linked to the NGER Act 2007 given that much of the inventory building (emissions accounting) methodology specified in the NCOS is directly referenced to subordinate NGER legislation and guidelines. The key difference is in the inclusion of selected scope 3 emissions from business travel, waste and paper consumption in the course of an organisation's operations. In line with the GHG Protocol's guidance, local governments should consider other sources of scope 3 emissions that are significant to their organisation. This paper has identified street lighting, leased assets and outsourced activities as important considerations for inclusion on local government inventories.

The NCOS achieves its primary purpose by specifying eligible offset units as well as additional requirements for achieving carbon neutrality and verifying claims. Local governments wishing to pursue carbon neutrality or make external carbon reduction claims should ensure they establish an appropriate Emissions Management Plan, retire eligible offsets (where relevant), publically disclose their undertakings, and seek third party verification from an appropriately qualified auditor.

Overall, It is important to remember that the NCOS is a 'living' document that will be regularly reviewed and updated to reflect the dynamic nature of the voluntary carbon market and provide ongoing opportunities for Australian businesses.

8. Where can I find further information?

The Department of Climate Change and Energy Efficiency provides information on the National Carbon Offset Standard and related topics on their website.

NCOS information on the Department of Climate Change and Energy Efficiency website:

- www.climatechange.gov.au/en/government/initiatives/carbon-offset

NGER Act information on the Department of Climate Change and Energy Efficiency website:

- www.climatechange.gov.au/government/initiatives/national-greenhouse-energy-reporting

The Australian and International standards referenced in the NCOS are available at a cost from SAI Global or the International Organization for Standardization (ISO):

- http://infostore.saiglobal.com/
- www.iso.org

The WRI/WBCSD Greenhouse Gas Protocol is freely available on the Greenhouse Gas Protocol Initiative Website:

- www.ghgprotocol.org/standards

The site also contains other useful standards and calculation tools related to projects, products and supply chain.

8. References

AS ISO 14064 Greenhouse gases Part 1: Specification with guidance at the organisation level for the quantification and reporting of greenhouse gas emissions and removals (AS ISO 14064.1:2006)

AS ISO 14064 Greenhouse gases Part 2: Specification with guidance at the project level for quantification and reporting of greenhouse gas emission reductions and removal enhancements (AS ISO 14064.2:2006)

AS ISO 14064 Greenhouse gases Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions (AS ISO 14064.3:2006)

Department of Climate Change and Energy Efficiency 2009, National Carbon Offset Standard (NCOS)

Hogan, T. (2010) FW: National Carbon Offset Standard – Scope 3 emissions (Use of paper) and Credits (Greenhouse Friendly), e-mail to S. Gundy (stewart@balancecarbon.com), 15 Feb. [15 Feb 2010].

International Standard *ISO 14040: Environmental management – Life cycle assessment – Principles and frameworks* (ISO 14040:2006)

International Standard *ISO 14044: Environmental management – Life cycle assessment – Requirements and guidelines* (ISO 14044:2006)

International Standard *ISO 14065: Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation of other forms of recognition* (ISO 14065:2007)

National Greenhouse and Energy Reporting (Measurement) Determination 2008 (NGER (Measurement) Determination)

National Greenhouse Account Factors, June 2009

WRI/WBCSD 2001, The Greenhouse Gas Protocol, Revised Edition