



**LOW CARBON LIVING  
CRC**

# Low Carbon Inclusions in Commonwealth and NSW Government Built Environment Sector Procurement

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An Australian Government Initiative



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## Preface

This report forms part of the deliverables for the CRC for Low Carbon Living project RP2010 'Informing and Trialling Low Carbon Inclusions in State Government Built Environment Sector Tenders'. The project is being undertaken in collaboration with UrbanGrowth NSW by Curtin University. The project is designed to collaborate with industry and state government to investigate ways to appropriately enhance the low carbon outcomes of built environment projects, initially focused on land development projects, through the project tendering process and including supply chain interaction.

The project will develop a 'Living Laboratory' with UrbanGrowth NSW focused on the trialling of the greater inclusion of low carbon related items in requests for tender, informed by supply chain engagement. The project draws on the expertise of two of the leading academics in this field, namely Professor Peter Newman (expert in sustainable development) and Professor Russell Kenley (expert in sustainable procurement). The project is supported by researchers at the Curtin University Sustainability Policy Institute (CUSP). The project will collaborate with the Sustainable Built Environment National Research Centre (SBEnc).

This report presents a high level summary of the findings of a desktop investigation of the current level of inclusion of low carbon considerations in selected government procurement policies and associated documents. The focus of the report is on the Australian Government and the NSW Government, and in particular UrbanGrowth NSW. The intention of the report is to provide the precedent for greater inclusion of low carbon related considerations in the public procurement process. Further the report maps the suggested key areas of sustainability performance in the various documents to the ISCA 'IS Rating Tool' to demonstrate the comprehensive coverage of such items informing its selection as a framework to be used in the following stages of the project.

The next stage of the project is to undertake an investigation into the 'Low Carbon Readiness' of the members of the UrbanGrowth NSW prequalified panel of civil contractors based on the low carbon related elements of the 'IS Rating Tool'. This investigation is intended to identify trends in low carbon readiness to inform future efforts to increase coverage in projects. The methodology is based on the understanding that the call for greater low carbon inclusions in procurement documentation needs to be complimented by effective supply chain interaction, hence there is a dual focus to the project:

1. The investigation of potential low carbon inclusions in procurement documentation in the form of either a minimum performance requirement (such as a minimum 'IS Rating') and/or the nomination of specific items (such as a selection of evidence requirements from 'IS Tool'), such as:
  - *Evidence that opportunities to reduce energy use and greenhouse gas emissions are identified and implemented.*
  - *Evidence of the modelling and monitoring of materials lifecycle impacts across infrastructure lifecycle, and demonstrated reductions.*
2. The investigation into effective supply chain interaction activities that can be undertaken to support the greater inclusion of low carbon items in procurement documents, such as:
  - *The provision of information seminars, training sessions, or briefing materials,*
  - *The requirement for supplier prequalification prior to inclusion in tender submissions,*
  - *The provision of an indication of future demand for particular low carbon products or services,*
  - *Investment in research and development of specific low carbon related goods or services.*

The next deliverable will be a summary of the findings of the low carbon readiness of the prequalified panel of civil contractors and recommendations as to areas of strength that can be included in future procurement processes, and in particular items to be included in the trial as part of the living laboratory. Further this report will highlight areas that may deserve attention to increase the level of low carbon readiness of the supply chain.

## Introduction

### Global Commitments to Reducing Greenhouse Gas Emissions

By the end of 2015 the world's largest economies had set ambitious greenhouse gas emissions targets with:

- China committing to 60 to 65 per cent by 2020 (compared to 2005 levels),
- European Union committing to reducing emissions by at least 40 per cent by 2030 (compared to 1990 levels),
- United States of America committing to 26-28 per cent by 2025 (compared to 2005 levels),
- Australia committing to 26-28 per cent by 2020 (compared to 2005 levels).
- India committing to 20-25 per cent by 2020 (compared to 2005 levels), and

These ambitious targets will create significant pressure to reduce emissions in the coming decades in a manner that delivers ongoing prosperity, jobs, and profits.



**Figure 1:** US President Obama and Chinese President Xi Jinping announcing Greenhouse Gas emissions reduction targets in 2014

A key strategy to deliver such targets will be a ratcheting of low carbon inclusions in both prequalification and tendering practices along with strategic supply chain interventions.

*The Australian Government spent over \$32 billion in 2010–11<sup>1</sup> on contracted goods and services... and can have a leading role as a model purchaser to encourage good practices by its suppliers by using its purchasing power to achieve environmental and social benefits and, at the same time, reduce its costs.*

**Commonwealth Sustainable Procurement Guide (DSEWPC 2013b)**

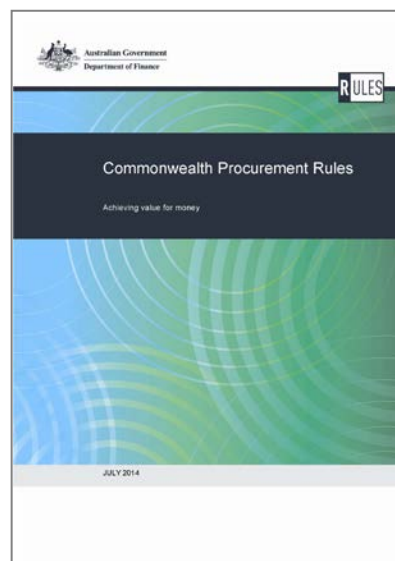
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<sup>1</sup> Department of Finance and Deregulation 2012, Statistics on Australian Government Procurement Contracts  
[www.finance.gov.au/publications/statistics-on-commonwealth-purchasing-contracts/index.html](http://www.finance.gov.au/publications/statistics-on-commonwealth-purchasing-contracts/index.html)

# Low Carbon Tendering Provisions in Commonwealth Government Procurement Rules

## Delivering Value for Money

The 'Commonwealth Procurement Rules' (CPRs) are the core of the procurement framework for the Australian Government. The CPRs have been designed to lay out the rules '*... with which entities must comply when undertaking procurement*' (DF 2014). The rules are structured in the following way: Value for money; Encouraging competition; Efficient, effective, economical and ethical procurement; Accountability and transparency in procurement; Procurement risk; and Procurement method. The area where consideration of low carbon outcomes is made in this structure it in 'Value for Money', with the Commonwealth Sustainable Procurement Guide pointing out that '*Value for money is the core principle underpinning Australian Government procurement. This means that all relevant financial and non-financial costs and benefits should be taken into account over the entire life of the procurement. Sustainability should be considered as part of the value for money assessment*'.<sup>2</sup>



*All commonwealth public procurement must consider the relevant financial and non-financial costs and benefits of the environmental sustainability of the goods and services, such as the energy efficiency and environmental impact.*

As part of the 'Value for Money' area the CPRs stipulate that '*When conducting a procurement, an official **must** consider the relevant financial and non-financial costs and benefits of each submission including, but not limited to:*

- a) the quality of the goods and services;
- b) fitness for purpose of the proposal;
- c) the potential supplier's relevant experience and performance history;
- d) flexibility of the proposal (including innovation and adaptability over the lifecycle of the procurement);
- e) environmental sustainability of the proposed goods and services (such as energy efficiency and environmental impact); and
- f) whole-of-life costs.

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<sup>2</sup> DSEWPC (Department of Sustainability, Environment, Water, Population and Communities) 2013b, Sustainable Procurement Guide, ECO-Buy Limited, Canberra, Commonwealth of Australia.

It is noted that Item e) above is the sole inclusion of low carbon related consideration in the CPRs and there is no guidance given as to how the direct and in-direct costs are calculated. According to the book 'Cents and Sustainability', *'Efforts to-date to reduce environmental pressures, such as greenhouse gas emissions, have been motivated by a wide range of factors, including improving productivity, reducing impacts on public health, reducing dependence on fossil fuels, acting to improve brand recognition, and working to capture new markets. However one of the leading drivers for change in the coming decades will be the costs to economies across the world of not acting to reduce a range of environmental pressures'*. The following have been identified as tangible costs related to inaction on responding to the need to reduce greenhouse gas emissions that is resulting in climate change: (Smith, Hargroves, and Desha, 2010)

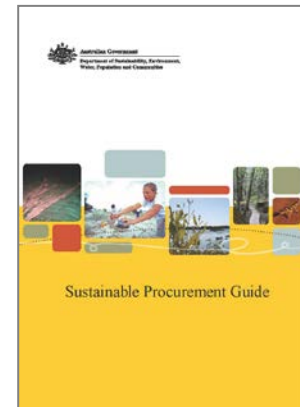
- Damage to infrastructure from an increase in frequency and intensity of natural disasters, including fires, storms, hailstorms, ocean surges, flooding, and cyclones.
- Health related costs due to more frequent heat waves and extreme cold, along with the spread of communicable diseases, such as Dengue Fever and Ross River virus.
- Reduced agricultural production from increased temperature affecting crops along with more intense and less frequent rainfall.
- Reduced revenue from nature based tourism, such as coral reefs, forests and alpine regions.
- Costs related to relocation or protection from rising sea levels and enhanced storm surges.
- Reductions to the carrying capacity of grazing land for livestock due to higher temperatures and lower availability of water.
- Increases in peak electricity loading due to the use of air-conditioners in response to rising temperatures, along with more frequent 'heat waves'.
- Increased losses from forest fires due to reduced water availability and higher average temperatures.
- Increased risk of conflict over resources such as oil, water and timber, and declining food production.

After analysing a broad range of potential costs of delayed action, such as those shown above, Stern (2006) concluded that each year on average, *'the costs of action to the global economy would be roughly 1% of GDP, while the costs of inaction could be from 5-20% of GDP'*, cautioning that, *'The investment that takes place in the next 10-20 years will have a profound effect on the climate in the second half of this century'*.

According to Smith, Hargroves, and Desha (2010), *'The challenge, however, is that these reductions in GDP will hit hardest in the future, while political attention and business strategy is firmly focused on performance in the very short term. Balancing the conflict between short and long term imperatives will be a significant challenge for nations in the coming century, one that if not met, may well lead to significant impacts on economies'*. The challenge is to enable meaningful calculations of costs related to greenhouse gas emissions in such a way as to inform public procurement.

## Considering Low Carbon Aspects of Procurement

In 2013 the Federal Government Department of Sustainability, Environment, Water, Population and Communities released a 'Guide for Sustainable Procurement of Services' that provides an overview of key considerations for sustainable procurement, including those related to low carbon, along with suggesting possible performance criteria for sustainable tendering (DSEWPC 2013a). The Guide suggests a number of questions may be asked related to the sustainability of potential service providers, with the following examples of questions related to low carbon considerations for land development projects.



- Does the supplier have a green/sustainable purchasing policy in place? (IS Tool Pro-1, Man-1)
- Has the supplier established sustainable purchasing guidelines or criteria for choosing its direct suppliers, such as guidelines that address environmental management and labour practices? (Pro-2)
- What steps will the supplier take to improve the energy/resource efficiency of its activities associated with delivery of the contracted service, such as energy consumption related to equipment use? (Ene-1,2)
- What steps will the supplier take to reduce travel and transport, such as change to holding a certain proportion of meetings with your agency via tele/video conferencing rather than face to face? (Ene-2)
- Can the supplier provide a statement of the sources of purchased electricity (for example: accredited GreenPower, coal)? (Ene-3)

Following the nomination of potential sustainability questions to ask service providers the Guide then nominates potential sustainability considerations in specifications for the procurement of services. The Guide suggests the specification of a number of 'minimum performance criteria' related to sustainability and suggests that, '*Minimum performance criteria can be used as a starting point in an approach to market if sustainable procurement is fairly new to your agency, where the supply market does not have a track record of minimising adverse environmental or social impacts or where many of the potential suppliers are small businesses*'.

The Guide suggests the following minimum performance criteria related to low carbon:

- Tenderers are to have an environmental or sustainability policy in place, or under development with a timeline for implementation. (Pro-1, Man-1)
- Tenderers are to have a program or system in place to identify environmental impacts relevant to the organisation, or a program/system under development with a timeline for implementation. (Man-3)
- Tenderers are to provide details of actions to improve the energy/resource efficiency or reduce energy consumption associated with delivery of the contracted service. (Ene-1.2)
- Tenderers are to provide details of actions to reduce fuel use, reduce air pollution and mitigate emissions associated with transport. (Ene-2)
- Tenderers can provide a statement of the sources of purchased electricity (for example: GreenPower, coal). (Ene-3)

In cases where there is confidence that suppliers can deliver the minimum performance criteria related to sustainability the Guide suggests the specification of 'better practice performance criteria' as '*a tool to help drive continuous improvement and communicate to the supply market that you are serious about sustainability*'. The Guide suggests the following better practice performance criteria related to low carbon:



- Tenderers should provide evidence of explored opportunities to improve the energy/resource efficiency of activities associated with delivery of the contracted service. (Ene-2)
- Tenderers should provide evidence of steps taken to reduce energy consumption associated with the delivery of the contracted service, such as energy consumption related to equipment use. (Ene-1,2)
- Tenderers should provide quantifiable evidence of implemented initiatives that reduce fuel use, reduce air pollution and mitigate emissions associated with transport – for example: change to holding a certain proportion of meetings via tele/video conferencing. (Ene-1,2)
- Tenderers should have implemented and maintained an environmental management system, certified to ISO 14001 or equivalent, to reduce environmental impacts and continually improve environmental performance. (Man-2)
- Tenderers should have a publicly available environmental or sustainability policy in place. (Pro-1)
- Tenderers should purchase a proportion of GreenPower, or if no proportion of renewable electricity is purchased, tenderers should offset a minimum proportion of non-renewable energy sources in line with the National Carbon Offset Standard (NCOS). (Ene-3)
- Tenderers should measure and record energy use on a minimum quarterly basis (for example: of electricity, gas, renewable energy) based on receipts. (Man-6)
- Tenderers should install energy efficient lighting in offices and other work areas where applicable. (Ene-2)
- Tenderers should install power-saving features on appliances where possible. For example, an appliance could be programmed to enter ‘suspend’ mode within 15 mins of becoming inactive. (Ene-2)
- Tenderers should demonstrate that a green/sustainable purchasing policy is in place. (Pro-1)
- Tenderers should demonstrate that sustainable purchasing guidelines or criteria are in place for choosing direct suppliers – for example: guidelines that address environmental management and labour practices. (Pro-2)

The Guide then considers how to assess the sustainability aspects of tender submissions and suggests that once sustainability performance criteria has been specified, *‘weightings should be assigned according to the agency’s objectives, priorities and targets. For example, if an agency’s priority is to reduce the greenhouse gas emissions associated with its activities, it makes sense to encourage suppliers of services to follow emissions-reduction principles and assign a higher weighting to emissions-specific criteria in the tender evaluation process’*. The Guide concludes by asserting that *‘Contract reporting requirements should highlight the sustainability outcomes achieved by procuring environmentally and socially preferable goods and services’* and suggests that contracts may specify reporting such as:

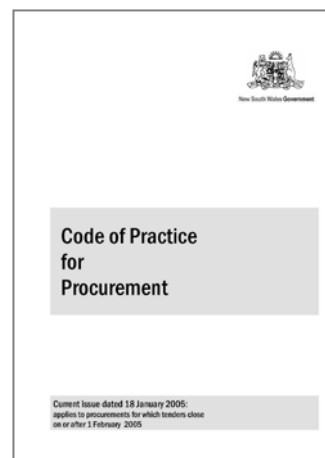
- The supplier should implement and report quarterly on initiatives to reduce energy use associated with transport, to reduce kilometres travelled and greenhouse gas emissions. (Pro-4)
- The supplier should implement and report on initiatives to achieve a continual reduction in energy use associated with the travel to/from client meetings over the contract period – for example, change to holding a certain proportion of meetings via tele/video conferencing. (Ene-2)
- The supplier is required to provide bi-annual reports stating environmental impacts (including those related to energy and water consumption and waste production) measured against a baseline over the term of arrangement. (Man-3)
- The supplier is required to continually increase the proportion of GreenPower that is purchased over the term of the arrangement. (Ene-3)
- The supplier is required to communicate its sustainability practices to its suppliers and stakeholders. (Man-6)

# Low Carbon Tendering Provisions in New South Wales Government Procurement

## NSW Code of Practice for Procurement

UrbanGrowth NSW has a commitment to comply with the NSW Code of Practice for Procurement ('Code') (NSW Government, 2005) that includes the following mention of low carbon related considerations:

- The Code states that '*Commitment to continuous improvement and best practice performance is expected of all those involved in government procurement*', and suggests a number of areas 'where this commitment may be demonstrated' including 'environmental management'.
- The Code states that, 'In addition to prices tendered, evaluation criteria shall contain the critical factors to be used in the evaluation of tenders', and lists the following related to low carbon tendering:
  - Tenderer's environmental management practices and performance, and
  - Value adding components such as economic, social and environmental development initiatives, if appropriate and relevant to the procurement.



The Code has an Appendix related to Environmental Management that states that, '*the Government expects government agencies and all other parties to identify the potential environmental opportunities, risks and impacts of their activities and to adopt measures to:*

- *Realise those opportunities, manage those risks, and enhance and protect the environment,*
- *Encourage recycling and re-use of materials and minimise waste, and*
- *Support effective use of scarce resources - including energy, water and materials'.*

## Procurement Policy Framework for NSW Government Agencies

The NSW Procurement Policy Framework ('Framework') sets out the '*policy and operating framework for the NSW public sector procurement system and provides a single source of guidance on the rules for procurement*'. (NSW Government, 2014a) As part of the 'Procurement Practice Checklist - Stage 3: Project Procurement Plan' the Framework suggests that procurement strategies embed a number of other requirements, including that of the 'NSW Government Resource Efficiency Policy' (which replaces the NSW Government Sustainability Policy) which delivers actions from the 'NSW Energy Efficiency Action Plan' (as outlined in the following section).

The Framework reiterates the need for 'value for money' from procurement as outlined in the Commonwealth Procurement Rules however unlike the CPRs it does not include specific mention of the financial and non-financial costs and benefits of the '*environmental sustainability of the proposed goods and services (such as energy efficiency and environmental impact)*' (DSEWPC, 2013b). However the Framework includes an element on 'Sustainable Procurement', stating that '*Sustainable procurement achieves the Government's commitment to spend public money efficiently, economically and ethically*', and requires that as part of the consideration of sustainable procurement the procurement process obtains 'value for money'.

Considering the NSW Procurement Policy Framework, in the area of environmental management each of the following relate to low carbon outcomes.

- *Pollution control, waste minimisation, recycling and disposal options.* (This may include reducing air pollution from the combustion of fossil fuels which leads to health issues from combustion particulates and enhances the greenhouse gas effect, reducing the wastage of fossil fuel intensive materials and energy along with reducing municipal waste that generates methane, and encouraging recycling that can significantly reduce the fossil energy required to deliver materials and goods.)
- *Energy efficiency and resource consumption.* (This may include the reduction of direct consumption of fossil fuels such as vehicle fuels, along with the reduction in electricity demand in various process or products through innovative approaches.)
- *Adopting environmental technologies and biodiversity.* (This may include the adoption of innovative technologies that can deliver enhanced services with reduced environmental damage, such as variable speed drives on pumping systems to match the pumping level to the level required and significantly reducing unnecessary energy consumption.)

The procurement policy framework then suggests that *‘Principles guiding sustainable procurement can be used by agencies to develop sustainable procurement strategies, policies, guidance material, training and tools by:*

- *Incorporating sustainability practices into every aspect of the business management from planning through the procurement process to measurement of results,*
- *Adopting strategies to avoid unnecessary consumption and managing demand,*
- *Selecting products and services with lower environmental impact across their life cycle, and*
- *Fostering a viable market for sustainable products and services by supporting businesses that support socially responsible suppliers, adopt ethical practices and demonstrate innovation in sustainability’.*

Each of these items provides the potential for reducing fossil energy demand and encouraging renewable energy generation. In particular, the avoidance of *‘unnecessary consumption and management of the demand of energy provides’* opportunities to both reduce energy costs and reduce greenhouse gas emissions. The Framework concludes by stating that *‘Adoption of sustainable procurement can be achieved through partnerships between governments, industry, business, education centres and the not-for-profit sector’* a process that the CRC for Low Carbon Living is well placed to support (DSEWPC, 2013b).

A number of other elements of the Framework support low carbon tendering, such as:

- *Innovation:* The Framework suggests that innovation can be ‘sought and encouraged at three levels of market engagement’, namely State economic level, the sourcing level and the contract management level. Each of these levels provides an opportunity for creative approaches to harness new innovations to deliver low carbon outcomes. In particular:
  - At the State economic level the Framework suggests that *‘through effective, early, structured and open communication of needs to the market to encourage appropriate research and development and attract the right suppliers for the government customer base’.* Hence, it is important to consider mechanisms to encourage industry to enhance current low carbon offerings and prepare to deliver a greater level of low carbon goods and services in the future. (As part of the project the ‘Low Carbon Readiness Survey’ will identify the areas that the supply chain is currently strong and areas that are in need of improvement related to the delivery of low carbon outcomes).
  - At the sourcing level through pre-qualification criteria and request for tender inclusions.

- At the contract management level where the Framework suggests the adoption of performance based contracts KPIs that measure innovation (such as those provided by the ISCA 'IS Rating Tool').
- *Effective Internal Engagement:* The Framework recommends 'early engagement across the organisation (and across multiple agencies/whole of government if applicable) to ensure business needs are identified, agreed and approved. This includes relevant operational, policy and legal areas, and areas responsible for change management within the organisation'. This will be a key area of focus as low carbon inclusions are considered and adopted. The Framework recommends the development of 'overarching guidance documents' for procurement and it may be of benefit to consider the development of a 'Low Carbon Procurement Guidance Document'.
- *Market Engagement:* Given the transition to low carbon operation will require changes across the build environment sector (along with all other sectors) it is important that low carbon procurement is enhanced by strong industry engagement. The Framework suggests that 'With effective industry engagement, sourcing strategies can be better aligned with market structure and dynamics, and provide government with knowledge about new and innovative approaches, leading to improved procurement outcomes'. It will be important to understand the low carbon strengths and current weaknesses of suppliers and contractors in order to ensure that the strengths are fully capitalised on and the current weaknesses are systematically addressed.

## NSW Sustainability Policy

In 2008 the Department of Premier and Cabinet published a Sustainability Policy for NSW government written by Premier Nathan Rees, and is considered an important document in the NSW governments commitment to become carbon neutral by 2020.<sup>3</sup> 'The implementation of the new Sustainability Policy will ensure Government agencies:

- Consider sustainability in all relevant decision making,
- Reduce their greenhouse gas emissions,
- Are more efficient in their use of energy and water,
- Reduce wider environmental impacts associated with water and energy use,
- Meet the challenge of rising prices expected for energy, fuel, water and waste management,
- Are more efficient in their use of vehicles,
- Produce less waste and increase recycling in Government activities, and
- Use purchasing power to drive efficiency and environmental sustainability.'

The overarching low carbon considerations are contained in the first five dot points for all government agencies, the final requirement specifically addresses the need for government purchasing power to drive efficiency and environmental sustainability. A sentiment parallel with the Commonwealth Sustainable Procurement Guides statement to use '... purchasing power to achieve environmental and social benefits and, at the same time, reduce its costs.'<sup>4</sup>

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<sup>3</sup> Rees N. (2008) *Sustainability Policy for NSW Government* Premier & Cabinet, NSW Government <http://arp.nsw.gov.au/m2008-28-sustainability-policy-nsw-government>

<sup>4</sup> DSEWPC (2013) *Sustainable Procurement Guide*, Department of Sustainability, Environment, Water, Population and Communities, Canberra, Commonwealth of Australia.

## NSW Government Resource Efficiency Policy

The NSW Government Resource Efficiency Policy ('Policy') aims to 'reduce the NSW Government's operating costs and lead by example in increasing the efficiency of the resources it uses'. (NSW Government 2014b) According to Rob Stokes MP, 'Our vision is for a resource productive public sector that provides better services to the NSW community with less impact on the environment'.

The Policy states that it will ensure the following three outcomes and that performance against the policy is to be published in annual statements. Each of the three outcomes relate to low carbon procurement and tendering for land development projects, such that:

- a) *Meet the challenge of rising costs for energy, water, clean air and waste management:* Reducing the cost of contractor fuel bills through efficiency and energy management requirements will reduce project costs and government expenditure,
- b) *Use purchasing power to drive down the cost of resource-efficient technologies and services:* Given the imperative for the transition to low carbon living the use of government purchasing power to provide clear market signals that favour low carbon goods and services will be a powerful mechanism to strength the built environment sector, and
- c) *Show leadership by incorporating resource efficiency in decision-making:* The consideration of the including of low carbon related inclusions into prequalification and tendering documentation will demonstrate significant leadership.



**Table 2:** Structure of the NSW Government Resource Efficiency Policy

<b>Energy</b>
E1: Targets to undertake energy efficiency projects
E2: Minimum NABERS Energy ratings for offices and data centres
E3: Minimum standards for new electrical appliances and equipment
E4: Minimum standards for new buildings
E5: Identify and enable solar leasing opportunities
E6: Minimum fuel efficiency standards for new light vehicles
E7: Purchase 6% GreenPower
<b>Water</b>
W1: Report on water use
W2: Minimum water standards for office buildings
W3: Minimum standards for new water-using appliances
<b>Waste</b>
P1: Report on top three waste streams
<b>Clean air</b>
A1: Air emission standards for mobile non-road diesel plant and equipment
A2: Low-VOC surface coatings

The following table shows the structure of the Policy with a focus on energy, water, waste and clean air. The current Policy includes the following items related to low carbon tendering of land development projects:

- *Clean Air*. This section focuses on ‘air emissions standards for mobile non-road diesel plant and equipment’ both contractor supplied and government purchased (over 19kW and purchased or contracted after December 2015) and stipulates that:
  - ‘Procurement contracts requiring the use of mobile non-road diesel plant and equipment will require reporting of engine conformity with relevant United States Environmental Protection Agency (US EPA), European Union (EU) or equivalent emission standards and the fitting of any exhaust after-treatment devices’ and provides specific requirements as shown below,

For equipment purchased by agencies from 1 January 2015 to 31 December 2017, minimum performance standards for new mobile non-road diesel plant and equipment ordered must be at least:

- US EPA Tier 3 or EU Stage IIIA compliant for engines 19 to 560 kW (see Appendix 2)
- US EPA Tier 2 or EU Stage II compliant for engines greater than 560 kW (Appendix 2).

From 1 January 2018, the minimum performance standard for newly manufactured mobile non-road diesel plant and equipment must be:

- US EPA Tier 4 or EU Stage IV (Appendix 2) compliant (Appendix 2).

- ‘The tender selection process will incorporate a weighting for air-emission standards in conjunction with other environmental considerations to ensure it is factored into the selection process and apply a consistent weighting to preference the lowest emission engines’.

In relation to offices, data centres and buildings the Policy includes requirements for minimum performance against sustainability related rating schemes such as NABERS. This suggests that it may be appropriate to suggest the creation of an item focused on minimum performance of infrastructure related projects with the Infrastructure Sustainability Council of Australia ‘Infrastructure Sustainability’ Rating Tool (as outlined below).

*Proposed new Policy Area ‘E8: Minimum ISCA Infrastructure Sustainability Rating for Land and Infrastructure Development’.*

## NSW Energy Efficiency Action Plan

The NSW Energy Efficiency Action Plan (‘Action Plan’) is intended to ‘place downward pressure on electricity bills by assisting households to reduce their energy use, and improve energy productivity for business’. (NSW Government, 2013)

*The Energy Efficient Business program will unlock business energy productivity by working with industry to accelerate the uptake of energy efficiency opportunities.*

The Action Plan is focused primarily on households, businesses, and government operations and does not directly relate to land development projects. The Plan has 30 actions across five streams with some in-direct association to land development projects:

- 1) Strengthen the Energy Efficiency Market: The Action Plan is focused on ‘actions to investigate policy options to provide the market with the structures, incentives, tools and skills it needs to mature’ and as such can support an investigation into low carbon tendering of land development projects. In particular the Action Plan includes a focus on positioning NSW as a leading centre of energy technology and services in the Asia-Pacific Region which may include delivering reduced fuel and materials consumption in land development projects in the region.

- 2) Energy Efficient Business: This section of the Action Plan includes a focus on accelerating the uptake of energy efficiency and suggests:
- a. The creation of 'Energy Saving Scheme Tools and business-case guides' which could be an outcome of the CRC project, namely a 'Business-Case Guide for Low Carbon Tendering in Land Development Projects'.
  - b. The provision of upfront incentives for '*businesses and their product and service providers that reflect equipment lifetimes and require best practice measurement and verification of energy savings*', which could include civil works contractors to invest in improving plant fuel efficiency.
  - c. Encouraging quality energy efficiency projects by '*publishing lists of eligible products*', which could include low carbon pavement and construction materials, along with energy efficient pumps, generators, temporary lighting, and earthworks plant.
  - d. Offering '*hands-on training for site managers to help them apply business-case guides and best practice maintenance plans to their own circumstances*', including civil works site managers responsible for plant, equipment, and vehicle fuel consumption, along with materials selection (such as low carbon recycled rubble and alternative low carbon cements).
- 3) Energy Efficient Government: This section of the Action Plan includes a commitment to '*Provide a dedicated team of energy efficiency specialists in the Office of Environment and Heritage to help key agencies to identify and implement energy efficiency projects*', which would provide the civil works sector with a valuable resource to inform the assessment and implementation energy saving activities and technologies (as outlined herein).

## Low Carbon Tendering Provisions in UrbanGrowth NSW Procurement

As part of the 'UrbanGrowth NSW Policy' ('Policy'), under the section on 'Environmental Management' it is stated that UrbanGrowth NSW is '*committed to responsible environmental management*' and complies with '*the requirements of AS/NZS ISO 14001, the Australian / New Zealand Standard for Environmental Management Systems and use an Environmental Management System (EMS)*'. The Policy also states that UrbanGrowth NSW aims to '*achieve environmental objectives on behalf of the community through our Water Sensitive Urban Design Policy, and the Energy Smart Communities Policy*', which are focused on residential dwellings.

### Relation to the NSW Code of Practice for Procurement

Under the section on 'Procurement' the Policy states that UrbanGrowth NSW complies with the NSW Code of Practice for Procurement ('Code') (NSW Government, 2005), suggesting that the following related to low carbon would be included in addition to prices tendered:

- Tenderer's environmental management practices and performance, and
- Value adding components such as economic, social and environmental development initiatives, if appropriate and relevant to the procurement.

Further as outlined above the Code also states that, '*the Government expects government agencies and all other parties to identify the potential environmental opportunities, risks and impacts of their activities and to adopt measures to:*

- *Realise those opportunities (Ene-1,2,3), manage those risks (Man-1, Cli-1,2), and enhance and protect the environment,*
- *Encourage recycling and re-use of materials and minimise waste (Mat-1,2), and*
- *Support effective use of scarce resources - including energy (Ene-1,2), water and materials*'.

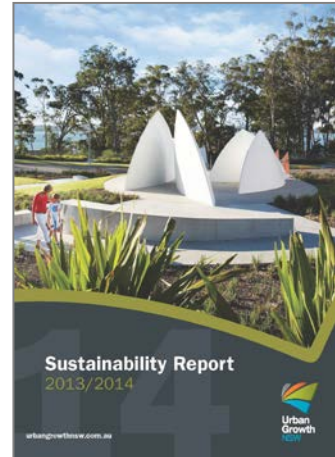
### UrbanGrowth NSW Sustainability and Design Guidelines for External Service Providers

The UrbanGrowth NSW Sustainability and Design Guidelines for External Service Providers state that UrbanGrowth NSW is '*committed to creating environmentally, socially and economically sustainable urban places within a commercial framework*' (UrbanGrowth NSW, 2013). The document calls for the incorporation of design and sustainability performance criteria (not stated) in master plans, DCPs, and other relevant planning instruments and design documents or guidelines. The document also calls for sustainability reporting as part of Masterplan adoption to include 'Energy Management and Greenhouse Gas Emissions Strategy' (without reference to supporting documentation).



## UrbanGrowth NSW Sustainability Report 2013/14

According to the CEO David Pitchford in the introduction to the UrbanGrowth NSW Sustainability Report 2013/14, *'world class urban renewal outcomes can only be achieved with sustainability front and centre... sustainability continues to be at the core of how we do business and how we deliver great places for the communities and generations to come'*. (UrbanGrowth NSW, 2015) Despite not directly reporting on greenhouse gas emissions the report states quantifies its energy demand (486GL direct and 580GL in-direct) and that UrbanGrowth NSW sources 100% GreenPower for its operations, has achieved 98.9% diversion from landfill of waste from civil works projects, and has implemented a travel Policy which *'prioritises low impact and efficient forms of travel such as public transport where possible. The policy also encourages using alternative methods of communicating over long distances such as teleconferencing and video conferencing'*.



Under the section on 'Our Supply Chain' the Sustainability Report states that *'We can positively influence and encourage sustainability outcomes through our work with builder and developer partners. This year we have continued to encourage better practices by requiring sustainability outcomes in many of our contracts, and working with our contractors on regular audits that monitor environmental and work health and safety (WHS) performance'*. The Sustainability Report then identifies the option to require a certain percentage of recycled products in construction materials; however it does not provide evidence of such action being taken.

*The Sustainability Report points out the partnership with the CRC for Low Carbon Living and states that the intention of the project is to 'develop standard best-practice sustainability clauses that we can include in procurement in the future'.*

## UrbanGrowth NSW Invitations To Tender (ITT)

UrbanGrowth NSW uses a number of requirements as part of invitations to tender (ITT) on the provision of a range of services related to land development, including engaging consulting services, civil works, minor works and design and construction works. Each of these current documents provide the potential for inclusion of low carbon related clauses as mentioned above with current coverage as follows:

### Engagement for Consulting Services ITT

The standard ITT for engagement of consulting services currently includes provision that consultants comply with environmental law, defined as *'any Act and Regulation and all other statutory requirements of the local, state, and federal governments pertaining to the environment, including but not limited to the Protection of the Environment Operations Act 1997 (NSW)'*.

## Civil Works (over \$250,000) ITT

This ITT states that UrbanGrowth NSW, *'uses sites and close working relationships with the private sector to deliver quality residential developments that demonstrate best industry practice in social, environmental and economic sustainability'*. Under the section on 'Evaluation of Tenders' the ITT states that the evaluation criteria will include *'Innovation proposed by the Tenderer in delivering the Works (including supply chain and sustainability innovation)'*. This is supported by Schedule 9 of the ITT on 'Innovation and Sustainability' and states that the tenderers should include *'details of products and processes that provide environmental benefits by using products that reduce environmental footprint. If the use of these products has the effect of increasing the Contract sum in Schedule 2 the amount of such increase should be provided here'*.

## Minor Works - Short Term Demolition ITT

As with the Civil Works (over \$250,000) ITT mentioned above this ITT states that UrbanGrowth NSW, *'uses sites and close working relationships with the private sector to deliver quality residential developments that demonstrate best industry practice in social, environmental and economic sustainability'*. Under the section on 'Protection of the Environment' the ITT states that *'in relation to air quality, ensure that all construction plant on the Site is designed and operated to minimise the emission of smoke, dust and other substances into the atmosphere'*.

## Minor Works ITT

The Minor Works ITT includes the statement that UrbanGrowth NSW, *'uses sites and close working relationships with the private sector to deliver quality residential developments that demonstrate best industry practice in social, environmental and economic sustainability'*. Under the section on 'Protection of the Environment' the ITT also states that *'in relation to air quality, ensure that all construction plant on the Site is designed and operated to minimise the emission of smoke, dust and other substances into the atmosphere'*. The Minor Works ITT includes an addition section compared to the three mentioned above in that it requires the submission of an Environmental Management Plan that complies with the NSW Government Environmental Management Systems Guidelines. The EMS Guidelines require that the following low carbon related aspects are included in the EMS:

- 'In identifying environmental risks (Man-3, Cli-1), opportunities (Ene-2,3; Cli-2) and impacts (Mat-1), a service provider would consider whether any of the organisation's activities (including decisions), products and services relevant to the contract will have any impact on the environment, including *air*, water or land, or involving waste, *emissions*, resource uses and any physical attributes.
- It is then suggested that questions such as the following are included in contracts; *What materials, energy and other resources does/will the organisation waste with its activities, products and services? What waste can be reduced? Is recycling an option?*
- Having initially identified the environmental risks, opportunities and impacts, the service provider must then determine how the organisation is to manage these - for example - *How will design minimise energy use? (Ene1,2) Along with 'What opportunities are there to reduce or avoid emissions?' (Ene-1,2,3)*

The Minor Works ITT also states that 'Licences and approvals may be needed from the Office of Environment and Heritage under the Protection of the Environment Operations Act for emissions from, and use of, plant consuming more than 300kg fuel/hour.

## Design and Construct ITT

The Design and Construct ITT also includes the statement that UrbanGrowth NSW, *'uses sites and close working relationships with the private sector to deliver quality residential developments that demonstrate best industry practice in social, environmental and economic sustainability'*. Under the

section on 'Protection of the Environment' the ITT also states that '*in relation to air quality, ensure that all construction plant on the Site is designed and operated to minimise the emission of smoke, dust and other substances into the atmosphere*'. The Design and Construct ITT also includes an additional section compared to the three mentioned above in that it requires the submission of an Environmental Management Plan that complies with the NSW Government Environmental Management Systems Guidelines. The EMS Guidelines require that the following low carbon related aspects are included in the EMS:

- 'In identifying environmental risks, opportunities and impacts, a service provider would consider whether any of the organisation's activities (including decisions), products and services relevant to the contract will have any impact on the environment, including *air*, water or land, or involving waste, *emissions*, resource uses and any physical attributes.
- It is then suggested that questions such as the following are included in contracts; *What materials, energy and other resources does/will the organisation waste with its activities, products and services? What waste can be reduced? Is recycling an option?*
- Having initially identified the environmental risks, opportunities and impacts, the service provider must then determine how the organisation is to manage these - for example - How will *design minimise energy use?* Along with '*What opportunities are there to reduce or avoid emissions?*'

Under 'Schedule D: Methodology' the Design and Construct ITT requires that tenderers 'provide details of any practices, materials or policies which they propose to adopt that address sustainable development practices in the following areas:

- Social sustainability: including strategies such as employment opportunities for under-represented groups within the construction sector.
- Economic sustainability: innovation in construction methods, materials or supply chain improvements that lower the cost of development.
- Environmental sustainability: innovation (Ini-1) in construction methods and materials to *reduce net emissions*, waste, surplus material generated, imported material; improvements in waste management; improvements in environmental management, use of recycled materials (Mat-1) (subject to Council approval); use of recycled water in construction and landscape establishment; *use of energy* (Ene-1,2) *and water efficient construction equipment and methods; use of low embodied and operational energy* (Ene-1) *and water materials* (Mat-1) (subject to specification & Council approval).'

The Schedule also points out that tenderers should outline any recycled or sustainable materials or practices proposed to be used in the delivery of the Works.

## Recommendations Based on Findings

The following is recommended for consideration following this initial investigation:

- a) The identification of direct and in-direct financial and non-financial cost and benefits of low carbon options, (p6)
- b) The creation of a '*Low Carbon Procurement Guidance Document*' as part of the NSW Procurement Policy Framework (p12),
- c) Creation of a new element in the NSW Resource Efficiency Policy based on minimum ISCA IS Tool rating standards for land development and infrastructure projects, (p14)
- d) The development of 'Business case guides' for low carbon tendering as part of the NSW Energy Efficiency Policy, (p14),
- e) Inform '*Energy Management and Greenhouse Gas Emissions Strategies*' as required by the UrbanGrowth NSW sustainability and design guidelines for external service providers as part of Masterplan adoption, (p16) and
- f) The specific inclusion of low carbon related items in invitations to tender. (p17-18)

## References

- DF (2014) *Commonwealth Procurement Rules: Achieving Value for Money*, Department of Finance, Commonwealth of Australia.
- DSEWPC (2013a) *Guide for Sustainable Procurement of Services*, Department of Sustainability, Environment, Water, Population and Communities, Canberra, Commonwealth of Australia.
- DSEWPC (2013b) *Sustainable Procurement Guide*, Department of Sustainability, Environment, Water, Population and Communities, Canberra, Commonwealth of Australia.
- Smith, M., Hargroves, K., and Desha, C. (2010) *Cents and Sustainability: Securing Our Common Future by Decoupling Economic Growth from Environmental Pressures*, The Natural Edge Project, Earthscan, London.
- NSW Government (2005) *Code of Practice for Procurement*, NSW Government, February 2005.
- NSW Government (2013) *NSW Energy Efficiency Action Plan*, Office of Environment and Heritage, NSW Government, August 2013.
- NSW Government (2014a) *Procurement Policy Framework for NSW Government Agencies*, NSW Government Procurement Board, October 2014, Version 3.
- NSW Government (2014b) *NSW Government Resource Efficiency Policy*, Office of Environment and Heritage, NSW Government, July 2014.
- UrbanGrowth NSW (2013) *Sustainability and Design Guidelines for External Service Providers*, UrbanGrowth NSW.
- UrbanGrowth NSW (2014) *Sustainability Report 2013/14*, UrbanGrowth NSW.