

CARBON OFFSETTING BY QUEENSLAND LOCAL GOVERNMENT

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Purpose

Climate change and carbon mitigation are key issues for local government (Pillora 2011; Storey et al 2012; Zeppel 2012). Reports include advice and case studies on greenhouse gas mitigation actions for local councils, including offsetting (QLGA 2009; Storey et al 2012). This paper evaluates carbon offsetting actions implemented by Queensland local councils. As part of the broader national response to global warming, local government in Queensland faces the challenge of implementing policy, organisational and technical initiatives to mitigate its carbon emissions (LGAQ 2009). Australia is a signatory to the Kyoto Protocol, with a national target of 5% emissions reduction on 2000 levels by 2020. Local councils are now required to report their carbon emissions over 25,000tCO₂-e a year from a single facility (i.e. landfill) under the *Clean Energy Act 2011*. To date, 12 Queensland councils have been listed as liable entities by the Clean Energy Regulator: 10 larger councils from landfills (i.e. Brisbane, Gold Coast, Logan, Townsville, Gladstone, Mackay, Moreton Bay, Rockhampton, Sunshine Coast and Toowoomba) and two as gas suppliers (i.e. Maranoa, Western Downs). Some 40 Australian councils are now liable entities for the carbon tax. The carbon price of AUD\$23tCO₂-e from 1 July 2012 also impacts on council operations through the increased cost of electricity and materials (LGAQ 2012). Councils are thus adopting eco-efficiency measures, and offsetting emissions, to reduce operating costs and carbon liability. In that context, this paper reviews carbon offsetting responses by Queensland local councils.

The Local Government Association of Queensland has published a *Climate Change Mitigation* guide (LGAQ 2009), including advice on carbon offsetting to reduce emissions. Carbon offsets are defined as "An investment in a project that reduces greenhouse gas emissions or sequesters carbon from the atmosphere" to compensate for emissions from other activities (LGAQ, 2009: 58). A regional carbon plan by five councils in North Queensland set a target of 50% reduction in carbon emissions on 2007/08 levels by 2020 from council operations, and a regional offset planting policy for revegetation (FNQROC 2011). The Council of Mayors SEQ previously supported regional carbon sinks with tree planting on council land in Ipswich, Redland and Moreton Bay in 2009, for 11 SEQ councils to offset emissions (LGAQ 2009). The climate change plans of four coastal councils in Queensland have set a goal of being carbon neutral by 2020 in their operations by purchasing offsets (i.e. Brisbane (2026), Cairns, Gold Coast, and Sunshine Coast) (BCC 2008). However, there is no state-wide climate change strategy for Queensland councils and no renewable energy, Green Power or other carbon mitigation/offsetting targets for local government have been set.

Carbon offsetting provides one avenue for local councils to mitigate or reduce their greenhouse gas emissions. Council vehicle fleets are often offset through Greenfleet and regional tree planting initiatives (Newman 2010). City councils purchase carbon credits to offset emissions from transport, or landfill (BCC 2008). Carbon offsets are sold in both voluntary (National Carbon Offset Standard) and compliance (Australian Carbon Credit Unit) markets. A local government carbon offset checklist recommended councils seek offset products that were accredited, independently verified, and provided other environmental benefits. Carbon credits from renewable energy, forestry, and methane reduction projects are sold by accredited offset companies such as Ecofund Queensland, Greenfleet, Greening Australia and other carbon brokers. Under the *Carbon Credits (Carbon Farming Initiative) Act 2011*, local councils can engage in offset projects through reducing landfill emissions, and reforestation. This paper evaluates carbon offsetting actions by Queensland councils.

Methodology

A climate change mitigation survey for Queensland councils was based on carbon mitigation actions recommended in the Cities for Climate Protection (CCP) program, and a desktop review of climate change plans and carbon actions listed on Queensland council websites (Zeppel 2011). The survey also adopted some questions from ICLEI's review of Australian (and New Zealand) councils in the CCP program (Hoff 2010), and previous climate change surveys of New South Wales local council. Sustainability officers at two large Queensland councils provided feedback on questions in the draft survey. The Queensland council survey included 36 main questions organised in five sections: A: Your Local Council; B: Climate Change; C: Climate Change Mitigation; D: Carbon Offsetting; and E: Preparing for the Carbon Price.

The survey included climate change responses, a checklist of 64 carbon mitigation actions, ranking of council motives for carbon actions, and open-ended questions on reasons for climate change actions by councils. This survey was circulated to all 73 Queensland councils, by email, post and follow-up telephone calls, during January to May 2012. A total of five City Councils (CC), 18 Regional Councils (RC), eight Shire Councils (SC) and one Aboriginal Shire Council (ASC) completed the survey (Zeppel & James-Overheu 2012). This paper reports on survey responses to section D on carbon offsetting actions by Queensland local councils. This includes council involvement in offsetting, types of offset providers/projects supported, and council motives and benefits from offsetting.

Findings

Out of a total of 433 carbon reduction actions adopted by 30 Queensland councils, less than 3% of council climate initiatives related to carbon offsetting actions (11). The main opportunities identified by Queensland councils to reduce their carbon emissions were through waste management and recycling (16), managing methane from landfills (15), planting trees on council land (14), green building design (12) and renewable energy (11). Planting trees on council land for carbon offsetting was preferred by four CC, eight RC and two SC. Just three councils in SEQ (1 CC, 2 RC) listed carbon offset markets or buying carbon credits as an opportunity to reduce emissions from council activities (e.g. landfill), with Sunshine Coast Council building a *'portfolio of offsets.'*

Seven Queensland councils were partly offsetting their carbon emissions, including five CC, the Sunshine Coast Council, and a coastal council. Townsville offset its *'community event Eco Fiesta.'* Three Regional Councils and one Shire Council in western Queensland planned to start offsetting in the next 12 months. However, 18 councils indicated carbon offsetting was not necessary (11), or not a priority (7) (Table 1). Most Shire Councils and three inland Regional Councils did not consider carbon offsetting was necessary, due to their small size lower populations, and being below the carbon threshold. Six other Regional Councils and the largest Shire Council focused on reducing their carbon emissions rather than offsetting. Not one Queensland council offsets emissions totally, although four large coastal councils plan to be carbon neutral by 2020 (i.e. Brisbane (2026), Cairns, Gold Coast, and Sunshine Coast). Brisbane City Council 'has offset its public transport and vehicle fleets' (Hepworth, 2012: 5), bought 100% Green Power since 2010, and \$3.5 million for landfill carbon permits.

Table 1: Carbon Offsetting by Queensland Councils

Carbon Offsetting	Ab.Shire Council	Shire Council	Regional Council	City Council	Total
No - not necessary	1	6	4	0	11
No - not a priority	0	1	6	0	7
Yes - partially offset	0	0	2	5	7
No - next 12 months	0	1	3	5	4

A few City and Regional councils commented on their council's position or policy on carbon offsetting. This included offsetting as part of a carbon neutral policy (Gold Coast); an unofficial

position to reduce emissions first, then to utilise mandated offsets (Logan); and some initial investment in offsets (Redland). The carbon neutral plan for the Sunshine Coast Regional Council requires offsetting of residual emissions by 2020. Cairns Regional Council also has offsetting requirements as *'Council has carbon neutrality in its carbon reduction goal for 2020.'* Other coastal councils offset events, or wanted to learn more about carbon credits and offset guidelines, but it was a low priority for one inland council. South Burnett Regional Council was *'willing to investigate options that can be incorporated and enhanced within existing Council operations and the possibility of working with landholders and industry to provide carbon offsets or credits.'* It has evaluated carbon offset options (i.e. environmental plantings, native forest protection, landfill methane gas) and analysed the biosequestration potential of native forest growth in the South Burnett region.

Mainly larger city and regional councils have implemented or planned carbon offsetting. Ten Queensland councils (5 City, 3 Regional, 2 Shire Councils) in the survey supported carbon offsetting - by planting trees on council land, and/or in partnership with organisations involved in regional tree planting. Just four respondents had paid for carbon credits through an Australian offset provider. These included the Gold Coast and Townsville City Councils, Sunshine Coast, and Gladstone councils. Only the Sunshine Coast Regional Council had paid for carbon credits through an international offset provider. Three other regional councils had not discussed or decided on the type of carbon offset project. Only Redland and Townsville City Councils had purchased renewable energy to offset council emissions. The councils offsetting their emissions are applying it to vehicle fuel, and electricity for the council office and facilities (3/4). Townsville City Council offset fuel in hire vehicles used by staff. Two larger coastal councils offset events: *'community event-Eco Fiesta'* (Townsville), and *'Event based (air transport, electricity, fuel (car/truck).'* Logan City Council offset its printed materials, while at Redland City Council offsetting was *'general ie total emissions offset.'* There was ad hoc offsetting of airline travel by staff at Sunshine Coast Council.

Overall, 10 Queensland councils (5 City, 3 Regional, and 2 Shire Councils) nominated tree planting as their preferred carbon offset project - by planting trees on council land, and/or in partnership with organisations involved in regional tree planting. Two northern councils supported soil carbon as an offset method (Townsville, and one Shire). City council preferences for carbon offset methods were driven by cost, best return for investment, supporting local farmers (soil carbon), and constraints on land or limited scope for some offset methods (tree planting). Regional councils also preferred offset methods that generated credits, aligned with council business, involved tree planting by community organisations, and provided tangible results in a short payback period. Mackay Regional Council reported they wanted to *'to learn more about the options available to Local Government for tree planting and soil carbon, there is just too much uncertainty at present.'* Sunshine Coast Regional Council preferred offset methods with *'potential to generate own credits, costs'* [i.e. landfill gas, tree planting, waste diversion]. One shire council sought *'longer term financial opportunities'* from carbon offset methods. Redland City Council noted they had *'limited scope for landfill gas and energy efficiency remains, (and) we have limited land for tree planting so that leaves...two'* [renewable energy, waste diversion].

Ten Queensland councils with offset programs supported Ecofund Queensland (4), Greening Australia (2), vehicle offsets with Greenfleet (2), Climate Friendly (1), and Conservation Volunteers Australia (1) - these focused on tree planting. Other offset providers preferred by councils were *'local accredited carbon offset companies'* (Townsville City Council), or *'through mixed service providers for our portfolio of offsets'* (Sunshine Coast Council). Larger councils preferred carbon offsetting by tree planting through recognised providers such as Ecofund Queensland and Conservation Volunteers Australia (CVA), based on their *'local capacity and knowledge'* to implement offsets, or *'previously used for other projects'* [CVA]. Gold Coast City Council noted *'This [Ecofund] was set up by the State Government for Queensland departments and LGAs.'* Another ten councils were either not sure or had not yet decided which carbon offset provider to support (2 City, 5 Regional, 2 Shire and 1 ASC). Redland City

Council noted that 'Some councils own large lots or have sizable rural areas, offering carbon sink opportunities'. Some respondents were aware they could earn carbon credits from offset projects, or income by leasing land to tree planting offset providers. Only a few larger councils listed carbon offsetting as a mitigation action in a climate change plan.

Survey responses indicated that the main motives for Queensland councils to implement carbon offsetting (Table 2) were: 1) Council concern about climate change impacts; 2) Supporting biodiversity/conservation; 3) Promoting council as climate friendly; and 4) Financially supporting tree planting or renewable energy. Secondary motives for councils to implement offsetting were earning carbon credits and meeting emission reduction targets. These reasons to implement offsetting included: 'to meet emission reduction targets set by Council' (Redland City), and 'to reach carbon neutrality, strategic decision' (Sunshine Coast Council). For larger coastal councils, (i.e. Cairns, Redland, Sunshine Coast) their carbon reduction targets and/or goal of carbon neutrality are key drivers for carbon offsetting. However, 18 Queensland councils did not consider carbon offsetting a priority or necessary. Results may differ for local councils in other Australian states with different carbon policies. Further research is required on the drivers and barriers for carbon offsetting by local councils.

Table 2: Motives to Implement Carbon Offsetting

Motive to Implement Carbon Offsetting	Number	Rank
<u>Major reasons to implement offsetting (> 5 responses)</u>		
Concern about environmental impacts of climate change	10	2.2
The 'right thing to do' for the environment (i.e. conservation)	8	2.3
Promote Council as a climate friendly business enterprise	8	2.8
Financially support tree planting or renewable energy projects	8	2.8
<u>Minor reasons to implement offsetting (< 5 responses)</u>		
Generate income or earn carbon credits from carbon farming initiative	4	1.2
Other: 'meet emission reduction targets' 'reach carbon neutrality'	2	1.5

Practical implications

This Queensland study found five city councils and two coastal regional councils were offsetting emissions from vehicle fuel and electricity, or community events. Councils with a climate change strategy or aiming to be carbon neutral (i.e. Cairns, Gold Coast, Redland, Sunshine Coast) were most likely to offset. The preferred offset action by councils was tree planting on council land or in partnership with conservation groups. Only a few councils bought carbon credits. Councils mainly preferred tree planting as a carbon offset method due to ancillary environmental and community benefits. Potential council benefits from offsetting related to earning or selling carbon credits, partnering with local businesses, or supporting private landholders. Many types of council remained unsure about carbon offset guidelines. Other barriers were the lack of a council policy on offsetting, limited land for tree planting, offsetting not aligned with council business, and the need to provide tangible environmental or financial benefits to councils. Key recommendations include councils developing a policy on offsetting for specific activities (e.g. vehicle fleet, electricity, events), and partnerships with conservation groups or landholders for tree planting projects with biodiversity benefits. Offsetting could also be required for council approval of events, or in council contracts for the supply of goods and services. Council planning schemes could direct offsets from regional tree planting to priority areas for revegetation (Newman 2010). These strategies will assist local government engagement in carbon offsetting projects with conservation benefits.

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References

Brisbane City Council (2008) 'CS6 Carbon offset purchase guideline.'
www.brisbane.qld.gov.au/

FNQROC (2011) *FNQROC Greenhouse Gas Inventory and Mitigation Action Plan: Managing Risk in a Carbon Economy*. June 2011. Cairns: FNQROC. www.fnqroc.qld.gov.au/

Hepworth, A. (2012) 'Green schemes face the axe as council caught by carbon tax' *The Weekend Australian*, 5-6 May, p. 5.

Hoff, J. (2010) *Local Climate Protection Programs in Australia and New Zealand: Results, Dilemmas and Relevance for Future Actions*. CIDEA Project Report No. 1. Department of Political Science, University of Copenhagen, Denmark, viewed 3 May 2013,

LGAQ (2009) Offsets: Forestry, carbon opportunities and purchasing offsets. In *Mitigating Climate Change: An Introductory Guide for Queensland Local Government* (pp. 37-39). LGAQ, Brisbane,

LGAQ (2012) *Affects of the Carbon Price on Qld Councils: Summary Analysis*. Brisbane: LGAQ.

Newman, P. (2010) 'Resilient cities' In S. Cork (Ed.) *Resilience and Transformation: Preparing Australia for an Uncertain Future* (pp. 81-95). Collingwood, Vic: CSIRO.

Pillora, S. (2011) *Australian Local Government and Climate Change*. Working Paper No. 1. Sydney: Australian Centre of Excellence for Local Government.
www.ancelg.org.au/upload/ACELG_ClimateChangeReport_April11_v02_full.pdf

Storey, H., Brennan, M., Pillora, S. & Thomas, C. (2012) *Local Action for a Low Carbon Future*. Sydney: Australian Centre of Excellence for Local Government.

Zeppel, H. (2011) *Queensland Local Government and Climate Change: Action Plans and Resources*. ACSBD, USQ, Springfield. www.usq.edu.au/acsbd/projects/councils

Zeppel, H. (2012) 'Climate change mitigation survey of Queensland councils: Carbon footprint management,' ACELG Local Government Research Showcase and Forum, QUT, Brisbane, 11 October 2012. <http://lgresearch.net.au/brisbane-papers-and-presenters>

Zeppel, H. & James-Overheu, C. (2012) *Climate Change Mitigation Survey of Queensland Local Councils: Final Report*. Working Paper No. 5, Australian Centre for Sustainable Business and Development, University of Southern Queensland, Springfield.