

National Carbon Offset Standard

Carbon Neutral Program

Public Disclosure Summary



An Australian Government Initiative



2014-2015

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Declaration

To the best of my knowledge and having met the requirements of the National Carbon Offset Standard Carbon Neutral Program (NCOS CNP), the information provided in this report is true and correct.



23/06/2016

Kim Woodbury
Chief Operating Officer

Type of carbon neutral certification: Organisation

Verification

Date of most recent external verification/audit: March 2016

Auditor: Greg Loftus, Clear Environment Pty Ltd

Auditor assurance statement link: <http://www.cityofsydney.nsw.gov.au/vision/towards-2030/sustainability/carbon-reduction/carbon-neutral/carbon-neutral-documents>

1. Carbon neutral information

Introduction

The City of Sydney has been carbon neutral for its own operations since 2008 by measuring and reducing energy and greenhouse gas emissions, installing and using renewable energy, and purchasing carbon credits for emissions which cannot be avoided.

In 2007 the City of Sydney Council resolved to become carbon neutral for its own properties and operations. In November 2011, the City's carbon neutrality was officially recognised under the National Carbon Offset Standard based on its 2009/10 emissions. It was also certified carbon neutral under the National Carbon Offset Standard (NCOS) and has retained annual certification.

Our target is to reduce our 2006 emissions by 70% by 2030. We are serious about achieving ambitious targets in order to mitigate climate change impacts. Emissions avoidance and reduction is our highest priority, and the City has many programs underway.

This inventory has been prepared based on the National Carbon Offset Standard (NCOS). For emissions that cannot be avoided in the immediate term, the City purchases offsets recognised also by the National Carbon Offset Standard (NCOS). It pertains to greenhouse gas emissions released due to activities associated with City of Sydney Council operations in the period of 1-July 2014 to 30-June 2015. The gross emissions during this period were 40,204 tCO₂-e.

The City of Sydney Council

The City of Sydney is the local government authority responsible for the city centre and more than 30 suburbs. The City of Sydney's role is to provide services for our residents as well as for the daily influx of workers and visitors. On any given day, Sydney's population swells to more than a million people.

The core functions of the City are defined by the *Local Government Act 1993*, the *City of Sydney Act 1988* and other legislation. A non-exhaustive overview of City of Sydney services and facilities include:

- Aquatic centres
- Community centres, services and facilities
- Domestic waste service
- Economic development
- Events and sponsorships
- Health and building inspections
- Infrastructure (roads, footways, drainage, street lighting)
- Parking services
- Parks and open space
- Strategic planning and development consent
- Sustainability

The City owns approximately 250 properties, many of which are tenanted. The City also owns 8,599 street lights and there are a further 13,000 street lights owned by the electricity network provider but deemed to be within the City's financial control (pays for energy and maintenance).

The City's operations are mostly run out of a main administration building, multiple depots, parks, libraries, venues and community centres.

Sustainable Sydney 2030, developed in 2008 with the most consultation ever undertaken by the City of Sydney, set ambitious targets including 70% reduction of 2006 greenhouse gas emissions, no-reliance on coal fired electricity, and for 30% of electricity to come from renewable sources by 2030.

Sustainable Sydney 2030 proposes a Green, Global and Connected city and has significantly increased the expectations and service delivery by the City of Sydney.

This report is about the processes and results of the City of Sydney being a carbon neutral organisation, and it does not refer to the Local Government Area (LGA).

Greenhouse gases

The City of Sydney greenhouse gas emissions inventory includes the gases covered by the UNFCCC/Kyoto Protocol including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorinated carbons (PFCs) and sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃). However, there are no known sources of PFCs, SF₆ or NF₃ relevant to the City's operations.

The City includes greenhouse gas emissions from the ozone depleting R22 refrigerant within its inventory. This is an option accorded within the Greenhouse Gas Protocol *Required Greenhouse Gases in Inventories - Accounting and Reporting Standard Amendment* Feb 2013. Until R22 is phased out it will continue to be a source of greenhouse gas emissions and is therefore included.

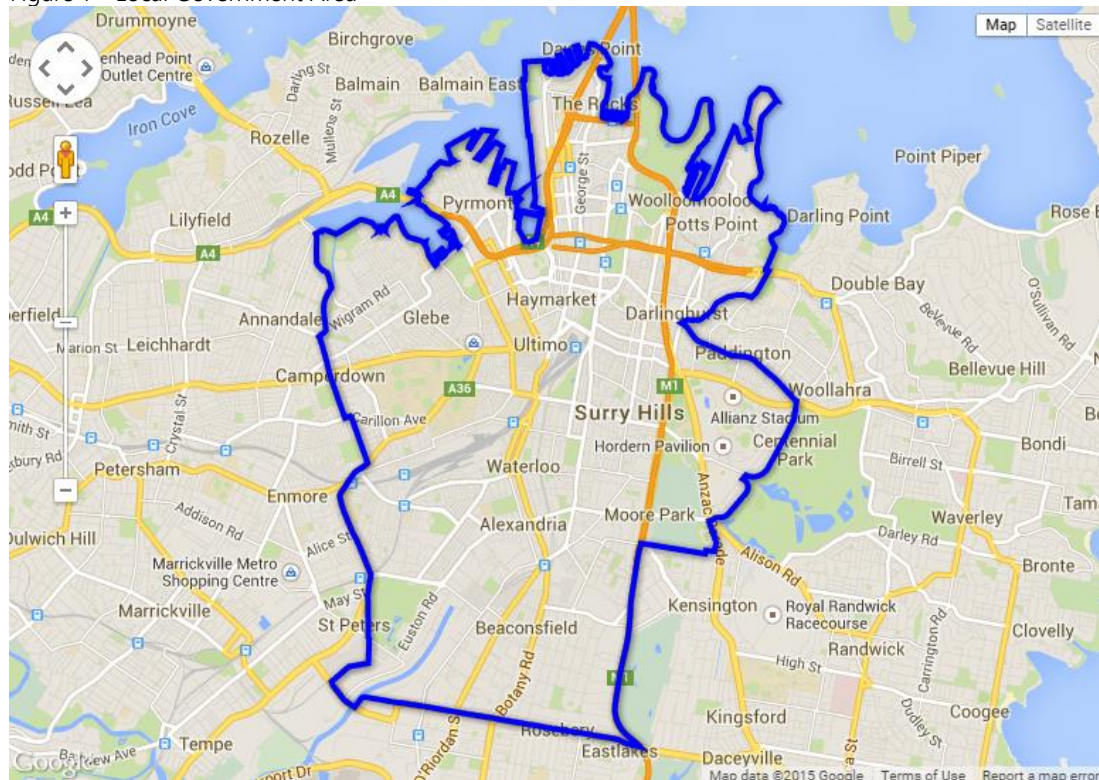
Emission sources within certification boundary

Our emissions boundary is based on the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard and includes all Scope-1 and Scope-2 emissions, as well as a range of Scope-3.

Geographic boundary

The City of Sydney local government area (LGA) covers 26.15 square kilometres of inner Sydney from Sydney Harbour at Rushcutters Bay to Glebe and Annandale in the west, Sydney Park and Rosebery in the south, and Centennial Park and Paddington in the east. This inventory pertains to providing local government services to constituents within the geographical area shown in Figure 1.

Figure 1 – Local Government Area



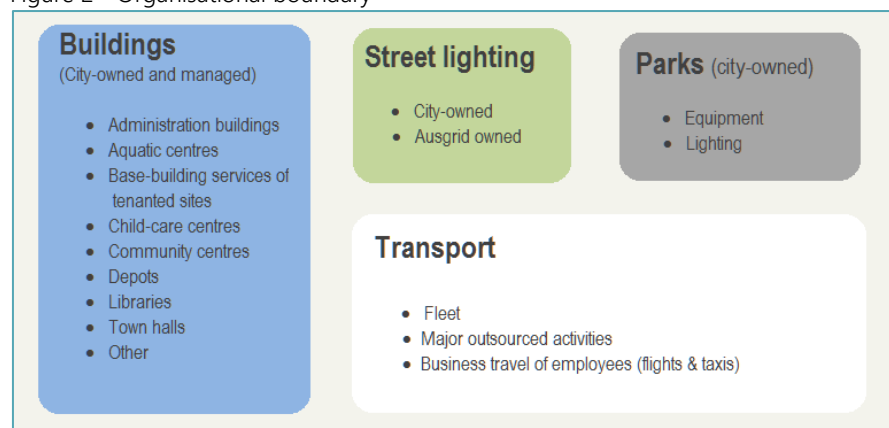
Organisational boundary

The City of Sydney organisational boundary includes emissions sources where the City is considered to have operational control (as defined by the *National Greenhouse and Energy Reporting Act 2008*) for emissions resulting in the delivery of services where the City has capacity to implement environmental policies.

Operational control is the predominant control approach as described above. In addition the City has chosen to include other emissions sources which are within its *financial* control (fuel emissions from major contractors, for example).

For the City of Sydney, this means services required under the *Local Government Act 1993* and Sustainable Sydney 2030 and includes core business, statutory responsibilities, service provision, Council facilities, services and other assets as depicted in Figure 2.

Figure 2 - Organisational boundary

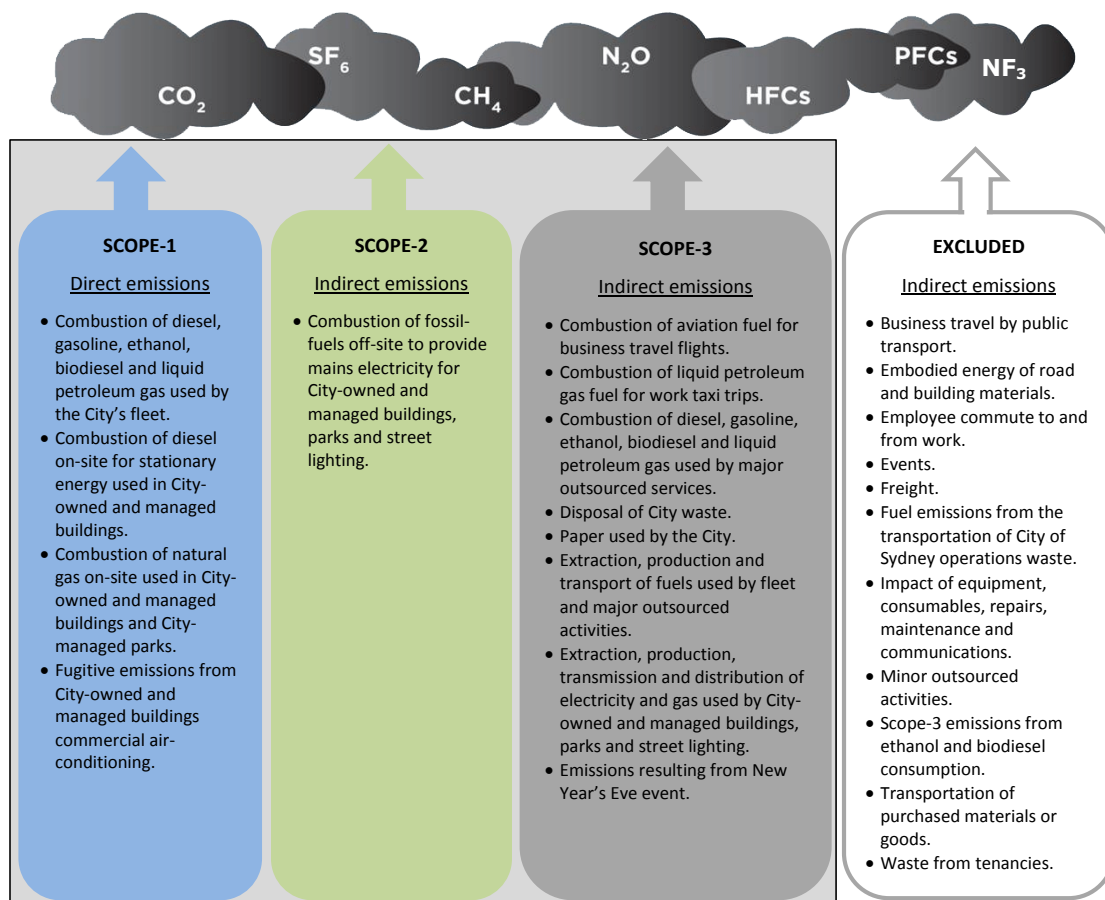


Operational boundary

In accordance with the *National Greenhouse and Energy Reporting Act 2008*, Section 11 the City includes all Scope-1 and Scope-2 emissions based on aggregated data for facilities and core activities. In addition, there are a range of Scope-3 emissions sources. Figure 3 shows all emissions that have been included or excluded.

The definitions for Scope-1, Scope-2 and Scope-3 emissions have been interpreted from the National Carbon Offset Standard (NCOS) Version 3, November 2015 and the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard.

Figure 3: Diagram of the certification boundary



The City of Sydney includes many Scope 3 emissions sources within its inventory. Some Scope 3 emissions sources have been excluded for reasons in accordance with Section 4.2.3 of the National Carbon Offset Standard, including:

- Emissions likely to be negligible (relative to other Scope 3 emissions);
- If determining emissions is not currently possible given available technology;
- If determining emissions will be very costly relative to their likely significance;
- If there is insufficient data.

Emissions from Contractors Fuel usage have been included within the City's inventory as Scope-3 emissions since 2006. Contractor emissions are outside of the City's operational control however are included on the basis that they are providing core local government services that would

otherwise need to be provided by the City. These emissions have been calculated using Scope-1 + Scope-3 emissions factors based on the amount and type of fuel used by contractors however are reported as Scope-3 emissions within the City's inventory as they have been produced by third-parties and there are data quality uncertainties. While the NGER Legislation¹ requires contractors to provide activity data to relevant reporting entities, the Legislation does not discuss the contractor's responsibility for data accuracy. City of Sydney has always formally and clearly requested the required data from its contractors in a suitable manner. However, it is difficult for City of Sydney to ensure the quality of this data. City of Sydney will improve its approach to obtaining contractors data in the future, as it is working to create new ways to conduct some degree of data checking to assess its accuracy and completeness.

It is not considered that the Scope-3 exclusions compromise the overall integrity of the reported inventory. The City of Sydney has publicly tested its emissions reduction targets and carbon neutral assertions within the media, local and international events and programs such as the *C40 Cities Climate Leadership Group* and the *CDP Cities Carbon Disclosure Project*. Review of other local and international Governments at varying stages of carbon neutrality has not identified any material emissions sources which are not reported by the City of Sydney.

¹ Source: NGER Legislation and Contractors/Subcontractors (<http://environmentalaccounting.org.au/wp-content/uploads/2013/10/NGER-Contractors-Reporting-Paper.pdf>)

2. Emissions reduction measures

Part A. Emissions over time

Figures 4 and 5 and Tables 1 and 2 show year-on-year changes to the City's greenhouse gas emissions by scope and by major business unit since 2005/06 - the year against which the City's greenhouse gas reduction target was established through Sustainable Sydney 2030.

In previous NCOS reports a 2010/11 base year was used. From 2013/14 report, the 2005/06 base year has been used for consistency with Sustainable Sydney 2030, City of Sydney Master Plans, sustainability programs, the bi-annual Green Report, Corporate Plan reporting and other communications channels.

The 2005/06 base year emissions inventory received independent assurance by the company Banarra to the same level as required for certification under the National Carbon Offset Standard, to a reasonable level for Scope 1 and 2 emissions, and to a limited level for Scope 3 emissions.

There have been no material changes to the emissions boundary since 2005/06.

Total greenhouse gas emissions have reduced by 24.5 per cent since 2006. The percentage reductions are greater for some specific sectors, for example greenhouse gas emissions from our buildings are more than 30 per cent below 2006 levels.

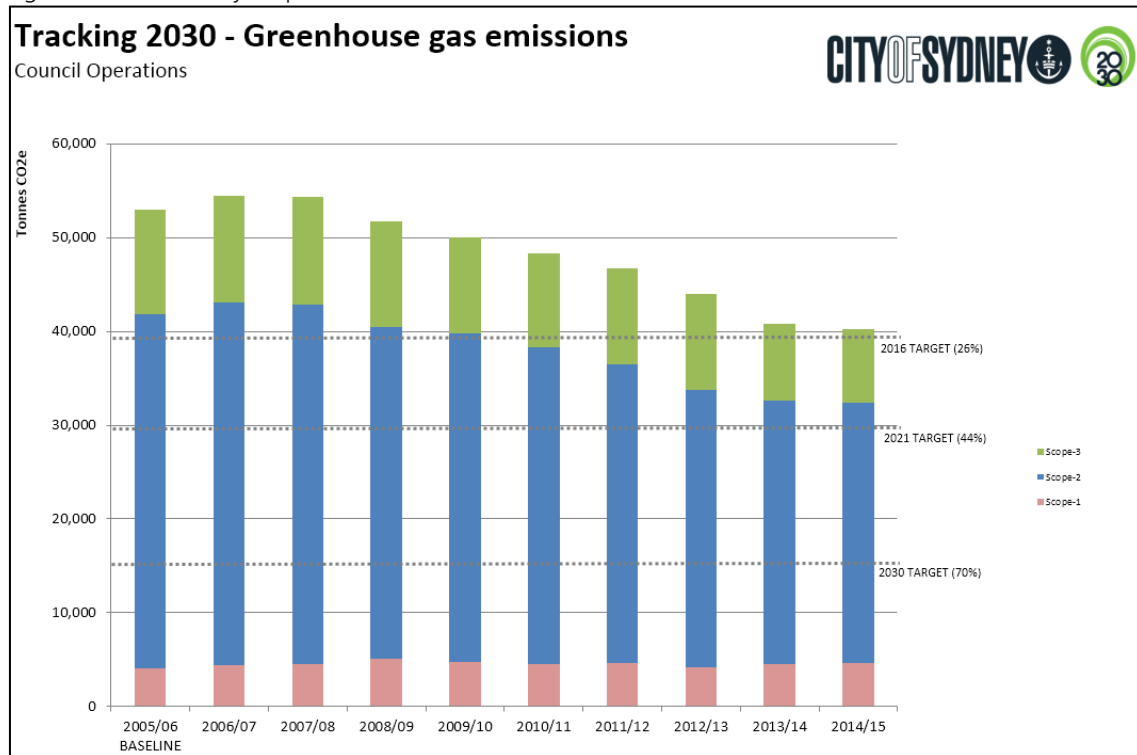
Progress toward the City's interim 2016 target and the target for 2030 to reduce greenhouse gas emissions by 70 per cent are also shown.

Table 1 - Emissions by scope (tCO₂-e)

	n/a 2005/06 BASELINE	n/a 2006/07	n/a 2007/08	n/a 2008/09	Year-1* 2009/10	Year-2* 2010/11	Year-3* 2011/12	Year-4* 2012/13	Year-5* 2013/14	Year-6* 2014/15
Scope-1	4,053	4,338	4,465	5,022	4,744	4,449	4,649	4,174	4,539	4,626
Scope-2	37,760	38,709	38,439	35,506	35,073	33,821	31,835	29,633	28,109	27,812
Scope-3	11,159	11,429	11,490	11,208	10,213	10,066	10,217	10,137	8,121	7,766
TOTAL	52,972	54,475	54,395	51,736	50,030	48,336	46,701	43,945	40,769	40,204

**Carbon Neutral Certification Year*

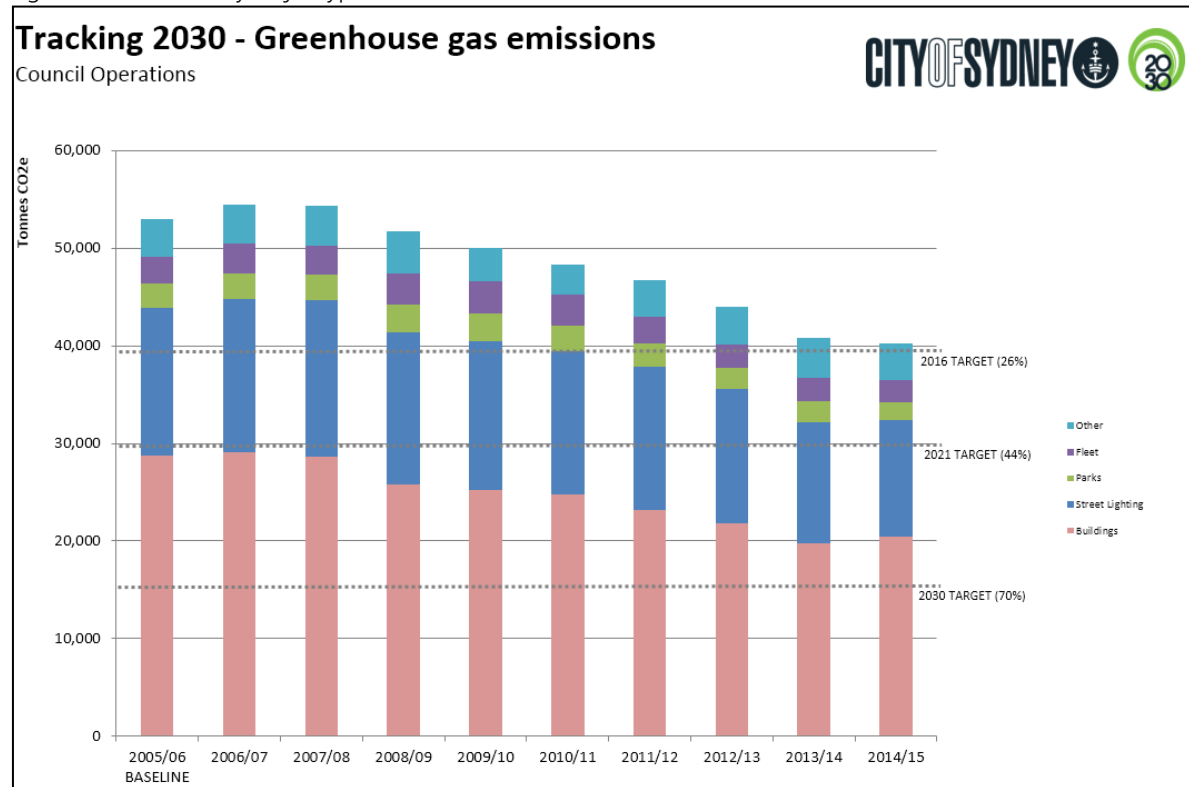
Figure 4 - Emissions by scope

Table 2 - Emissions by major type (tCO₂-e)

	n/a	n/a	n/a	n/a	Year-1*	Year-2*	Year-3*	Year-4*	Year-5*	Year-6*
	2005/06 BASELINE	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Buildings	28,775	29,075	28,626	25,750	25,203	24,718	23,150	21,847	19,711	20,468
Street Lighting	15,131	15,699	16,057	15,636	15,269	14,783	14,653	13,730	12,404	11,942
Parks	2,502	2,636	2,610	2,850	2,878	2,578	2,468	2,197	2,206	1,824
Fleet	2,669	3,022	2,954	3,212	3,225	3,175	2,710	2,373	2,417	2,293
Other	3,896	4,042	4,148	4,288	3,455	3,082	3,720	3,798	4,031	3,677
TOTAL	52,972	54,475	54,395	51,736	50,030	48,336	46,701	43,945	40,769	40,204

*Carbon Neutral Certification Year

Figure 5 - Emissions by major type



Part B. Emissions reduction strategy

The emissions reduction strategy focusses on the City's planned or intended actions to achieve its target to reduce 2006 emissions by 70 per cent by 2030. This is an absolute target, based on the City playing its fair share to constrain global average temperature increases to below 2 degrees Celsius.

In the first instance, the City will continue to deploy energy efficiency and solar PV as part of its current tenders and commitments. In addition the City will continue to identify feasible opportunities to reduce emissions through technologies, management practices and the design and operation of its properties and other assets.

Figure 6 shows that the majority of emissions are from electricity which reflects the highly emissions intensive NSW grid due mostly to coal-fired generation. The majority of emissions reductions achieved to date, as well as future savings, will come by reducing grid electricity through energy efficiency and renewable energy.

Figure 6 – Electricity and non-electricity emissions

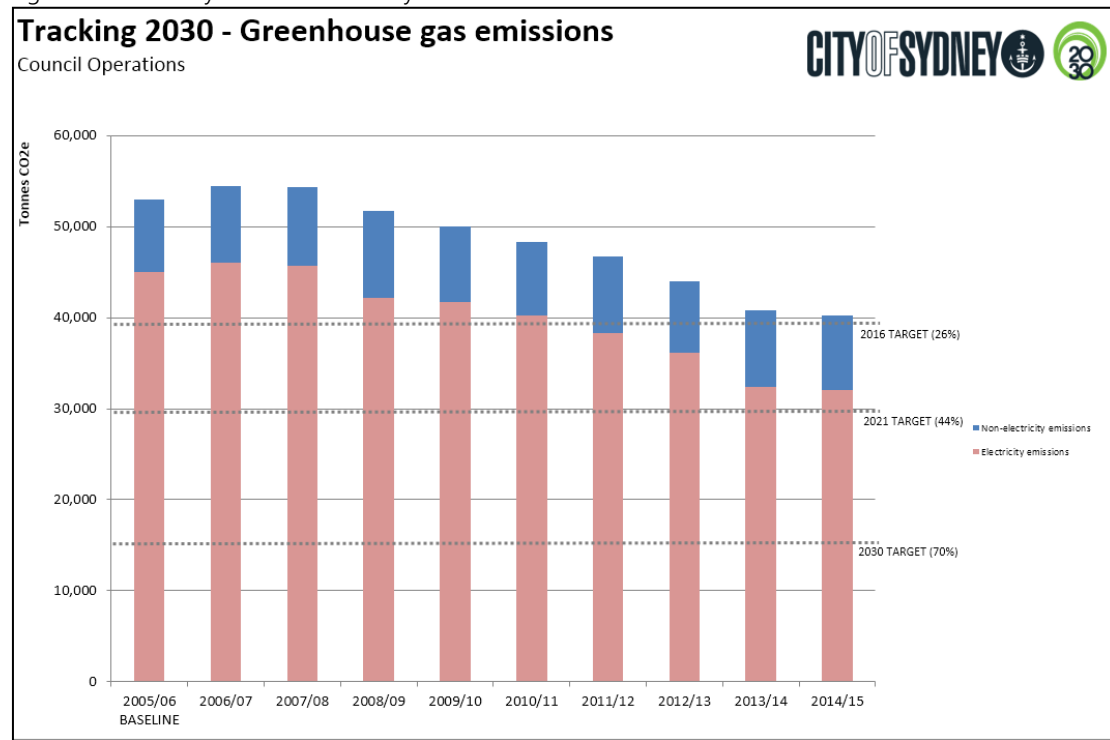
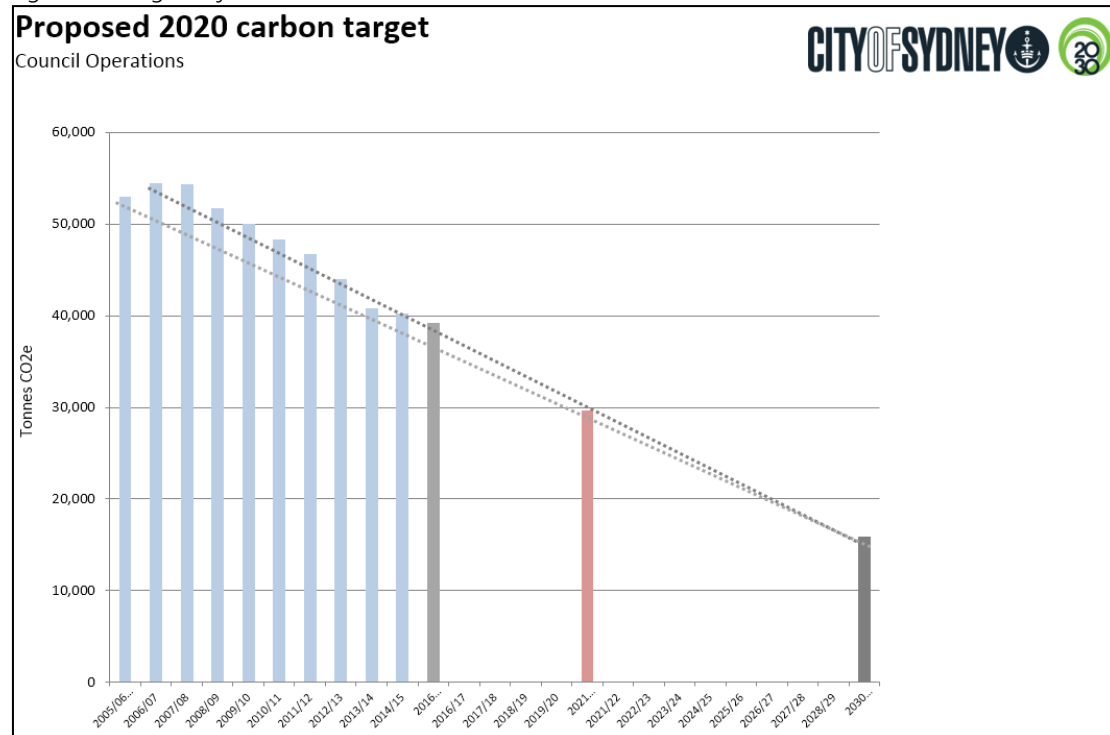


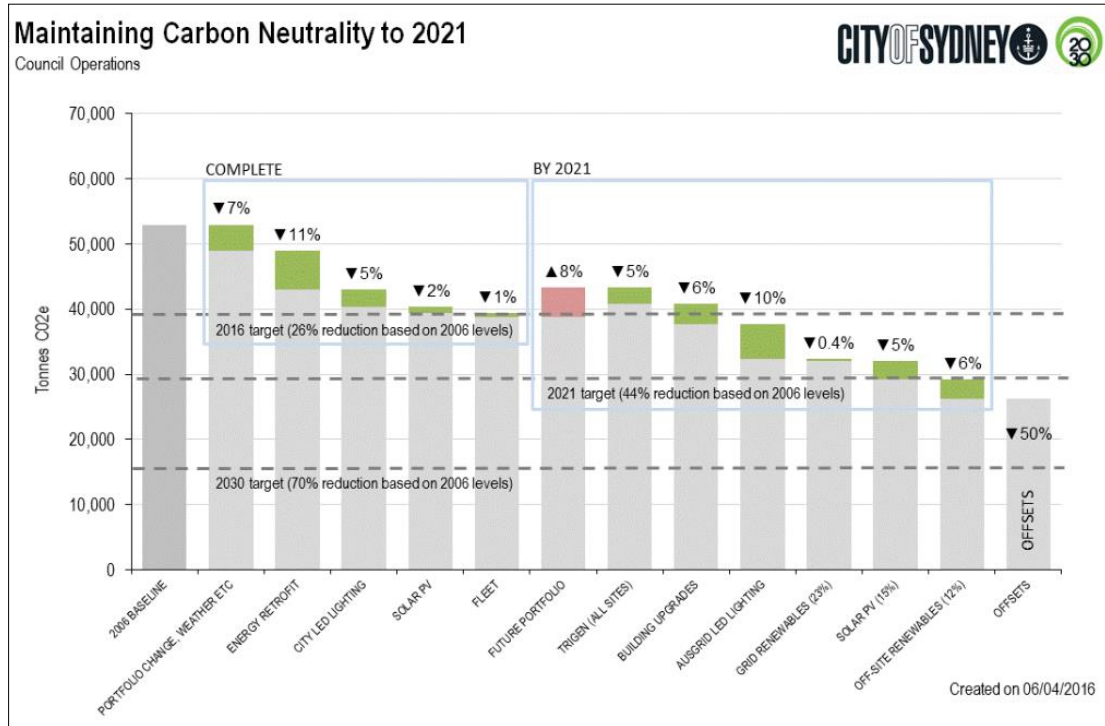
Figure 7 shows the emissions reduction tasks for achieving the City's interim 2020 and longer term 2030 targets.

Figure 7 – Target trajectories 2020 & 2030



The emissions savings shown in Figure 8 indicate a range of opportunities to achieve the 2030 target to reduce 2006 emissions by 70 per cent. These charts are continually revised as new information and opportunities become available and are included within the twice-yearly City of Sydney Green Report.

Figure 8 – Tracking 2030 emissions



Part C. Emissions reduction actions

Emissions reduction measures implemented in the current reporting period 2014/15 are shown in table 3.

Table 3. Emissions reduction measures

Year completed	Emission source	Reduction measure and calculation method	Scope	Status	Overall* Project Reduction (t CO ₂ -e)
In Progress	LED lighting	Tender to replace the most energy inefficient lighting luminaires to reduce energy and emission consumption	2 & 3	Installation in Progress Negotiations completed and Contract was executed with GE- UGL. Three year roll out program covering 6,448 luminaires.	2,816

Year completed	Emission source	Reduction measure and calculation method	Scope	Status	Overall* Project Reduction (t CO ₂ -e)
2015	Stage 1 Building Energy and Water Efficiency Retrofit (Origin/Ecosave)	A collection of projects tendered as one project to achieve a 23 per cent greenhouse gas emissions reduction from the City's property portfolio	2 & 3	Installation complete. 6-month fine tuning period complete. Measurement and verification in progress. All works are now complete. Measurement and verification of Greenhouse Gas emissions savings to be completed 30 January. To be reported from Q1 2014/15.	6,054
In Progress	Renewable Energy (solar photovoltaic)	Installation of renewable energy projects to meet target for 30 per cent renewable energy by 2030	2 & 3	Installation in Progress Solar photovoltaics tender awarded for design, installation, commissioning, and monitoring.	1,953
2014 In Progress	Fleet	A four year program to reduce fleet emissions by 20 per cent before end 2014. Maintain fleet emissions at 2014 levels until 2016	1	Completed and exceeded End 2013/14 In Progress End 2016	642
In Progress	Utility Consumption Management	Educate City staff to interpret the STEvE reports and take corrective action to reduce energy use through the City's Green Champions program.	2 & 3	In Progress Integration into City processes on-going Influence, hasn't been quantified.	Not quantified
In Progress	Environmental Management	Implement environmental management processes to ensure all City staff are aware of their responsibilities in regards to environmental management. Continuous improvement of environmental management	2 & 3	Ongoing Influence, hasn't been quantified.	Not quantified
In Progress	Environmental Sustainability Platform (ESP)	Develop the ESP to gather and utilise emissions data, providing strategic information to reduce emissions to Sustainable Sydney 2030	All	In Progress Contract has been awarded, project being developed.	Not quantified

Year completed	Emission source	Reduction measure and calculation method	Scope	Status	Overall* Project Reduction (t CO ₂ -e)
		targets and the means to report in accordance with international initiatives. Includes information about emissions. An open approach conforming to the Digital Strategy. Reporting consistent with other cities worldwide.		Influence, hasn't been quantified.	
In Progress	Other Influences	Calculated by subtracting completed projects and most recent actual annual emissions from the 2006 baseline to show changes that have occurred due to changes in the property portfolio and other influences	2 & 3	In Progress	4,153

* Overall project reduction (tCO₂-e) shown.

3. Emissions summary

Emission sources and totals for the period 2014/15 are listed in table 4.

Table 4. Emissions inventory

Scope	Emission source	t CO ₂ -e
1	Transport diesel & biodiesel (post 2004 vehicles fleet) – 999.106 kL	1,928
1	Natural Gas in Buildings & Parks - 34,579,265 MJ	1,775
1	Refrigerant – assumed leakage 490 kg	715
1	Transport ULP & ethanol (post 2004 vehicles) - 95.747 kL	205
1	Stationary diesel - 1.218 kL	3
1	Transport LPG fleet - 0.382 kL	1
2	Purchased electricity for buildings, parks & streetlighting - 32,339,772 kWh	27,812
1	Contractor diesel (assumed scope 1) - 386.915 kL	1,042
1	Contractor ULP (assumed scope 1) - 52.226 kL	120
1	Contractor LPG (assumed scope 1) - 6.607 kL	10
1	Contractor biodiesel (assumed scope 1) - 0.023 kL	0
1	Contractor ULP (ethanol) (assumed scope 1) - 3.453 kL	0
3	Purchased electricity for buildings, parks & streetlighting - 32,339,772 kWh	4,204
3	Municipal solid waste - 1,063 t waste	1,169
3	New Year's eve event	467
3	Natural gas for buildings & parks - 34,579,265 MJ	443
3	Transport diesel (post 2004 vehicles) - 703.075 kL	144
3	Contractor diesel (scope 3) - 386.915 kL	79
3	Travel taxis - 71,804 km	22
3	Paper (A4, A3 & plotter)– 6,829 reams	22
3	Air travel (no RFI inc.) – 107 flights	17
3	Transport ULP fleet (post 2004 vehicles) - 89.434 kL	16
3	Contractor ULP (scope 3) - 52.226 kL	9
3	Contractor LPG (scope 3) - 6.607 kL	1
3	Stationary diesel - 1.218 kL	0
3	Transport LPG fleet – 0.382 kL	0
Total Net Emissions		40,204

4. Carbon offsets

Part A. Offsets summary

The City's 2014/15 greenhouse gas emissions were 40,204 tCO₂-e during which time the City purchased 17 offsets for flight emissions. Subsequently, offset retirements that relate to the current reporting period 2014/15 are 40,187 tCO₂-e.

The City ensures information about its carbon neutral program - including offset certificates - is transparent and available for public scrutiny on its website

www.cityofsydney.nsw.gov.au/Carbon.

Offset retirements that relate to the current reporting period 2014/15 are shown in table 5.

Table 5 - Offsets Summary

Offset type	Registry	Date of retirement	Quantity (tCO ₂ -e)	Serial Number
VCU	APX VCS Registry	20/05/2016	11,397	1014-45892428-45903824-VCU-001-CDC-IN-1-173-01102009-31032010-0
VCU	APX VCS Registry	20/05/2016	25,000	1954-79335006-79360005-VCU-001-CDC-IN-1-173-01042011-30092011-0
VCU	Markit	20/05/2016	3,790	1014-45998730-46002519-VCU-001-CDC-IN-1-173-01102009-31032010-0
Total			40,187	

Part B. Offsets purchasing and retirement strategy

Offsets are purchased and retired in arrears at the end of the reporting period.