Australian Government

Carbon Neutral Program

Public Disclosure Summary

Moreland City Council

An Australian Government Initiative

THIS DOCUMENT WILL BE MADE PUBLICLY AVAILABLE

NAME OF CERTIFIED ENTITY: Moreland City Council

REPORTING PERIOD: 1/7/2018 to 30/06/2019

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the National Carbon Offset Standard Carbon Neutral Program.

Signature 	Date 20/05/20
Name of Signatory Victoria Hart	
Position of Signatory Sustainable Built Environment Unit Manager (Acting)	

Carbon neutral certification category	Organisation
Date of most recent external verification/audit	12 September 2016
Auditor	SGS Australia Pty Ltd
Auditor assurance statement link	

Australian Government
Department of the Environment and Energy

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1. Carbon neutral information

1A. Introduction

Moreland City Council is certified carbon neutral for its organisational corporate emissions. Moreland City Council works hard to continually reduce our emissions through our Corporate Carbon Reduction Plan. To be certified carbon neutral, Moreland City Council must also measure and offset all remaining emissions.

City of Moreland

The City of Moreland covers the inner and mid-northern suburbs of Melbourne. It lies between 4 and 14km north of central Melbourne and covers a diverse range of communities. Centrally located on the northern doorstep of Melbourne's CBD, Moreland is undergoing a sustained period of urban regeneration. Moreland has housing choices ranging from restored heritage cottages, modern family homes and stylish inner-urban apartments to recycled industrial buildings.

Moreland's current population of 181,725 (as at June 2018) is forecast to grow to 228,425 by 2036. Significant growth has occurred in the last five years (the biggest increase for two decades). The City of Moreland covers the suburbs of Brunswick, Brunswick East, Brunswick West, Pascoe Vale, Pascoe Vale South, Coburg, Coburg North, Hadfield, Fawkner, Glenroy, Oak Park and Gowanbrae. Small sections of the suburbs of Fitzroy North and Tullamarine are also located in the City.

Key features of Moreland's regional context include:

- Proximity to Melbourne's Central Business District (CBD); and
- Good transport links to the CBD, ports, airport and industrial areas.

Moreland City Council

Moreland City Council (Council) provides services to the community within the City of Moreland. Council provides these services through our buildings and facilities (see below), fleet, in-house waste collection services as well as the use of contractors for waste collection services and the provision of public (street) lighting. These services are the primary business activities that result in carbon emissions.

Moreland City Council currently has over 300 buildings within its portfolio including civic centres, aquatic and sports leisure centres, community centres, pavilions, maternal/child care centres, kindergartens, libraries and depots, as well as other facilities including public lighting and parks and reserves. The majority of these buildings/facilities are used by Council; however, some are leased by a third party. Council also leases some third-party buildings/facilities to provide various community services.

This inventory has been prepared based on National Carbon Offset Standard (NCOS). It is aligned with the National Greenhouse and Energy Reporting Act 2007 (NGER Act), as well as the Greenhouse Gas Protocol's Corporate Accounting and Reporting Standard.

In this submission, the following greenhouse gases are considered:

- carbon dioxide
- methane
- nitrous dioxide
- synthetic gases (R22, R507, R134a, R407C, R410a, HFC-134a, SF6)

Boundary overview

In 2012 Council established its emissions boundary for the entire organisation, based on the GHG Protocol's *Corporate Accounting and Reporting Standard*, Carbon Neutral Guidelines, and *AS ISO 14064.1-2006*. Council included emission sources in its organisational boundary, based on operational control approach for measuring and reporting on Council's emissions.

Operational control was defined in accordance with the National Greenhouse and Energy Reporting Act as whether Council:

- was paying the utility costs for the facility
- had the ability to set operating policies, health and safety policies and environmental policies

Operational control was assessed at all Council facilities and buildings which included:

- Council owned and operated facilities
- Council facilities leased out to third party
- Facilities Council leased from a third party

An analysis of Council's building stock confirmed that all sites that are owned and operated by Council or are leased from third parties and operated by Council are under Council's control. Sites where Council facilities were leased to third parties were considered to be under Council's operational control only where Council was paying the utility costs. The operational boundary is depicted in Figures 1 and 2.

1B. Emission sources within certification boundary

Quantified sources

The direct and indirect emissions included in the boundary of this inventory (as depicted in Figure 2 below) are as follows:

Scope 1 emissions

- Transport Fuels
- Natural Gas
- Stationary Fuels
- Fugitive Emissions (Refrigerants)
- Lubricants

Scope 2 emissions

- Electricity: grid electricity from facilities where Council has financial and operational control (buildings, public/minor and unmetered lighting)

Scope 3 emissions

- Street Lighting
- Contractor Fuels
- Water
- Electricity: transmission & distribution losses associated with electricity purchased by Council (excluding street lighting)
- Electricity: grid electricity from facilities where Council does not have operational control but has financial control (including unmetered lighting)
- Transport Fuels: emissions associated with the extraction, production, and transportation of fuels
- Natural gas: emissions associated with the extraction, production and distribution of natural gas
- Natural gas: facilities where Council does not have operational control but pays bill

- Waste disposal
- Stationary fuels: emissions associated with the extraction, production, and transportation of fuels
- Employee business travel (public transport, flights, hire cars, taxis)
- Paper consumption
- Lubricants: emissions associated with the extraction, production, and transportation of lubricants
- Accommodation
- Asphalt

Non-quantified emissions

The following emission sources have been non-quantified in line with the provisions of the Climate Active Carbon Neutral Standard for Organisations. The Climate Active Carbon Neutral Standard lists activities recommended or to be considered for inclusion in the inventory. Where they have been non-quantified is generally due to the following factors:

- Council does not have any emissions associated with the activity
- The emissions source is immaterial (i.e. <1% for individual items and no more than 5% collectively)
- Quantification is not cost effective relative to the size of the emission. An uplift factor will be applied to the subsequent reporting period.
- There is a lack of reliable data or methodology to quantify the emissions and to quantify the data and is difficult to gather relative to the expected emissions. An uplift factor will be applied to the subsequent reporting period and a data management plan will be put in place to provide data within 5 years.

The following emissions sources have not been quantified:

Table 1. Non-quantified emissions

Emission Source	Scope	Justification for exclusion & overall implications for footprint
Some outdoor events	3	• Lack of complete and reliable data. • Implication for footprint would be immaterial.
Staff commute	3	• Lack of complete and reliable data. Could consider future inclusion if based on very limited sample data. • Implication for footprint likely to be immaterial.
Contractor energy	3	• Lack of complete and reliable data, and uncertainty regarding methodologies and locally relevant emissions factors. • Quantification is not cost effective relative to the size of the emission - Would be extremely time intensive to capture holistic data for this emissions source but will consider limited inclusions in future reporting periods. • Overall implication for the footprint is difficult to judge, although this could be a substantial source of scope 3 emissions. • Uplift factor will be applied in FY19/20 and a data management plan will be developed to capture this going forward.
Construction/demolition activities	3	• Lack of complete and reliable data. Overall implication for footprint is difficult to judge, although could be a substantial source of scope 3 emissions. • Uplift factor will be applied in FY19/20 and a data management plan will be developed to capture this going forward.
Embodied emissions of purchased products and services, i.e. IT equipment, chlorine, office printing, telecommunications, stationery, food and catering, cleaning services	3	• Lack of complete and reliable data, and uncertainty regarding methodologies and locally relevant emissions factors. • Would be extremely time intensive to capture holistic data for this emissions source but will consider limited inclusions in future reporting periods. • Overall implication for the footprint is difficult to judge, although could be a substantial source of scope 3 emissions. • Uplift factor will be applied in FY19/20 and a data management plan will be developed to capture this going forward.

Table 1. Non-quantified emissions		
Emission Source	**Scope**	**Justification for exclusion & overall implications for footprint**
Transport emissions from purchased products and materials i.e. postage, couriers, freight	3	• Lack of complete and reliable data, and uncertainty regarding methodologies and locally relevant emissions factors. • Would be extremely time intensive to capture holistic data for this emissions source but will consider limited inclusions in future reporting periods. • Overall implication for the footprint is difficult to judge, although could be a substantial source of scope 3 emissions. • Uplift factor will be applied in FY19/20 and a data management plan will be developed to capture this going forward.

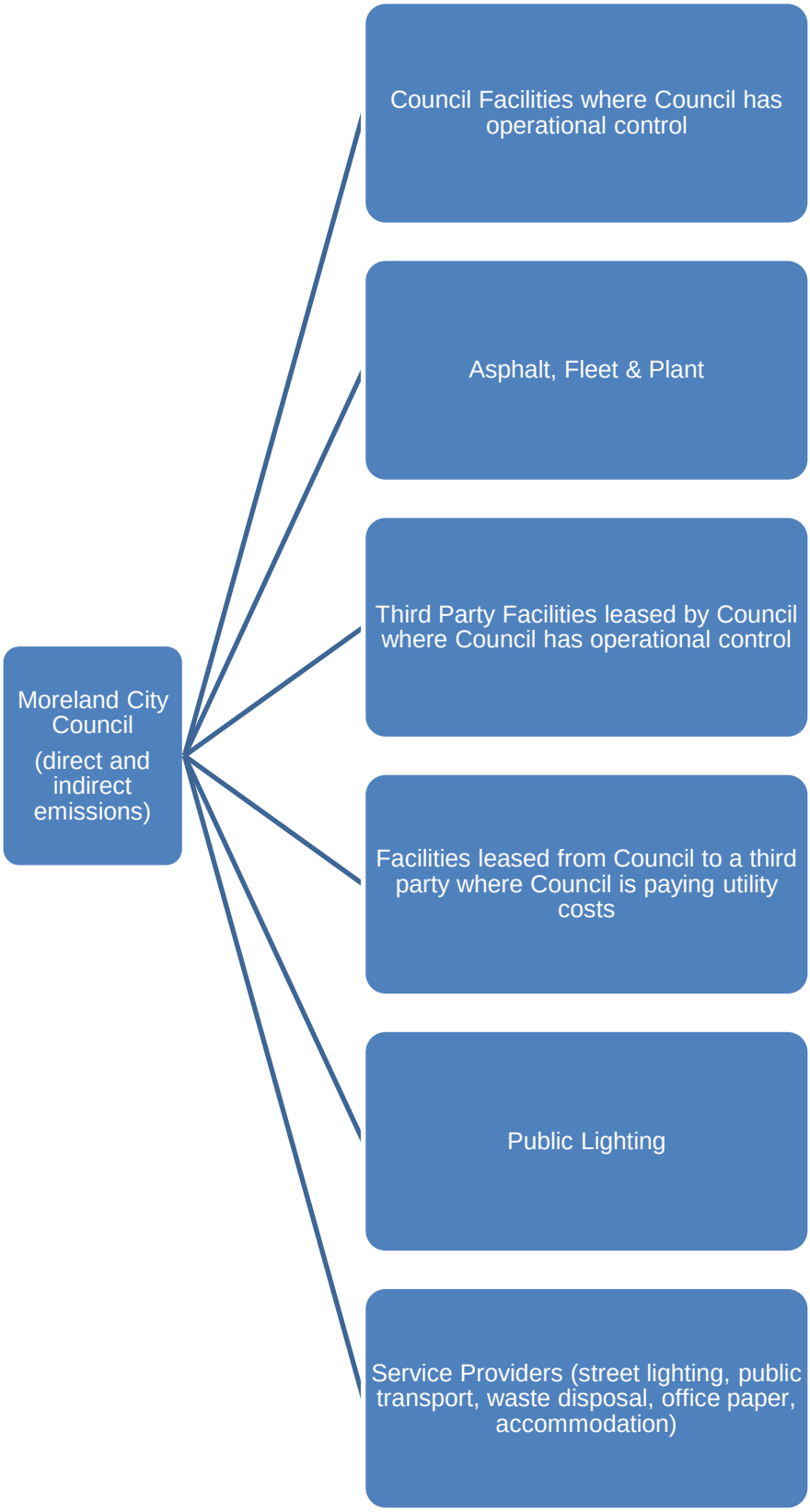
Excluded sources

All emissions not listed above were subjected to the relevance test and were determined to be outside of the boundary of this inventory.

A specific example of this is domestic waste from the community in the form of emissions from waste disposal to landfill from domestic kerbside waste. Whilst the emissions from Council operations and contractors to collect the waste is considered within the inventory boundary, the emissions from community waste disposal to landfill is not considered to be Council's responsibility as Council has no operational control over this action.

Similarly, emissions generated by the community or businesses located within the Moreland municipality are also excluded from this inventory, as are emissions generated by Council employees commuting to/from work at Council.

1C. Diagram of the certification boundary


Moreland City Council
(direct and indirect emissions)
Council Facilities where Council has operational control
Asphalt, Fleet & Plant
Third Party Facilities leased by Council where Council has operational control
Facilities leased from Council to a third party where Council is paying utility costs
Public Lighting
Service Providers (street lighting, public transport, waste disposal, office paper, accommodation)

Proposed change to accounting for electricity emissions and trial of this proposed methodology

The Federal Department of Environment and Energy is proposing an update the National Carbon Offset Standard (NCOS) from 2020, moving from a 'location based' method for accounting of electricity emissions, to a 'market based' method'. This change in approach is based on guidance from international best practice standards including the Greenhouse Gas Protocol and ISO 14064, and will enable organisations to more accurately reflect the emissions resulting from their electricity choices and contracts, such as Power Purchase Agreements (PPA), such as the one that Moreland entered into during the course of 2018/19 as part of the Melbourne Renewable Energy Project (MREP).

The Department invited carbon neutral certified organisations to trial reporting with the new methodology in 2018/19 with an indication this may become mandatory in 2020. At the time of writing the Department is yet to finalise a policy on this issue. Moreland City Council agreed to participate in this trial. For transparency Moreland has decided to show the results of both the methods. Refer to the Emissions Summary in Table 4.

A summary of the differences between these two carbon accounting methods is provided below.

Location Based method (used on NCOS reporting to date)

Electricity missions are calculated using the emissions factors published each year in the *National Greenhouse Accounts Factors* by the Department of Environment and Energy. These factors reflect the emissions factors after allowing for all sources of electricity generation in the Victorian grid, including electricity supplied from other states. Organisations then multiply the kWh/MWh usage for the year by the published emissions factors.

Renewable energy, such as wind and solar PV, which supplies electricity into the electricity grid is considered zero emissions. As such a portion of each kWh of electricity supplied to consumers can be attributed to renewables through the published Renewable Power Percentage (RPP). Renewable energy which is purchased through a PPA , such as the MREP can also be treated as zero emissions if the associated Large-scale Generation Certificates (LGCs) have been surrendered. However currently these renewables are also counted in the Renewable Power Percentage and in the emissions intensity of the emissions factor reducing the emissions and as a result the zero emissions electricity is double-counted under the existing reporting method.

This carbon account uses the location based method for the electricity calculations.

Market based method (proposed, but not yet finalised, for Climate Active reporting periods 2019/20 onwards)

The market based approach proposed ensures consumers can more accurately calculate the emissions resulting from their electricity usage and allows for how it is procured, for example via a PPA, with or without associated LGCs. As well as providing a more transparent reporting of a consumers electricity usage and associated emissions it mininimises the risk of any double counting of renewable energy.

This approach calculates a **'**residual mix factor' which replaces the emissions factor used under the Location based method. It removes the portion of renewable electricity from the state-specific electricity emission factors and apportions an equivalent renewable percentage to the consumers usage. Removing this zero emissions electricity increases the relative emissions intensity of each remaining unit of power in the electricity grid, which more accurately reflects the actual emissions intensity of each unit of the fossil fuel generated electricity used.

2A. Emissions over time

Table 1 below shows the emission sources by scope and compares the percentage change in emissions of a respective year against the current year 2018/19. Overall missions in 2018/19 increased by less than 1% compared to 2017/18. Factors contributing to the year-to-year change were:

- Re-opening of the Oak Park Sports and Aquatic Centre in August 2018
- Updates to the National Greenhouse Accounts Factors as published by the Department of Environment in July 2018
- Reductions due to installation of street lighting upgrades, solar PV and other energy efficiency upgrades

Scope 1 emissions were up by less than 1%.

The increase in scope 1 emissions was largely due to Natural Gas usage increasing by 3.7%. This was mostly due to the re-opening of the Oak Park Sports and Aquatic Centre in August 2018 but offset in part by reduced usage at Fawkner Leisure Centre where the pool was closed during May and June 2019.

Scope 2 emissions increased by 6.3% (using the location based method)

Emissions reported this year increased because of the re-opening of the Oak Park Sport and Aquatic centre, which was 12% of the electricity consumption. This was in part offset by a change in emissions factor as provided in the National Greenhouse Accounts Factors – August 2019. For scope 2 emissions there was a decrease from 1.07 kg/CO2-e to 1.02 kg/CO2-e, which equates to a 4.7% drop from last year. There are further actions detailed in Table 2 that have limited the rise in emissions due to the reopening of the Oak Park Sports and Aquatic Centre.

Scope 3 emissions decreased this year by 6.8%.

Factors include:

- Street Lighting was down by 182 tCO2-e (6%) of which two-thirds was directly due to the reduction in the emissions factor. The balance would be from minor upgrades to more energy efficient street lighting.
- Contractor Fuel was down by 66 tCO2-e (3.8%) after an increase in 2017/18.
- Despite Water usage being up by over 7%, emissions are close to last year due to a drop in the relevant emissions factor.
- Scope 3 electricity was up by 11.5% reflecting the 12% increase in electricity consumption due to re-opening of the Oak Park Sports and Aquatic Centre as previously mentioned and other minor changes in electricity usage at other sites. The Scope 3 emissions factor is the same as last year.
- A 43.7% decrease in Flights emissions after a large rise the previous year and the use of updated emissions factors.
- A 40% decrease in emissions from office paper due to reduced purchase of both letterhead and other paper due to some stockpiles accumulated. Letterhead is routinely much cheaper for large production runs and none was purchased this financial year. There was also a very small reduction due to the purchase of some NCOS carbon neutral paper. Emissions factors were also updated.
- Asphalt has increased by 74.6% due to updated emissions factor.

Table 2. Emissions since base year			
	Base Year: 2011-12	Interim Year: 2014-15	Current year Year: 2018-19
Scope 1	4,970	4,369	4,022
Scope 2	5,879	5,344	5,922
Scope 3	10,404	10,057	6,383
Total	21,253	19,770	16,327

2B. Emissions reduction strategy

Climate Action Plan / Carbon Management Strategy / Corporate Carbon Reduction Plan

In April 2007, Council endorsed the Climate Action Plan, which included a commitment to the goal of zero net emissions for Council's corporate emissions by 2020 and the goal of zero net emissions for the Moreland community by 2030. In December 2008, the incoming Mayor's speech took the corporate goal further to state that Council would achieve zero net emissions by 2012. To respond to this direction, Council developed a Carbon Management Strategy (CMS) that provided a pathway for Council to meet its commitment of carbon neutrality for Council's corporate operations by 2012. The CMS brought together the Climate Action Plan, the Building Operating Plan and the Sustainable Buildings Program and included a strategic energy efficiency program to provide a road map to move forward in a positive direction towards zero net emissions by 2012. Council delivered on its promise of zero net emissions by 2012 by achieving carbon neutral certification under the National Carbon Offset Standard (NCOS).

In June 2015, Council endorsed an update of the CMS - The Corporate Carbon Reduction Plan (CCRP) sets out Council's on-going actions to decrease corporate carbon emissions through to 2020 and sets the foundations for action beyond this time whilst maintaining carbon neutral accreditation under NCOS. The CCRP includes actions to directly reduce emissions associated with Council's operations and actions to influence and encourage others such as Council's service providers to reduce emissions associated with their operations. The key objectives of the CCRP are to:

- Maintain Council's carbon neutral certification.
- Provide leadership to the local government sector and the Moreland community of the urgent need to tackle climate change.
- Deliver a clear business case for action.
- Ensure that projects are planned, delivered and reviewed regularly to deliver clear outcomes.

Corporate Carbon Reduction Plan Energy Efficiency Implementation

CCRP capital works undertaken in 2018-19 have largely focused on installation of solar photovoltaic systems as detailed in Table 3.

The start of the Melbourne Renewable Energy Project (MREP) contract was the major initiative that began during 2018-19. This is a 10 year contract. The associated Large Scale Generation certificates (LGC) will reduce emissions by approximately 7,253 tCO2-e over a full year based on current electricity emissions. This would equate to 47% of overall current emissions of 15,396 tCO2-e.

From the 2011-12 reporting period to the current 2018-19 results, Council has reduced annual emissions by approximately 28% or 5,856tCO2-e. When including the LGCs which equate to 3,627 tCO2-e registered as part of the MREP contract for electricity usage between January and June 2019 the overall reduction would be 45% since the base year of 2011-12.

This includes reductions since the base year in almost all categories, excluding Natural Gas Scope 1 and 3, Water, and Electricity (no operational control) and Hire Cars and Taxis with improved reporting structures likely to be responsible for some of the apparent increases in these categories.

This result is testament to Council's strategic approach of continual monitoring and improvement. It reflects ongoing energy efficiency works undertaken at all council buildings, as well as behavioural modifications and procurement policies. Additionally the participation in the MREP contract will have a major impact on reducing emissions over the coming decade, and also provides a procurement model for other Councils, and organisations to procure renewable electricity collectively.

To manage its commitment to reducing emissions and maintaining its carbon neutral status, Council will continue to take a strategic approach, guided by the CCRP to mitigating its carbon impact. Investment in energy efficiency is critical to directly reducing greenhouse emissions, reducing Council's exposure to energy price rises, carbon prices and the costs associated with achieving carbon neutrality. Council will also continue to progress data management to identify savings and to help direct energy efficiency projects.

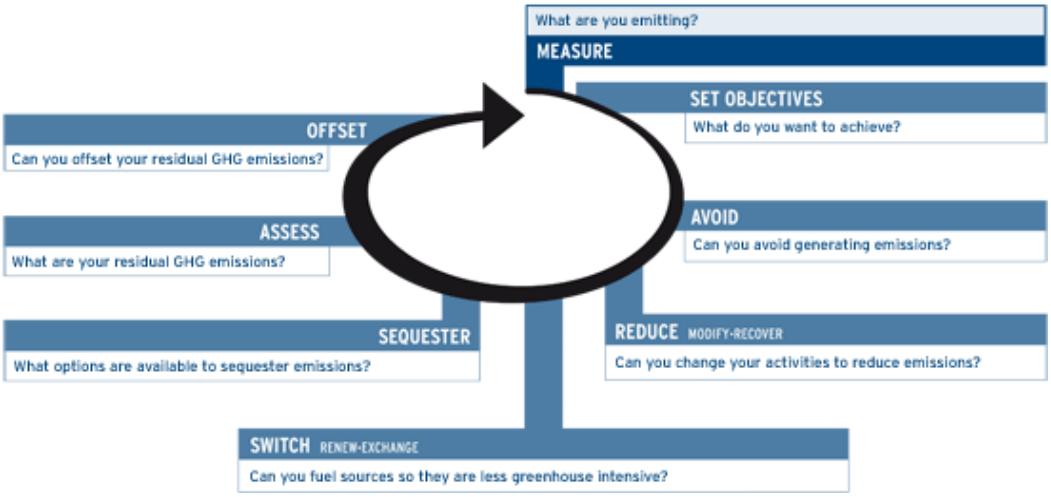


Figure 3: Carbon Management Principles (source: http://www.epa.vic.gov.au/business-and-industry/lower-your-impact/carbon-management-at-work)

Using steps in the Carbon Management Principles (refer Figure 3 above), Council has identified and recommended actions by which the organisation can reduce its greenhouse emissions. These are outlined in the following sections.

Measure

Data Management

Employing Council's Utility Data Management Officer and improving data management saved Council over $100,000 in energy bill errors in the first 12 months of implementation. These savings would have been missed were it not for the proactive approach recommended in the CMS. Further, measuring utility data is a crucial step towards carbon neutrality as Council has a much better understanding of:

- Opportunities for emissions reduction
- The impact of energy efficiency measures and facility use on emissions
- The investment required for energy efficiency and carbon offsets for forward planning

The data management system has been upgraded to a more rigorous system (Chameleon) integrated within Council's financial system. This data management system will provide more rigorous quality assurance, improved reporting and best use of the resources available to Council.

Avoid

- Council has a thermal comfort policy ensuring our buildings are heated and cooled as effectively as possible, infrared sensors and signage on lights to encourage people to switch off when rooms are not in use.
- Incentives such as subsidised annual MYKI tickets and free MYKI for business use to encourage public transport use.
- Interest free loans are available for purchase of bicycles.
- Electric bikes and cars powered by renewable energy available to all staff.
- Council has a Sustainable Buildings Policy ensuring all building projects are subject to best practice energy efficiency minimum standards.
- Council hosted fossil fuel divestment information sessions
- Council installed new recycling and composting bin infrastructure at the Coburg Town Hall and Hadfield Operations Centre.

Reduce – Energy Efficiency Projects

Adopting an approach to reduce emissions through energy efficiency projects will minimise the need to purchase carbon offsets and associated long term costs.

As shown in Figure 4 below, the top 3 emission sources for Council in 2018-19 are:

- Electricity
- Transport Fuel
- Natural Gas

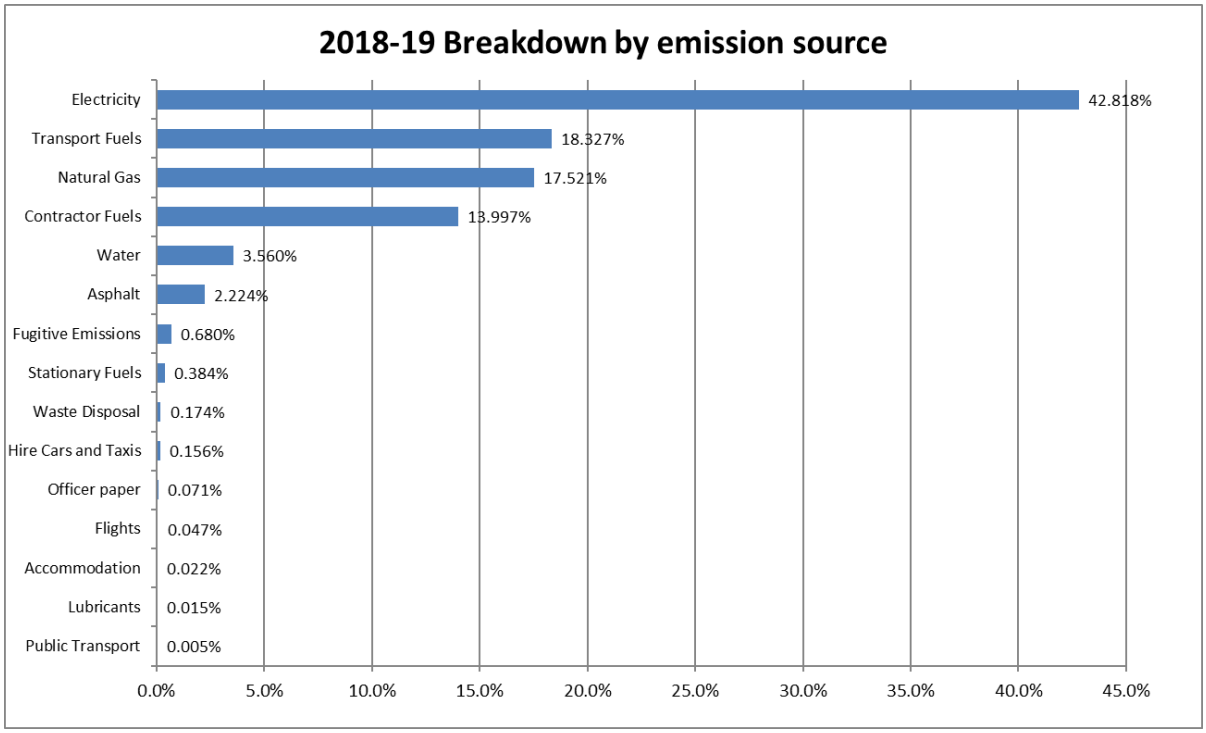


Figure 4: 2018-19 Breakdown by emission source

Around 79% of all emissions result from the top 3 sources and 43% is due to electricty use alone. Adopting an approach to achieve ongoing emissions through energy efficiency projects that particularly target these areas will minimise the need to purchase carbon offsets and associated long-term costs. Below are the key initiatives undertaken in 2018-19.

Open Space Lighting program

Council will actively upgrade existing mercury vapour to LED in parks and open spaces. During the reporting period, lighting upgrades were undertaken at 5 sites:

- Allard Park
- Jacobs Reserve
- Brunswick Park
- Methven Park
- Barkly Street Park

Renewable Energy – Solar

Council undertook a renewable energy feasibility study in 2013-14 for Council owned buildings. The study identified a number of sites where solar PV is viable for installation.

In this reporting period, Council installed solar PV on the following Council owned buildings:

- Oxygen Youth Centre 20kW (additional) – as part of the stage 2 upgrade
- Fawkner Library 22kW

After the above installations Council now has solar PV on 29 Council-owned buildings with a combined installed capacity of 764kW, providing an annual savings of 1,124 tCO2-e, using the current emissions factors.

Council also installed five systems at Council buildings leased to the community. Please note that these sites are not included in this carbon inventory. Council used an innovative approach where Council paid for the installation and the community group leasing the site repay for the system over a 5-10-year period utilising savings received from reduced energy bills. This Solar on Leased Facilities pilot program saw the following installations:

- West Coburg Bowling Club: Solar PV 20kW
- Fawkner Bowling Club: Solar PV 18kW
- Lake Park Kindergarden: Solar PV 5.5kW
- Dawson Street Child Care Centre: Solar PV 14.5kW
- Denzil Don Kindergarden: Solar PV 9kW

GreenPower

With the introduction of the MREP contract, GreenPower purchases were discontinued for Coburg Civic Centre with just the usage for the 1st two days of July 2018 covered by GreenPower purchases equating to 2.76 tCO2-e.

Melbourne Renewable Energy Project

As flagged in last year's Public Disclosure Summary the MREP contract, which is a consortium of 13 partners who intended to stimulate the construction of a renewable energy generation project to provide 100% renewable energy for a period of ten years, began on the 1st of January 2019. The only electricity emissions this does not cover are some small unmetered sites that cannot be incorporated into the contract or where another party is paying the electricity bill (e.g. some leased or shared sites).

Sequester

This is not directly available to Council as an option.

2C. Emissions reduction actions

Table 3: Emissions reduction actions in 2018/19					
Year completed	**Emission source**	**Reduction measure and calculation method**	**Scope**	**Status**	**Reduction t CO_2-e per annum**
2018/19	Scope 2 & 3 – electricity consumption	Oxygen Youth Centre: Solar PV: 20kW*	2 & 3	Implemented this period	29.43
2018/19	Scope 2 & 3 – electricity consumption	Fawkner Library: Solar PV: 22kW*	2 & 3	Implemented this period	32.37
2018/19	Scope 2 & 3 – electricity consumption	Lighting Upgrades at: • Allard Park • Jacobs Reserve • Brunswick Park • Methven Park • Barkly Street Park	2 & 3	Implemented this period	15.46
Total emission reductions implemented in this reporting period					**77.26**

* PV calculations include any power that may be exported to the grid

3. Emissions Summary

Note – only those emission sources with an asterix have been impacted by the proposed changes in the methodology

Table 4. Emissions Summary		**Location Based Methodology**
Scope	Emission source	t CO_2-e
1	Transport Fuels	2,017.4
1	Natural Gas	1,882.4
1	Stationary Fuels	42.2
1	Fugitive Emissions (Refrigerants)	78.7
1	Lubricants	1.4
2	Electricity	4,898.5
2	Electricity (estimated solar generation)*	1,024.0
3	Street Lighting	2,834.5
3	Contractor Fuels	1,619.9

3	Water	412.0
3	Electricity (Scope 3 emissions)	580.6
3	Electricity (No Op ctl)	371.7
3	Transport Fuels	103.7
3	Natural Gas (Scope 3 emissions)	142.5
3	Waste Disposal	20.2
3	Stationary Fuels	2.2
3	Flights	5.4
3	Natural Gas (No Op ctl)	2.9
3	Hire Cars and Taxis	18.0
3	Office Paper	8.4
3	Public Transport	0.5
3	Lubricants	0.4
3	Asphalt	257.4
3	Accommodation	2.5
3	NCOS Carbon Neutral paper https://www.winc.com.au/main-catalogue-productdetail/reflex-copy-paper-carbon-neutral-a3-ultra-white-500-sheet-box-3/87217180 https://reflex.com.au/product/copypaper/a4-copy-paper/ https://www.winc.com.au/main-catalogue-productdetail/winc-copy-paper-a4-carbon-neutral-20-recycled-80gsm-white-ream-500-box-5/87217186 All purchased through WINC Office Supplies	(0.2)
Total Gross Emissions		16,327.5
Estimated solar generation (1,004 MWH equivalent to 1,124.36t CO2-e), GreenPower (2.76t CO2-e) and registered LGCs (3,238 MWh's equivalent to 3,626.64 tCO2-e)**		(4,753.8)
Total Net Emissions		11,573.5

*Solar generation consumed on site is subtracted from gross emissions.
** Note that due to current contract arrangements the LGCs referred to Table 4 above and detailed in Table 5 below will not be retired until early 2020 as the retirement process is reconciled and completed on a calendar year basis. The LGCs are registered in the Clean Energy Regulator's REC registry.

Table 5. Large-scale Generation Certificate registration	
LGC Serial Numbers	Total Certificates registered (MWh electricity)
47486-47755	270
66700-67032	333
90467-91649	1,183
4515-5694	1,180
91650-91922	273
Total	3,238

4. Carbon offsets

4A. Offsets summary

Table 6. Offsets Summary

Projects supported by offset purchase	Eligible offset units	Registry	Cancellation date	Serial numbers (including hyperlink to registry transaction record)	Vintage	Quantity
Project: Hebei Kangbao Sanxiatian Wind Farm Project **Offset Type:** VCUs **Registry**: APX VCS registry	VCU's	APX VCS	30/6/2018	5138-214089969-214099968- VCU-034-APX-CN-1-697- 30112011-31122011-0 https://vcsregistry2.apx.com/mymodule/rpt/CertificateInfo.asp?rhid=16990&ftType=PRO	2011	7,663
Project: Saipuram Wind Energies Private Limited, Andhra Pradesh, India **Offset Type:** VCUs **Registry**: APX VCS registry	VCU's	APX VCS	30/6/2019	6715-339145855-339152354-VCU-034-APX-IN-1-1788-31032017-31122017-0 https://vcsregistry2.apx.com/mymodule/rpt/CertificateInfo.asp?rhid=25858&ftType=PRO	2017	6500 (total) of which 4,104 used for 2018/19
Total offsets cancelled for 2018/19						11,574
Total offsets banked for use future years: (if any) 6715-339145855-339152354-VCU-034-APX-IN-1-1788-31032017-31122017-0						2,589

4B. Offsets purchasing and retirement strategy

Council seeks to position itself as a carbon neutral organisation and to recognise this through an accreditation process. Accreditation requires the purchase of verified carbon offsets. In June 2012 Council endorsed its Carbon Offset policy which outlines Council's approach and criteria to the purchase of carbon offsets. This policy establishes a framework for purchasing carbon offsets, which includes procurement process and criteria for offset selection.

In July 2012 Council established a panel of preferred suppliers for carbon offsets to ensure that Council can purchase NCOS accredited offsets to meet its carbon neutral commitment.

In accordance with NCOS guidelines for the purchase of offsets for the years 2015 to 2016, 2016 to 2017, 2017 to 2018 and 2018 to 2019, Council has forward-purchased and cancelled offsets. Any excess offsets will be carried forward to Council's carbon neutral claim in subsquent years. The offset suppliers for the years 2018 – 2019 were selected based on Council's Offest policy criteria through a request for quote process.

4C. Offset projects (Co-benefits)

The selected wind projects contribute to sustainable development in the local community, and India and China as a whole. The projects help reduce the level of air pollution caused by burning coal, as well as reducing other environmental impacts from extracting and processing fossil fuels. The projects create jobs for local people during construction and with their continued operation.

5. Use of trade mark

Table 7. Trade mark register	
Where used	Logo type
Council's website	Certified organisation
Council's Annual Report	Certified organisation
Council email signatures	Certified organisation
Presentations to other Councils	Certified organisation
Northern Alliance for Greenhouse Action (NAGA) events	Certified organisation
Council presentation banners	Certified organisation
Decals on Council's electric vehicle	Certified organisation
Electronic information Kiosks	Certified organisation
Council Buildings	Certified organisation

6. Have you done more?

Under the CCRP, Council has or plans to take the following actions beyond the requirements of the NCOS:

- Continue to install solar PV on Council's leased facilities to assist with reducing community emissions and inspire the community to install solar PV in residential dwellings.
- Complete the development and integration of carbon emissions tender questions into Council's procurement process to influence the process and supply chain of Council suppliers.
- Update community grants application forms with questions regarding carbon and other environmental performance of projects and programs being put forward for grant funding.
- Continue to engage and educate staff on sustainability actions they can take in their own time including active transport, reducing organic waste to landfill and divestment from fossil fuels.
- Introduce a central Utility Billing Management System (Chameleon) including employing a dedicated Data Management Officer to ensure quality and general management of data.
- Source all Council Operational Electricity from the renewable energy from the Crowlands windfarm from January 2019.
- Developed the Moreland Integrated Transport Strategy 2018 has a focus on new and improved routes for pedestrians and cyclists and increasing bus services with an aim to reduce the growth of cars in Moreland as the population increases.
- Continue to apply the Moreland Sustainable Buildings Policy in the development or redevelopment of Council buildings.
- Continue to respond to the impacts of the urban heat island effect. Council's Urban Heat Island Effect Action Plan 2016-26 identified the Upfield corridor as having some of the hottest surface temperatures within Moreland. The key priorities of the Action Plan are to develop an action plan to reduce the urban heat island effect along the Upfield corridor, identify locations for introducing water and landscaping along the corridor, improve pedestrian and bicycle amenity along the corridor to encourage walking and cycling and have a coordinated approach across Council.
- Introduced a new fleet policy that prioritises the purchase and use of zero emissions vehicles.