

# Zero Emissions Organisational Strategy 2016-2026



*“Council’s plan  
to reduce carbon  
emissions in Noosa.”*



PO Box 141 Tewantin QLD 4565  
P (07) 5329 6500 | F (07) 5329 6501  
mail@noosa.qld.gov.au  
www.noosa.qld.gov.au

The words *Zero Emissions Noosa*™ are subject to trademark application by Noosa Council

© Noosa Council 2016

[www.noosa.qld.gov.au](http://www.noosa.qld.gov.au)

**General Enquiries:**

By telephone: (07) 5329 6500  
By email: [mail@noosa.qld.gov.au](mailto:mail@noosa.qld.gov.au)  
Fax: (07) 5329 6501  
Street Address: 9 Pelican Street, TEWANTIN  
Postal address: PO Box 141, TEWANTIN QLD 4565

Endorsed by Noosa Council 20 October 2016

# Contents

1. Executive summary.....	4
2. Principles.....	6
2.1 Principle 1: Leadership by Council with the support of the community .....	6
2.2 Principle 2: Acceptance that we have a moral obligation to act .....	6
2.3 Principle 3: Pursuit of multiple benefits .....	6
2.4 Principle 4: Action that is prioritised by impact .....	6
3. Objectives .....	6
4. Policy context.....	7
4.1 International .....	7
4.2 Australian Government.....	7
4.3 Queensland Government.....	7
4.4 Local Government.....	7
4.5 Noosa Council.....	7
5. Target .....	8
6. Background .....	9
6.1 Noosa context .....	9
7. Decision making framework .....	16
8. Carbon offsets.....	17
9. Cost analysis – Marginal Abatement Cost Curve.....	18
10. Strategy implementation .....	19
10.1 Funding and resources .....	19
10.2 Employee engagement .....	19
10.3 External engagement.....	19
11. Monitoring and review .....	20
11.1 Annually .....	20
11.2 Biennially .....	20
12. Glossary .....	21

# 1. Executive summary

Noosa Council endeavours to be a positive example to the community by managing its resources efficiently and sustainably. This Zero Emissions Noosa™ (ZEN) Organisational Strategy (the Strategy) is a further commitment by Council to support the community's aim for a sustainable future and builds on previous work done by the organisation to reduce its emissions over the past 15 years.

While there is no legislative requirement for Council to have a plan to reduce greenhouse gas (GHG) emissions as a response to climate change, Council wishes to continue to take the initiative to be resource efficient. It is worth noting that many other local governments throughout Australia have also chosen to take direct, local action.

Being a coastal locality, Noosa Shire is vulnerable to the predicted impacts of climate change in relation to coastal inundation and sea level rise. There are many other potential impacts as well. These include habitat loss, species extinctions, reduced water supply, more intense weather events etc. It is in Council's and the community's interest to contribute to global mitigation of those impacts by reducing Council's GHG emissions.

It also makes good financial sense to take action to reduce Council's direct reliance on fossil based energy. With the cost of traditional energy sources steadily increasing, Council has a responsibility to reduce its usage as far as practicable, to improve its energy efficiency and to become better insulated against future price fluctuations.

The Strategy aims to achieve an ambitious zero net emissions target by 2026.

The process to achieve zero net emissions includes:

- Calculating emissions as best as possible;
- Reducing emissions wherever possible; and
- Offsetting any remaining emissions that cannot be reduced.

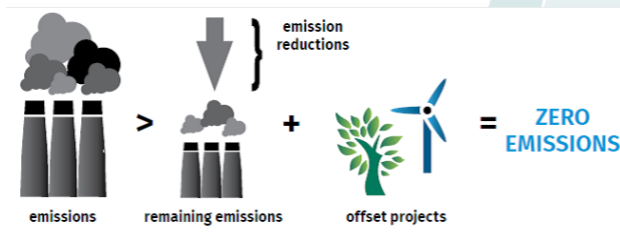


Figure 1: Extract from Australian Government Guide to Going Carbon Neutral

The purpose of the Strategy is to establish a decision-making framework to provide a cost-effective way forward for the Council in achieving zero net emissions. It sets out some key actions and is supported by a detailed Zero Emissions Noosa™ (ZEN) Organisational Action Plan (the Action Plan) that will define, drive and prioritise abatement activities to achieve carbon neutrality.

The principles that underpin the Strategy are:

1. Leadership by Council with the support of the community.
2. Acceptance that we have a moral obligation to act.
3. Pursuit of multiple benefits.
4. Action that is prioritised by impact.

The plan provides for the following key actions:

KEY ACTION 1	Council will continue to improve its knowledge and data collection. It will measure emissions using credible measurement tools.
KEY ACTION 2	GHG emissions will be measured annually. Progress towards the defined zero net emissions target will be included in Council's annual reporting.
KEY ACTION 3	The decision-making framework outlined in the Strategy will be used when determining the appropriate approach to reduce emissions for a specific activity.
KEY ACTION 4	A detailed Action Plan will be developed that will prioritise actions over an initial 5-year period (and ultimately 10 years). Funding of actions will be considered as part of the annual budget development process.
KEY ACTION 5	The process outlined in the Strategy will be utilised when determining the appropriate approach to purchase of carbon offsets.
KEY ACTION 6	Decision-making for the Action Plan initiatives requiring capital investment will be based on detailed cost-benefit analysis. It will also ensure that recommended actions contribute to Council's ongoing financial sustainability and have the greatest potential to reduce emissions. Innovative methods of delivery and appropriate financing models may also be considered.
KEY ACTION 7	Appropriate resourcing (people & systems) will be provided and Council will also ensure an appropriate governance framework is established to ensure effective delivery, monitoring and reporting on implementation of the Strategy and Action Plan.
KEY ACTION 8	The Strategy will be reviewed at least biennially (every 2 years) to ensure the approach remains appropriate to legislative, political, economic and social contexts. The detailed Action Plan will be reviewed annually as part of the budget development process.

## 2. Principles

### 2.1 Principle 1: Leadership by Council with the support of the community

This principle recognises Council's role to provide leadership and set an example of best practice for the community. It also recognises that Council will share any knowledge gained through delivery of the Strategy. Although this Strategy is targeted specifically at Council operations and activities, Council also acknowledges its role in providing leadership for the community's transition towards a zero emission future.

### 2.2 Principle 2: Acceptance that we have a moral obligation to act

This principle recognises the moral obligation for Council to "do its bit" in response to the serious long-term threat that climate change poses. This includes threats to the planet as well as threats to the local economy, the Noosa Shire environment and residents' lifestyle. Council assumes an obligation to act beyond legislative requirements to help create a truly sustainable future. Council also acknowledges that action to mitigate climate change is the shared responsibility of governments at all levels, businesses, communities and individuals.

### 2.3 Principle 3: Pursuit of multiple benefits

It is acknowledged that there are often multiple benefits associated with reducing GHG emissions. Actions to reduce emissions can result in financial, environmental, health and/or social rewards. Implementing the Strategy will also enhance the Noosa Shire's resilience and adaptability.

### 2.4 Principle 4: Action that is prioritised by impact

This principle supports actions being developed and prioritised according to their ability to affect change. Council will ensure its decisions are sound by applying appropriate and up-to-date analysis and risk-management tools.

## 3. Objectives

The principles above are supported by the following core objectives:

- To help mitigate climate change and provide a sustainable future by reducing Council's GHG emissions to a zero net position.
- To ensure that reduction in GHG emissions will not impact on Council's long-term financial sustainability nor result in any significant financial impost on ratepayers.



## 4. Policy context

### 4.1 International

In December 2015, the international community unanimously adopted an ambitious agreement to decarbonise the global economy and to limit the impact of climate change. The UNFCCC COP21 Paris Agreement commits 195 nations to hold the increase in global average temperature to "well below" 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

### 4.2 Australian Government

The Australian Federal Government became a member of the Kyoto Protocol in 2008 and has a current commitment to reduce the nation's emissions by 26-28 percent on 2005 levels by 2030.

### 4.3 Queensland Government

Through its paper Advancing Climate Action Queensland, the Queensland Government has noted that, due to a lack of climate action over recent years, the state's emissions "will increase ... 34 per cent by 2030 on 2000 levels". The State Government is pursuing a range of strategies including development of a climate adaption strategy, implementing a coastal hazards adaptation program, as well as pursuing opportunities for alternative energy and changed land management practices.

### 4.4 Local Government

A number of local governments around Australia have already established targets. Both Adelaide City Council and the City of Melbourne ambitiously aim to be carbon neutral by 2020. Byron Bay aims for zero emissions by 2025. Brisbane City Council is hoping to be carbon neutral by 2031. Sydney City intends to reduce emissions by 70% by 2030. Frankston intends to be carbon neutral by 2025.

Meanwhile, Moreland City Council in northern Melbourne became carbon neutral for Council operations in 2012 (as certified under the National Carbon Offset Standard - Carbon Neutral Program).

### 4.5 Noosa Council

At a local level, the Noosa Council Emission Reduction Policy adopted 19 May 2016 commits Council to a reduction in carbon and GHG emissions with a view to establishing a zero net emissions target in Council's operations and services. The policy aim is to drive greater efficiency in Council's use of natural resources by:

- Investing in appropriate actions such as new technologies and options that focus on clean energy.
- Leading by example and inspiring change by demonstrating best practice options to the community.
- Measuring and monitoring to demonstrate progress towards achieving the stated objective of achieving zero net emissions.

Other policies and strategies that have been developed that support Council's zero net emissions efforts include adoption of the Waste Reduction and Recycling Plan 2016-2024. Work is also underway to develop a fresh and innovative Transport Strategy. The Strategy is also aligned with Council's Sustainability Principles.

# 5. Target

The Strategy proposes that Council operations and service activities will reach zero net emissions by 2026. This is an ambitious target that will be dependent upon ongoing commitment by future Councils. It may also be impacted by the changing economic environment, technological advances, and legislative changes.

The target will become one of Council's sustainability indicators to ensure progress can be tracked and reported over time.

Achievement of the target requires:

- A detailed Action Plan that will drive and prioritise GHG emission abatement activities.
- A cost-benefit analysis model which identifies net benefits of potential GHG emission reduction projects.

- Ongoing commitment of annual funding (operating and capital).
- Ongoing data collection, use of credible GHG measurement techniques, plus effective monitoring and reporting systems.
- Flexibility to adjust to the rapid pace of technological change and shifting cost efficiencies that may arise.
- An appropriate internal governance framework plus internal champions to drive the necessary changes.
- Participation by Council's employees to drive organisational behaviour change.
- An internal and external communications plan.



# 6. Background

## 6.1 Noosa context

Being a coastal locality, Noosa Shire is vulnerable to the predicted impacts of climate change in relation to coastal inundation and sea level rise. Of course there are many other potential impacts as well. These include habitat loss, species extinctions, reduced water supply, more intense weather events etc. It is in Council's and the community's interest to contribute to global mitigation of those impacts by reducing Council's GHG emissions.

The Noosa Shire area is at real risk of not only experiencing the physical effects of climate change but also the flow on effects to the local economy and resident lifestyles.

Regardless of the potential impacts from climate change, Council has a responsibility to minimise the financial impact on ratepayers that the threat of rising fuel, utility and other charges pose.

Council also has a responsibility to continue to strive to achieve best practice in line with the Shire's designation as a UNESCO Man and the Biosphere Reserve and the long standing commitment by the community to living sustainably within the natural environment.

Like many local governments in Australia, the pre-amalgamation Noosa Council participated in the International Council for Local Environmental Initiatives (ICLEI) Cities for Climate Protection (CCP) program. Council joined the program in 2001.

Some of the projects undertaken at the time include: installation of movement sensors on office lighting; reshaping of the organisational vehicle fleet to accommodate smaller, more fuel-efficient vehicles; a pilot project trialling bio-diesel fuel for trucks; plus general emission avoidance and waste reduction strategies. In more recent years six Council buildings & facilities have had solar power installed.

The CCP program was complemented by a travel behaviour change scheme aimed at reducing reliance on motor vehicles whilst encouraging the use of public transport, walking and cycling. Part of the program that continues to this day is the free holiday bus initiative. This encourages people to travel by public transport in order to reduce both traffic congestion and vehicle emissions.

An electric bus trial initiated by the new Noosa Council is expected to commence in 2017.

### 6.1.1 Defined emissions boundaries – greenhouse gas (GHG) inventory

One of the most important and challenging decisions required in the development of a GHG emission inventory is to define the boundaries for the inventory i.e. a list of what is included and what is not.

The approach taken has been to include GHG emissions from all operations for which Council has legislated responsibility and where it has full authority to introduce and implement operating policies.

The exception to this approach is public lighting. The current regulatory framework results in the bulk of public lighting assets in Noosa Shire being owned and operated by Energex. This means Council does not currently have authority to take direct action to reduce GHG emissions from public lighting, although this may change in the future.

While Council does not currently have authority for public lighting, it has been included in the inventory as Council has regulatory responsibility for the payment of energy consumption for this activity.

It is expected that the detailed Action Plan to support delivery of this Strategy will include an initiative to investigate means by which public lighting can transition to more energy efficient lighting.

The recent independent audit of Council's emissions inventory included emissions from energy used in all Council operated and owned buildings, Council transport (fleet), waste and public lighting. The calculations excluded:

- Leased facilities (such as the Sunrise Beach Shopping Centre), unless there is a component of the activity that generates emissions that are paid for by Council (e.g. Bicentennial Hall, Doonella House, Girraween Sports Complex, and Noosa Transit Centre).

- Emissions from Council employees commuting to and from work unless they are utilising a Council provided vehicle.
- Business travel via air or rail.
- Emissions in embedded goods and some contracted services.

The inventory boundaries were used to estimate Council's current baseline GHG emissions.

## 6.2 GHG emission scopes

GHG emissions refer to the release of a number of gases that contribute to the greenhouse effect which is considered responsible for climate change. This includes methane which is particularly important in relation to gases released from Council's landfill site. (Refer to glossary for details.)

The GHG Protocol sets the global standard for how to measure, manage and report GHG emissions based on direct and indirect emissions. These are defined as follows:

- Direct GHG emissions** are emissions from sources that are owned or controlled by the reporting entity.
- Indirect GHG emissions** are emissions that are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity.

The GHG Protocol further categorises these direct and indirect emissions into three scopes as shown in Figure 3 below:

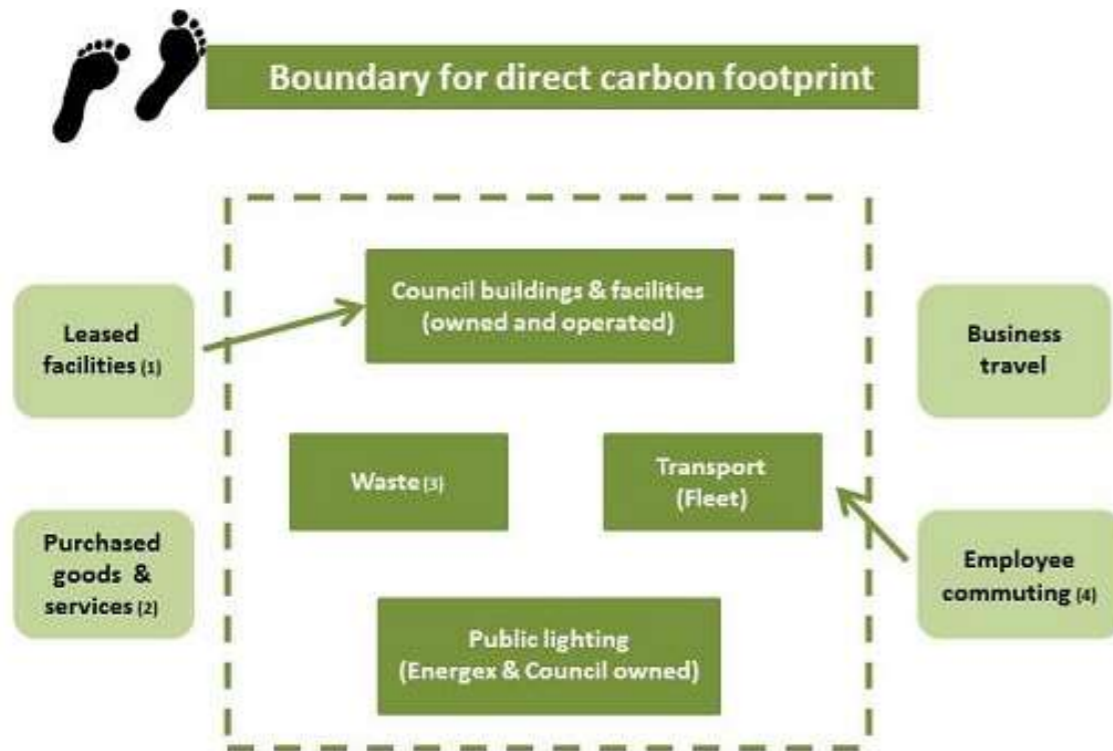
- Scope 1: All direct emissions from **owned or controlled** sources.
- Scope 2: Indirect emissions from the **consumption of purchased energy** (electricity, heat or steam).

- Scope 3: Other indirect emissions (not included in scope 2) that are **embedded into goods & services; contracted or leased activities**.

The National Greenhouse and Energy Reporting Act 2007 (NGERA) & Regulations and the National Greenhouse and Energy Reporting (Measurement) Determination 2008 establish the legislative framework for a national GHG and energy reporting system. The legislation and technical guidelines have been aligned with international standards so that there is a single approach. Council's method will be to align with existing standards to provide consistency and to reduce risk in the event of legislative change.

The Australian regulations define scope 1 and scope 2 emissions as "the release of greenhouse gas emissions into the atmosphere either as a direct result of an activity that constitute the facility (scope 1) or as a result of activities that consume electricity, heat or steam at the facility (scope 2)." No definitions are provided for scope 3. They remain important in fully accounting for an organisation's total emissions, but in some instances can be more difficult in terms of gathering data and driving change.

If the Commonwealth Government decides that Local Government will need to report emissions under the NGERA, scope 1 and 2 are likely to be mandatory.



- Excluded except where a component of the activity results in emissions paid for by Council (electricity)\*.
- Non-transport fuels used for contracted services have been included where information known\*.
- Excluded landfill and waste collection fuels due to contract being in tender evaluation phase.
- Included in boundary where employee uses Council supplied vehicle for commuter use.

\*For detail refer to BZE Report – Noosa Council Emissions Baseline 2015-16.

Figure 2: Noosa Council Emissions Boundary for Emissions Baseline Calculation

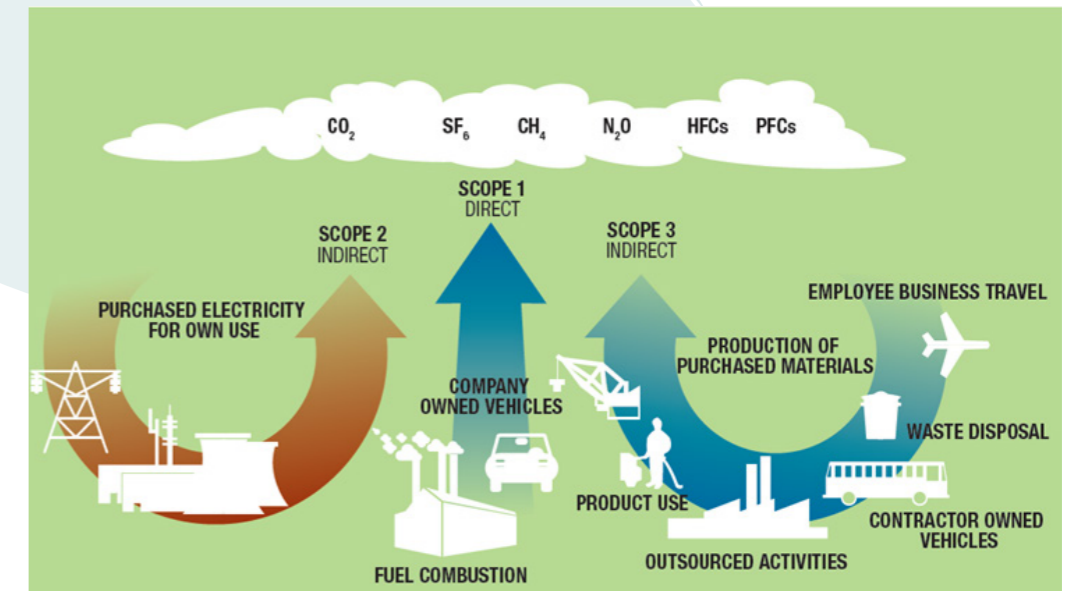


Figure 3: Extract from Hobson Bay Council Corporate Greenhouse Strategy

Using the defined inventory as per clause 6.1.1, for Council operations the scopes are applied as follows:

Scope 1	
The following Council owned services are included in Council's zero emissions approach as they generate Council's scope 1 emissions.	
Type	Activity
Fleet	Council vehicle fleet (heavy and light fleet) tailpipe emissions.
Waste	Waste landfill emissions (methane gas.)

Scope 2		
The following Council owned assets and services are included in the definition of Council's zero emissions approach as they generate Council's scope 2 emissions from the use of electricity and gas, heating and cooling. They include the following facilities:		
Type	Activity	Emission Source
Buildings	Tewantin Administration Building	Electricity
	Noosaville Depot	Electricity
	Pomona Depot	Electricity
Community Facilities*	Noosaville Library	Electricity
	Cooroy Library	Electricity
	The J	Electricity and gas
	Noosa Aquatic Centre	Electricity and gas
	Noosa Leisure Centre	Electricity and gas
	Noosa Community Support Centre	Electricity
	Cooroy Butter Factory (subject to changed arrangements)	Electricity and gas
	Bicentennial Hall & Annex	Electricity
	Amenity blocks (Public Toilets)	Electricity
	Doonella House	Electricity
	Barbeques	Electricity
Holiday Parks	Noosa River Caravan Park	Electricity and gas
	North Shore Beachfront Campground	Electricity and gas
	Boreen Point Campground	Electricity and gas
	Cooroy RV Stopover	Electricity
Public Lighting (Council owned)	Roads, Parks, Pathways and Waterways Navigation Lights	Electricity
Waste	Landfill operations, transfer stations, buildings and facilities	Electricity

Sporting fields*	Girraween Sports Complex (subject to changed arrangements)	Electricity
Transport facilities	Noosa Transit Centre (leased but Council pays a component of the operations cost including electricity)	Electricity
	Noosa Waters Lock and Weir	
Other facilities	SES buildings (Tewantin, Cooroy, Boreen Point & Pomona)	Electricity
	Noosa Main Beach Sand Recycling system	
	Ringtail Quarry	
	Stormwater facilities	

\*The majority of community and sports club buildings owned by Council are operated under lease arrangements with community organisations who assume responsibility for consumable payments such as electricity and gas. While not included in the inventory boundary, as the asset owner, Council may still take actions or provide incentives to reduce emissions as necessary.



Scope 3	
The following activities are included in the definition of Council's zero emissions approach as they involve other indirect emissions (not included in scope 2) that are embedded into goods & services, contracted or leased activities on behalf of Council.	
Type	Activity
Purchased Goods & Services	Emissions embedded in purchased goods (e.g. asphalt, pre-mixed concrete)  While embodied emissions relating to Council's procurement activities are not recorded by Council, a sustainable procurement policy is in place that recommends the use of climatically and environmentally friendly goods and services.
Public lighting (not owned by Council)	As at August 2016 there are 5,665 public lights in the Noosa shire, with the majority owned and operated by Energex. As Council has legislated responsibility to meet the cost of electricity consumption it has been included in the inventory and classified as scope 3 (contracted services).
Contracted or leased services	Fuels used to deliver services such as: <ul style="list-style-type: none"> <li>Waste collection.</li> <li>Concrete crushing at the landfill and Ringtail Quarry.</li> <li>Green waste mulching.</li> <li>Mowing.</li> <li>Street sweeping.</li> <li>Capital works and asset maintenance activities.</li> <li>Noosa River Ferry (leased operation).</li> <li>Other contractor transport (not owned or managed by Council).</li> </ul>
Business travel	Travel by air where payment for an offset does not occur at the time of booking (could be covered by Council policy requiring this to occur).  Rail travel.

The current data available for scope 1 and 2 activities is considered satisfactory with much of it available from the providers e.g. energy and transport fuel accounts.

Some of the Scope 3 activities are also supported by satisfactory data (waste activities and Energex owned public lighting), but there is a current gap in data for most other contracted services. Scope 3 activities represent a reasonable proportion of Council activities, so continued improvement is required in the collection of data to complete Council's understanding of the GHG components of these activities. Improvements will occur via a range of actions but the first step is likely to be through the capture of information at the procurement stage and via contractual arrangements.

### 6.2.1 Baseline GHG emissions footprint

As a first step in establishing the Strategy, Council engaged Beyond Zero Emissions Inc., a climate change solutions think-tank, to undertake an independent audit of Council's operations and services, to develop an emissions inventory and to determine a baseline GHG emissions footprint.

No estimate has been made for any potential growth in emissions e.g. for new or expanded buildings or facilities, new public lighting through Council works or contributed assets, or expansion of services that may include embedded emissions.

The assessment indicates total emissions being 10,713 tonnes CO<sub>2</sub>e based on available data for 2015-16. Emissions are shown by sector in Figure 4 below and by scope in Figure 5. Data for fuel utilised for waste collection services was excluded due to probity issues as the new waste tender was under evaluation at the time of the audit. So the baseline figure will need to be adjusted after the waste contract is awarded (post December 2016). The baseline figure will also need to be re-calculated over time as data capture is improved (particularly for scope 3 emissions).

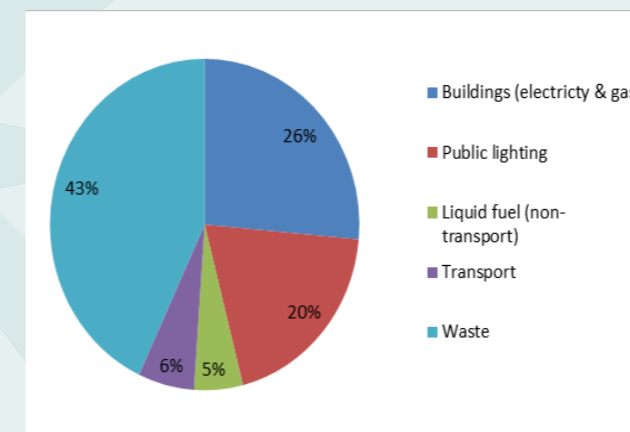


Figure 4: Noosa Council's GHG emissions x sector

It is clear that activities with the most opportunity to reduce emissions come from:

- Waste management services.
- Electricity consumed at Council buildings & facilities (incl. Holiday Parks).
- Public lighting (both Council and Energex owned).

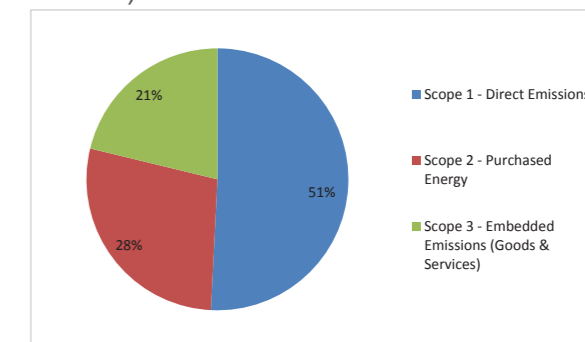


Figure 5: Noosa Council's GHG emissions x scope

The largest source of emissions under Scope 1 is from waste landfill. Improved knowledge and data capture is required to accurately calculate the emissions generating Scope 3 activities.

#### KEY ACTION 1

*Council will continue to improve its knowledge and data collection. It will measure emissions using credible measurement tools.*

#### KEY ACTION 2

*GHG emissions will be measured annually. Progress towards the defined zero net emissions target will be included in Council's annual reporting.*



# 7. Decision making framework

In seeking to achieve best practice Council's approach to achieving zero net emissions will be based on the following prioritised hierarchy for decision making – Figure 6.

The Australian Government National Carbon Offset Standard provides guidance on what is a genuine offset unit.

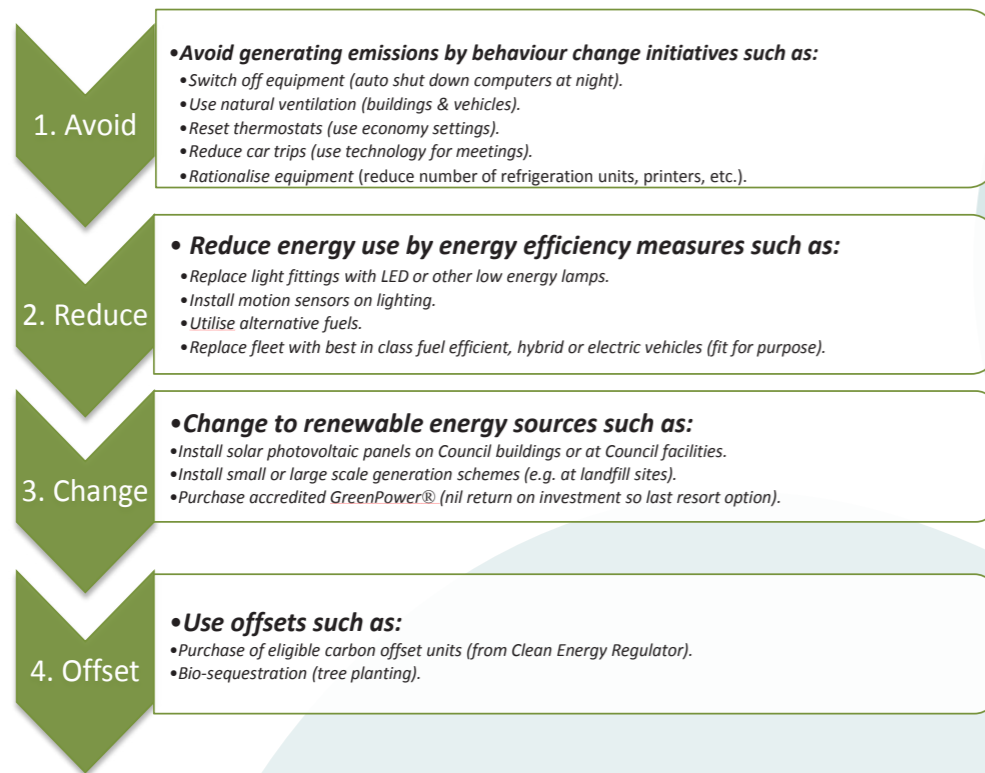


Figure 6: Hierarchy of Decision Making Framework for Zero Emissions Noosa™

As shown in the hierarchy above, actions that avoid or reduce emissions should be prioritised ahead of any renewable energy generation.

The purchase of carbon offsets would only be pursued after emissions have been reduced and energy sources switched to renewable resources to the fullest extent practical.

This hierarchy is recognised as environmental best practice for energy and GHG emission management.

**KEY ACTION 3**

.....

*The decision-making framework outlined in the Strategy will be used when determining the appropriate approach to reduce emissions for a specific activity.*

**KEY ACTION 4**

.....

*A detailed Action Plan will be developed that will prioritise actions over an initial 5 year period (and ultimately 10 years). Funding of actions will be considered as part of the annual budget development process.*

# 8. Carbon offsets

Carbon offsets are projects that indirectly compensate for emissions by:

As noted, pursuit of carbon offsets is a last resort option when considering actions towards net zero emissions.

- Investing in emissions avoidance or reductions elsewhere; or
- Removing carbon from the atmosphere, usually by storing in trees or soils.

Offsets can be purchased from voluntary or mandatory schemes. Figure 7 below outlines the steps Council should follow in pursuing the purchase of offsets:

**KEY ACTION 5**

.....

*The process outlined in the Strategy will be utilised when determining the appropriate approach to purchase of carbon offsets.*

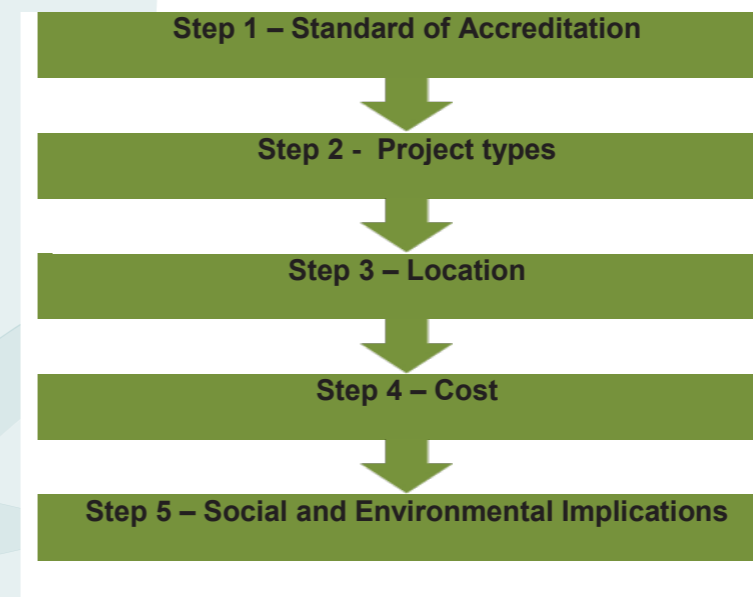


Figure 7: Decision making process for the purchase of offsets

Projects that generate offsets may be accredited to various standards. Council should select a standard that aligns with its own organisational principles.

The number of opportunities for major offset projects is limited because of availability of suitable sites and capital costs. Appropriate offset projects may need to be located outside of the Shire boundaries.

# 9. Cost analysis – Marginal Abatement Cost Curve

A Marginal Abatement Cost Curve (MACC) will be used to compare the relative cost and effectiveness of potential GHG emission reduction strategies. An assessment tool will calculate whether proposed emission reduction projects are cost effective for ratepayers and have the most potential to reduce emissions.

Innovative methods of delivery and various financing models will be investigated to help enable and/or fund actions in the detailed Action Plan.

## KEY ACTION 6

*Decision making for the Action Plan initiatives requiring capital investment will be based on detailed cost-benefit analysis. It will also ensure that recommended actions contribute to Council's ongoing financial sustainability and have the greatest potential to reduce emissions. Innovative methods of delivery and appropriate financing models may also be considered.*



# 10. Strategy implementation

## 10.1 Funding and resources

Implementation of the Strategy will be progressed through the Action Plan and through Council's annual budget process via the allocation of operating and capital funds and the provision of adequate resources (people & systems).

Opportunities for grants from other tiers of government will also be sought to assist in the delivery of the required actions. Partnership arrangements may also be considered.

## 10.2 Employee engagement

To deliver significant change it is vitally important that Council employees are involved in the process. Council's employees will need to integrate GHG implications into planning and decision-making for all activities, including their day-to-day use of facilities and equipment.

Effective employee engagement will be achieved by:

- The Leadership Team being champions for the Strategy and Action Plan.
- An effective communication plan that will provide the activity with the necessary profile in Council and also inform the community on achievements and milestones.
- Identifying appropriate resources to co-ordinate the Strategy and Action Plan delivery.
- Establishing an internal Council ZEN team to act as ambassadors for net zero emissions and to oversee monitoring, reporting and review of the Strategy and Action Plan.
- Create opportunities for all employees to provide input.
- Provide opportunities to celebrate successes and milestones.

## 10.3 External engagement

Council will lead by example. It will communicate its learnings and share its knowledge with the community.

Council may provide advice to residents and community groups who are wishing to reduce their own emissions and will endeavour to work closely with community based organisations that are working with the community to achieve a zero net emissions future.

## KEY ACTION 7

*Appropriate resourcing (people and systems) will be provided and Council will ensure an appropriate governance framework is established to ensure effective delivery, monitoring and reporting on implementation of the Strategy and Action Plan.*

# 11. Monitoring and review

The Strategy and the associated Action Plan will be reviewed to ensure that they are on-track to achieve Council's goals. Council will make amendments as required and ensure that progress reporting is being regularly undertaken. The following review process will be undertaken:

## 11.1 Annually

- Re-inventory of the organisation's emissions.
- Assessment of progress against targets.
- Analysis of the costs and benefits of actions compared with the cost and benefits of purchasing certified offsets.
- Measurement of the impact of implemented actions.
- Review of the Action Plan to ensure that it can still meet the Strategy objectives.
- Compilation of information for the annual reporting to include, where possible, the total cost per tonne of CO2e saved.

## 11.2 Biennially

In addition to the above items to be reviewed annually, at least every 2 years Council will ensure the approach remains appropriate in respect of legislative, political, economic, scientific, technological and social contexts.

### KEY ACTION 8

*The Strategy will be reviewed at least biennially (every 2 years) to ensure the approach remains appropriate to legislative, political, economic and social contexts. The detailed Action Plan will be reviewed annually as part of the budget development process.*

# 12. Glossary

Carbon Neutral	Means reducing your greenhouse gas emissions where possible and using offsets to compensate for the remainder to achieve zero net emissions.
Carbon Offset	Is a credible method of reducing emissions of carbon dioxide or greenhouse gases made in order to compensate for an emission made elsewhere.
Climate Change	A change in the pattern of weather, and related changes in oceans, land surfaces and ice sheets, occurring over time scales of decades or longer that may be caused by natural or human induced activities.
CO2e	Is an abbreviation of 'carbon dioxide equivalent' and is the internationally recognised measure of greenhouse emissions. There are many types of greenhouse gases. Six such gases are controlled by the Kyoto protocol.
Direct Emissions	Greenhouse gas emissions that are caused directly by actions taken by the owner or controlling entity.
GHG Emissions Footprint	An inventory of all greenhouse gases produced to directly or indirectly support human activities within a defined boundary based on available data. Can also be referred to as a Carbon Footprint. The words greenhouse gas and carbon have become synonymous in everyday speech.
Greenhouse Effect	The trapping of the sun's warmth in a planet's lower atmosphere, due to the greater transparency of the atmosphere to visible radiation from the sun than to infrared radiation emitted from the planet's surface.
Greenhouse Gas	Any of the atmospheric gases that contribute to the greenhouse effect by absorbing infrared radiation produced by solar warming of the Earth's surface. They include carbon dioxide (CO2), methane (CH4), nitrous oxide (NO2), and water vapour.
Greenhouse (GHG) Protocol	Is an international accounting tool that sets the global standard for how to measure, manage, and report greenhouse emissions.
GreenPower®	The GreenPower® Program is a government managed scheme that enables Australian households and businesses to displace their electricity usage with certified renewable energy, which is added to the grid on their behalf to decrease greenhouse emissions due to electricity generation.
Indirect Emissions	Greenhouse gas emissions that occur outside of the organisation but are generated upstream or downstream as a consequence of the organisation's actions.

Kyoto Protocol	The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets.
Marginal Abatement Cost Curve	Is a cost analysis model which compares the relative cost and effectiveness of potential carbon emission reduction strategies.
Man and the Biosphere	The intergovernmental scientific program under the name “Man and the Biosphere Program” that is facilitated by UNESCO.
Solar photovoltaic (Solar PV)	An array of photocells which convert sunlight to electricity.
UNESCO	The United Nations Educational, Scientific and Cultural Organisation.
UNFCCC COP21 Paris Agreement	Paris Agreement under the United Nations Framework Convention on Climate Change sealed on December 2015.
Zero Net Emissions	The same meaning as carbon neutral.
Zero Emissions Noosa™ (ZEN)	The words are a trademark of Noosa Council. The words may only be used by Noosa Council and any other parties licensed by Council to use the trademark.

