

**Report to General Manager**Attachments:
Nil

SUBJECT: North Sydney Carbon Emission Initiatives**AUTHOR:** Niki Carey, Senior Sustainability Programs Coordinator**ENDORSED BY:** Rob Emerson, Director Open Space and Environmental Services**EXECUTIVE SUMMARY:**

This report responds to the resolution of Council on 22 July 2019 with respect to Notice of Motion No. 7/19 by Cr Baker regarding the Climate Emergency. It provides an overview of existing and planned initiatives that are being implemented across the organisation, guided by Council's Greenhouse Action and Water Management Plan 2015-2020. These initiatives include solar projects, equipment upgrades, renewable energy electricity supply, streetlighting upgrades, community and business engagement programs and electric vehicle charging stations.

In combination, programs are set to see Council achieve its operational and community greenhouse gas reduction targets on track by 2020. Work is currently underway to develop new targets for 2030 accompanied by a new action plan to help guide Council's response to the climate emergency. This work will be the subject of a further report.

FINANCIAL IMPLICATIONS:

This report identifies a broad range of initiatives across the organisation, the funding for which is allocated in the 2019/20 budget.

RECOMMENDATION:**1. THAT** the report be received.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

Direction: 1. Our Living Environment

Outcome: 1.2 North Sydney is sustainable and resilient

BACKGROUND

This report responds to 1.a of Notice of Motion No. 7/19, considered by Council at its meeting on 22 July 2019, which resolved:

1. THAT Council:

a. prepare a report on initiatives that Council is currently undertaking, or could be improved, which have the effect of reducing carbon emissions. The report should particularly address:

- adoption of a guiding principle in all Council operations to reduce carbon emissions towards the reduction targets contained in the Paris Agreement.*
- Introduction or strengthening of existing policies that make a positive contribution to reducing carbon emissions.*
- A specific budget provision for climate change initiatives linked to the Delivery Program.*
- Facilitating the roll out of car charging battery stations in the local government area.*

b. join nearly 600 jurisdictions worldwide, including 22 Australian councils, and recognise that we are in a state of climate emergency that requires immediate action by all levels of government;

c. acknowledge that climate change poses a threat to the future of our cities, including the North Sydney Local Government Area;

d. note the latest report of the Intergovernmental Panel on Climate Change (IPCC) 'Global Warming of 1.5 degrees Celsius';

e. note the Federal Government's latest emissions data showing we are increasing, not reducing, our carbon emissions;

f. join with and support the City of Sydney's resolution of 24 June 2019 calling upon the State and Federal Governments to declare a climate emergency and to respond to this emergency by taking urgent action to meet the emissions reduction targets contained in the Paris Agreement;

g. encourage neighbouring Local Government Areas to join us by declaring a climate emergency and advocate to State and Federal Governments in their own right;

h. write to the Prime Minister, Premier of NSW and relevant State and Federal Ministers providing a copy of this resolution and calling upon them to act urgently to address climate change and its impacts; and

i. submit this motion to LGNSW for debate at the next LGNSW conference.

All other components of the Notice of Motion have already been completed.

CONSULTATION REQUIREMENTS

Community engagement is not required.

SUSTAINABILITY STATEMENT

The following table provides a summary of the key sustainability implications:

QBL Pillar	Implications
Environment	<ul style="list-style-type: none"> • These projects help reduce Council's energy consumption. • These projects help reduce the community’s energy consumption.
Social	<ul style="list-style-type: none"> • These projects help support Council's sustainable transport initiatives, increasing pedestrian access, bicycle access and public transport, and encouraging more people to participate in health and wellbeing activities like walking and cycling.
Economic	<ul style="list-style-type: none"> • These projects help Council better understand long term operational and maintenance costs associated with water and energy conservation technologies. • These projects help quantify energy and water savings that will directly contribute to Council's income.
Governance	<ul style="list-style-type: none"> • These projects will play an important role in helping Council to deliver on several of its goals and objectives in the "Our Living Environment" direction of Council's Community Strategic Plan, including: <ul style="list-style-type: none"> 1.4.1.2 Demonstrate sustainable business practices in Council’s own activities, including improved environmental performance of existing buildings 1.4.1.3 Reduce energy consumption and greenhouse gas emissions <ul style="list-style-type: none"> 1.4.1.3.1 Implement Greenhouse Action Plan

DETAIL

Guiding Principles to Reduce Carbon Emissions in all Council Operations

North Sydney Council has been proactively reducing its greenhouse gas (GHG) emissions for many years in an effort to reduce its energy consumption and its impact on climate change. Council set its first greenhouse gas reduction target in 2002 as part of the International Council for Local Environmental Initiatives (ICLEI) Cities for Climate Protection (CCP) program.

Council’s current greenhouse gas reduction target for its operations is:

50% greenhouse gas reduction of Council’s 1996 level emissions by 2020.

Council also established a community greenhouse gas reduction target to help residents and businesses to reduce their impact. The North Sydney community greenhouse gas reduction target is:

15% greenhouse gas reduction of the North Sydney community’s 1996 levels emissions by 2020.

Existing Policies

Council established its first Greenhouse Action Plan in 2002 to provide specific guidance to all Council operations to reduce carbon emissions in accordance with Council’s adopted

greenhouse gas reduction targets. This plan has been reviewed and updated several times since and the current plan is due for review in 2019/2020.

In 2017, Council signed up to the Cities Power Partnership (CPP) through the Climate Council as a foundation partner. This initiative helps Council progress on its greenhouse gas reduction mandate by providing access to resources and expertise, better knowledge sharing with other councils across the country and access to grants and incentives.

Current Progress and Initiatives

Council engaged consultants to undertake an emissions review in 2019 to track its progress against operational emission targets. The review demonstrated that Council had achieved a 30% emission saving in 2017/18 compared to the 1996 baseline level, through a combination of the following initiatives:

- Solar PV projects at a variety of Council sites including the Council administration building, depot, Stanton library and the Coal Loader Centre for sustainability;
- Continuous improvements to lighting, heating and cooling and other energy intensive equipment; and
- Greenpower purchases to offset 50% of the electricity use of Council's largest energy consuming sites.

The review predicted that Council is on track to achieving a 55% emission saving by 2019/20, surpassing our 50% reduction target. This reduction in emissions is expected to be achieved by:

- purchasing 35% of renewable energy for Council's large sites and streetlighting through a Power Purchase Agreement (PPA) which commenced in 2019;
- upgrading streetlighting to energy efficient LED bulbs starting in 2019/20;
- installing several new solar PV systems in 2019/20 which will take Council's total solar generation to 403kW; and
- the increase of the renewable energy component in the electricity grid itself (i.e.: poles and wires).

The emissions review also calculated the greenhouse gas emissions of the North Sydney community. This determined that the community had already achieved an 18% reduction in greenhouse gas emissions in 2017/18, surpassing the 15% reduction target, and is on track to stay below this level to 2020 and beyond. Contributing to this result are significant reductions in commercial and residential electricity use which occurred since the 1996 baseline year. To help the community achieve this target Council coordinates a range of activities designed to suit the needs of different target groups, including businesses, schools and the broader community. For example, Council runs regular workshops, events, and activities to help the community to reduce its greenhouse gas emissions. These activities are complimented with support materials provided on Council's website and through monthly e-newsletters. Programs like Smart Energy Future, Futureproofing Apartments and school grants, City Switch Green Office and the Better Business Partnership offer more tailored support.

Electric Vehicle Charging Stations

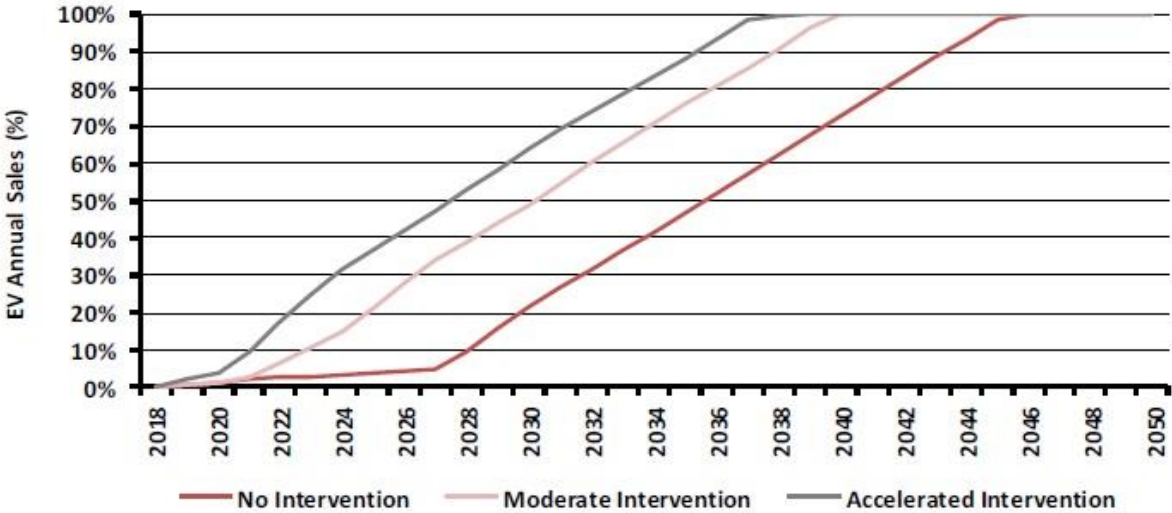
The North Sydney Transport Strategy discourages personal vehicle use, suggesting instead that most trips to and from North Sydney can and should be made on foot, by bike or by public

transport. Provision of electric vehicle charging infrastructure in North Sydney needs to be considered in this context. According to the Australian Government's "National Strategy for Electric Vehicles", greater electric vehicle uptake would reduce both greenhouse gas emissions and urban air pollution from the road transport sector. To help facilitate an increase in local EV ownership, ten new Electric Vehicle (EV) charging stations have been operating since July 2019 across all of Council's parking stations, as an initiative of the Engineering and Property Services Division and funded by the Parking Stations business unit. The chargers were installed in response to item 2.3.4.1 of the Delivery Program, which states "Investigate provision of recharge facilities for electric vehicles at public facilities and car parks".

This pilot program is designed to assess the technology and uptake of EVs by the general population. Each of the chargers that Council has purchased are capable of charging vehicles at a rate of up to 22kw using a three-phase electrical supply. Additional electronic load-balancing systems have been installed to ensure chargers do not overload the available electrical supply in the buildings, while still supplying as much current as is available to charge a customer's vehicle. The system includes an online system for customers to register and pay for the electricity they use, while also providing Council with data regarding usage. The price set for electricity supplied through the chargers is the rate charged to Council.

At this point in time, usage of the EV chargers is very low, reflecting the current low uptake of electric vehicles in the community. This is expected to change over the coming years with the Australian Renewable Energy Agency's 2018 "Australian Electric Vehicle Market Study" predicting an uptake of 20-60% of new Plug-in Electric Vehicle (PEV) sales by 2030, and 70-100% by 2040 (see Figure 1). These figures include plug in electric hybrids. Uptake is likely to be high locally with drivers on the north shore already leading the uptake of electric cars based to the ABS's 2018 motor vehicle census. Crows Nest has the second highest concentration of PEV ownership in the state after Gordon. The expected increase in PEV ownership will necessitate greater availability of charging infrastructure, particularly at home where PEV drivers prefer to charge. Council's development controls will therefore have an important role to play in supporting and accelerating PEV uptake. Currently commercial & mixed use development and the development of the public domain are encouraged to be designed and constructed so that electric vehicle charging points can be installed at a later time.

Figure 1: Projected Annual PEV Sales in Australia



There will also be a need for more public charging infrastructure for the 30% of drivers without access to dedicated home or workplace charging. According to the study, petrol station operators, major domestic operators, automotive associations, regulated electricity networks and energy retailers are in the strongest positions to deploy this public charging network.

Budget Provision for Climate Change Initiatives

Council's Environmental Levy provides funding to implement Council's Greenhouse Gas Action Plan. In the 2019/20 budget this equates to \$292,478. Property Assets also fund energy conservation upgrades as well as renewable energy projects like solar panels, which in 2018 totaled \$682,960. In addition, Council has allocated \$713,200 to the 2019/20 streetlight LED upgrade program, and the Parking Stations business unit funded the installations of ten public electric vehicle charge stations in 2019.

Future Opportunities

Work is currently underway to develop the 2020-2025 Greenhouse Action Plan and an Environmental Sustainability Action Plan which will include targets for 2030 that are in line with the Paris Agreement. These will be reported to Council separately in the near future and will explore opportunities like:

- increasing Council's renewable energy purchasing the future through further electricity PPAs;
 - electrification of hot water systems and small plant equipment;
 - investing in electric vehicles as part of Council's fleet as these become commercially viable;
 - purchasing carbon offsets for the residual emissions to aim for carbon neutrality; and
 - joining 45 Australian Councils who have committed to divesting from fossil fuels.
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