

8.13. 100% Renewable Electricity Procurement for Council and update on Council Solar PV program

AUTHOR: Albert Lo, Property Asset Manager

ENDORSED BY: Duncan Mitchell, Director Engineering and Property Services

ATTACHMENTS: Nil

PURPOSE:

The purpose of this Report is to provide an update on Council's new contract on Renewable Energy and also on the installation of Solar PV systems on Council buildings.

EXECUTIVE SUMMARY:

North Sydney Council has participated in an electricity supply tender in 2021 for renewable electricity under the Program for Energy & Environmental Risk Solutions 3 (PEERS 3) which was coordinated by the Southern Sydney Regional Organisation of Councils (SSROC).

As part of the PEERS 3 contract that Council has entered into as at November 2021, it is proposed to transition the majority of North Sydney Council's operations and major facilities to 100% Renewable Energy using solar power on 1 July 2022, with the remaining small building sites to move to 100% Renewable Energy from 1 January 2023.

Major facilities that will move to 100% renewable energy from July 1 include the Stanton Library, Council Chambers, Central Depot, St Leonards Park, all Council Streetlights and the newly redeveloped North Sydney Olympic Pool when complete. The remainder – small building sites including Community Centres, Carparks and facilities like the Coal Loader site will transition from 1 January 2023.

North Sydney Council has opted for 100% renewable energy under the agreement and, overall 83% of all the participating councils' total electricity supply will be covered by renewable energy from the Moree, Hillston and Nevertire Solar Farms, all located within NSW.

This report also updates Council on the photovoltaic program that Councils Property Department has been rolling out since 2008.

FINANCIAL IMPLICATIONS:

Funding is available in the current Operating budgets and future financial years for expenditure on renewable electricity for Council buildings and facilities. There will be significant savings from the 2022/23 financial year onwards after Council transitions into the

PEERS3 Renewable Electricity contract commencing on 1/7/2022 for Large Market sites and from 1/1/2023 for Small Market sites.

RECOMMENDATION:

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

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

1. Our Living Environment
 - 1.2 North Sydney is sustainable and resilient
2. Our Built Infrastructure
 - 2.1 Infrastructure and assets meet community needs

BACKGROUND

In terms of purchasing renewable energy North Sydney Council has had an agreement in place since 2009, whereby Council has purchased up to 50% renewable electricity for large market sites through the government managed Greenpower™ program. This program was independently verified and has been charged to Council at an additional rate on top of standard black power charges. The Greenpower™ verification process ensures that the renewable energy comes from 100% renewable sources, and the money goes to creating more Australian renewable energy projects.

In 2018 Council took the opportunity to switch to a more cost-effective renewable energy solution through a ten-year Renewable Energy Power Purchase Agreement with Origin Energy under the SSROC Program for Energy & Environmental Risk Solutions 1 (PEERS 1) program.

Under this program, participating councils purchase solar energy directly from an accredited Renewable Energy Retailer, in this instance “Moree Solar Farm”. The Moree Solar Farm is a 56MW photovoltaic solar plant located about 10km south of Moree in New South Wales. North Sydney Council committed to purchasing 30% of its energy through the PEERS 1 agreement from this energy retailer.

Through the PEERS 1 agreement, Council also achieved a very competitive rate for the renewable energy component of its electricity usage (30%) and as a result has saved approximately \$95,000 in annual electricity costs, and reduced Greenhouse gas (GHG) emissions by approximately 1500 tonnes every year.

Since Council’s 2019 Climate Emergency declaration, it has been an objective of Council to move towards 100% renewable energy to help Council achieve its GHG reduction targets.

These targets heavily rely on Council transitioning to 100% renewable electricity if it is to achieve its goal of being carbon neutral before 2030.

At its meeting of 24 May 2021, Council received a report which presented a number of scenarios to increase Council’s renewable electricity component. Based on this report, Council resolved to participate in PEERS 3 – an SSROC renewable energy tender. Specifically Council resolved, inter alia, the following:

1. *THAT Council delegates authority to the General Manager to determine Councils*

participation in the PEERS 3 procurement process following close of tenders to achieve up to 70% renewable electricity or more if cost neutrality can be maintained.

2. *THAT the General Manager be authorised to take any necessary action to implement the decision including entering associated contracts.*

The tender process for the SSROC renewable energy tender has since been finalised in November 2021 and the Best and Final Offers (BAFO) has been received from the short-listed tenderers.

It should be noted that the current agreement that Council has entered into is a combination of the PEERS 1 agreement (entered into in 2018) and the new PEERS 3 agreement entered into in November 2021.

The PEERS 1 agreement whereby Council was buying 30% of its energy requirements from the Moree Solar Farm has been novated into the PEERS 3 agreement whereby Council is purchasing the balance of its energy requirements (70%) from renewable energy retailers making Councils total energy consumption (100%) sourced from renewable energy retailers.

Note: Council did not participate in the PEERS 2 program which was for black power purchase and did not include any renewable energy component.

CONSULTATION REQUIREMENTS

Community engagement is not required.

DETAIL

Renewable Energy Procurement

There were a total of 25 Councils participating in this tender with a total combined annual load requirement of 214,000 MWh of electricity. North Sydney Council's total annual load requirement as at the end of the 2020/21 financial year is 5,120 MWh which is about 2.4% of the total annual load for the overall PEERS 3 contract.

Due to the large volume of the combined load from various Councils, the tender prices received from accredited renewable energy retailers have been very competitive and significant savings have been achieved in the recent tender.

At its meeting of 24 May 2021, Council delegated authority to the General Manager to determine Council's participation in the PEERS 3 procurement process following close of tenders to achieve up to 70% renewable electricity or more if cost neutrality can be maintained. The stage 1 PEERS 3 tender process with indicative pricing received from SSROC revealed that Council could purchase 100% renewable electricity and go beyond cost neutrality to achieve an annual saving in the range of \$53,742 - \$163,430.

The General Manager has since approved (under delegation) for North Sydney Council to purchase 100% renewable energy in this tender. With the Best and Final Offers (BAFO) pricing

received in November 2021, Council has subsequently entered into a contract with an electricity retailer ZEN Energy which has submitted the best offer in the SSROC tender.

ZEN Energy submitted the cheapest and most competitive offers over 5 years for both small and large market sites. It should be noted the offers from ZEN Energy are underpinned by renewable energy supply from 3 solar farms (Moree, Hillston and Nevertire Solar Farms), all located within NSW.

Councils contract with ZEN Energy via SSROC for both large market and small market sites is for 5 years from 1 July 2022 with the option of exit or price reset for a further 4 years up to 31 December 2030 (5+4 contract). In the new contract Council will achieve savings of \$143,000 per year while at the same time purchase 100% Renewable energy from the three (3) nominated solar farms in NSW.

As outlined earlier in this report the current agreement that Council has entered into is a combination of the original PEERS 1 agreement (entered into in 2018) and the new PEERS 3 agreement entered into in November 2021.

The PEERS 1 agreement whereby Council was buying 30% of its energy requirements from the Moree Solar Farm has been novated into the PEERS 3 agreement whereby Council is purchasing the balance of its energy requirements (70%) from renewable energy retailers making Councils total energy consumption (100%) sourced from renewable energy retailers.

Most of North Sydney Council's operations, major facilities including Stanton Library, Council Chambers, Central Depot, St Leonards Park, all Streetlights and the newly redeveloped North Sydney Olympic Pool, when complete will move to 100% solar power on 1 July 2022, with the remaining small building sites move to 100% solar power on 1 January 2023.

The SSROC Renewable Energy contract involves the supply of electricity to 25 Councils with over 300 major council facilities, more than 210,000 streetlights and more than 3,000 small sites managed by councils. The participating councils collectively represent over 3 million people, which is almost 38% of NSW population.

Over the first 5 years this agreement will reduce NSW emissions by over 650,000 tonnes CO₂e with an average of approximately 150,000 tonnes CO₂e per annum. North Sydney Council will reduce its GHG emission by 3600 tonnes every year.

The 25 participating councils are: Bayside, Burwood, Campbelltown, Canada Bay, Canterbury-Bankstown, Fairfield, Georges River, Hornsby, Hunters Hill, Inner West, Ku-ring-gai, Lane Cove, Liverpool, Mosman, North Sydney, Parramatta, Port Stephens, Randwick, Ryde, Singleton, Sutherland, Tamworth, Waverley, Willoughby and Woollahra.

It should be noted that 19 out of 25 participating Councils have opted for 100% Renewable Energy under this contract.

Benefits of using renewable energy

The key benefits (other than financial) from Council switching to use renewable energy for its requirements is that this energy is produced using solar, wind or hydro powered systems which are considered as sustainable energy resources. Using energy from these sources lessens the exhaustion and reliance on natural resources such as coal and other fossil fuels traditionally used for energy generation.

Renewable energy also reduces nitrogen oxide emissions, sulphur oxide emissions as well as carbon dioxide emissions associated with fossil fuel generation of electricity. It is also now widely recognised that renewable energy generation projects create new industries in local communities, especially in rural areas.

Solar PV systems on Council buildings- update

Since 2008, North Sydney Council has taken a leading role in local government by installing solar photovoltaic (PV) systems in Council owned buildings. From 2008 up until 2022, Council has completed 16 installations with a combined total capacity of 497.9 kW of solar panels, capable of producing 753 MWh of free electricity from the sun each year.

This amounts to 12.8% of Councils total electricity consumption. Based on average price of \$0.22 /kWh, the total value saved would be over \$165,000 per year.

A list of all solar PV installations on Council owned buildings, in the order of their initial installed dates, is outlined below:

| <i>INSTALLATION NAME</i> | <i>Installed Date</i> | <i>System (kW)</i> | <i>Capacity</i> |
|---------------------------------|---------------------------------|---------------------------|------------------------|
| Ros Crichton Pavilion | August 2008 Replaced Jan 2022 | 12 | |
| Stanton Library | August 2009 Expanded May 2013 | 30.5 | |
| Coal Loader Sheds & Cottage | December 2010 Expanded May 2020 | 28.6 | |
| Council Chambers | August 2011 Replaced Nov 2021 | 51 | |
| Central Depot | May 2012 Expanded Jan 2019 | 64 | |
| Kirribilli Neighbourhood Centre | June 2015 | 7 | |
| Neutral Bay Community Centre | September 2015 | 18.5 | |
| Crows Nest Community Centre | February 2016 | 30.8 | |

| | | |
|---------------------------------|---------------|--------------|
| North Sydney Community Centre | December 2017 | 21 |
| Coal Loader Café | August 2018 | 9.8 |
| Coal Loader Platform & Trackers | April 2019 | 58 |
| Holtermann St Car Park | August 2020 | 94.5 |
| McMahons Point Community Centre | December 2020 | 7.4 |
| McMahons Point Café | December 2020 | 14.8 |
| Forsyth Park Community Centre | January 2021 | 20 |
| Bradfield Park Community Centre | October 2021 | 30 |
| TOTAL CAPACITY (kW) | | 497.9 |

Council’s Property Department will continue to install more solar PV systems on Council owned buildings in the coming years and consideration will also be given to install Battery systems (eg Tesla Powerwall) to better utilize and support the solar PV installations.



Photo 1. Council Chambers Wyllie Wing Solar PV panels



Photo 2. Council Chambers SolarEdge Inverters



Photo 3. Holtermann Street Car Park Solar PV car ports



Photo 4. Tesla Batteries in Holtermann Street Car Park solar PV system