

Accelerating Dubbo Regional Council towards a renewable energy future

COUNCIL NAME

Dubbo Regional Council

WEB ADDRESS

dubbo.nsw.gov.au

SIZE

7,535 square kilometres

POPULATION

53,240

Overview

Non-renewable sources of stationary and transport energy contribute around 81% of NSW's greenhouse gas emissions (GHG), and at least 66% of the Dubbo Region's emissions. In February 2020, Dubbo Regional Council adopted an ambitious Energy Strategy and Implementation Plan 2020 – 2025 aimed at not only reducing energy costs, but also tackling energy and transport emissions.

Background

In 2019 the impacts of climate change were evident with the Bureau of Meteorology's Annual Climate Statement stating that it was Australia's hottest and driest year on record. To reduce the impacts of climate change and save money, Dubbo Regional Council developed a strategy to reduce its emissions.

Council's carbon footprint (or emissions) relating to energy use in 2017/2018 was made up of 87% electricity use and 11% diesel use for fleet, with petrol and gas consumption accounting for a low proportion of the carbon footprint.

In the 2017/2018 financial year Dubbo Regional Council consumed:

- 23,042 MWh in electricity, with 58% of Council's consumption dominated by water and sewer assets, 25% buildings and 17% street lighting;
- 5,225 GJ of natural gas and 662.3 GJ of bottled gas; and
- 36,808 GJ of diesel, 2,607 GJ of petrol and 152 GJ of E10 (ethanol) for fleet operations.

Council's development of the Energy Strategy and Implementation Plan arose from the 2040 Community Strategic Plan (CSP) which calls for an energy strategy for Council facilities and buildings. Additional CSP strategies supporting the development include:

- 2.1 Opportunities for use of renewable energy are increased; and
- 5.9 Environmental sustainability is a priority.

Implementation

The Energy Strategy and Implementation Plan was developed in three key steps:

Step One: Development of a Background Paper

A background paper, which forms Part 1 of the Strategy and Plan, provides the overall context or business case "to act". This important piece of work was developed on behalf of Council by 100% Renewables, an expert energy consultant engaged under the NSW Department of Planning, Industry and Environment's Sustainability Advantage Program. The background paper brings attention to the importance of energy conservation and renewable energy; highlights the current range of responses (from international to local) to energy management and carbon reduction; examines Council's response so far to managing energy; looks at future energy industry trends; provides a list of best practice energy efficiency and renewable energy opportunities for Council; presents a number of energy management scenarios up until 2030 utilising these opportunities; and collates feedback from a number of Council workshops (with both Councillors and staff) on preferred energy management strategies.

Step Two: Development of the Draft Strategy and Implementation Plan

A draft Strategy and Implementation Plan was developed in house by Council's Organisational Sustainability Coordinator, in consultation with Council staff. This built upon information provided in the background paper and feedback from the workshops on strategic objectives.

The Draft Strategy and Implementation Plan outlined Council's strategic vision, strategies and outcomes for energy management within Council controlled facilities and activities. It also sought to outline ways in which Council could support the local community in becoming energy smart. The Implementation Plan outlined specific actions to be undertaken by Council to ensure the strategic outcomes in the Energy Strategy were addressed.

Step Three: Adoption of the Draft Energy Strategy and Implementation Plan by Council

The Draft Energy Strategy and Implementation Plan was reviewed by a number of key Council staff before being submitted to the Executive Leadership Team for review and adoption, and then finally onto Council for adoption at its ordinary meeting on 24 February 2020.

The effect of energy efficiency and renewable energy measures undertaken as a result of the Strategy and Implementation Plan will be monitored through Council's energy monitoring software (e21).

Outcomes

The Dubbo Regional Council Energy Strategy and Implementation Plan 2020 – 2025 is designed to support and guide Council in reducing its energy consumption, increasing energy efficiency, and increasing the use and adoption of renewable energy resources and sustainable transport. The Strategy and Implementation Plan also seeks to support the local community in becoming energy smart.

Council is currently in the process of implementing and working through the Energy Strategy and Implementation Plan. The first major project to be implemented under the Strategy and Plan commenced in February 2020 and includes the upgrade of more than 90% of Council's street light network to new energy efficient LED technology at a cost of over \$2.37m and with a payback period of 4 years. This project is estimated to save Council at least \$570,000 per year in energy and maintenance costs. It is also set to reduce Council's energy use by 1784 MWh per year, equivalent to getting nearly 268 cars off the road annually.

Key Learnings

One of the most important steps in developing the Energy Strategy and Implementation Plan was creating the 'business case' to act. It enabled Council to understand the reasons to act, what to do and how to achieve best practice in energy management. Consultation and engagement of key staff, the Executive Leadership Team, and councillors throughout the development process was also essential and helped to promote the business case behind the Strategy and Implementation Plan.

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LED streetlight replacement program launch