

Lighting up a sustainable Western Sydney

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Eight Western Sydney councils have saved ratepayers tens of millions of dollars – and massively reduced carbon emissions – by working together on local sustainable energy projects and 100 per cent renewable power purchase agreements with energy providers.

The latest annual report by the Western Sydney Regional Organisation of Councils (WSROC) – the peak body representing councils in Greater Western Sydney – reveals that under its Western Sydney Energy Program, the eight councils managed to save ratepayers over \$36 million since 2019.

The scheme also reduced the councils' combined greenhouse gas emissions by 535,714 tonnes – equivalent to taking 124,585 cars off the road each year.

'Contributing to the savings has been the rollout of modern high-tech LED street lighting across the eight council areas,' says WSROC President Councillor Barry Calvert.

'By June next year, more than 100,000 streetlights will have been changed to LEDs. That alone saves \$16.2 million in estimated regional energy costs annually, and reduces carbon emissions by 71,378 tonnes.

'Residents across the eight participating council areas will also benefit from brighter, more reliable and higher-quality street lighting, and improved public safety.'

The Western Sydney Energy Program commenced in February 2019, and is a collaboration between Blacktown City Council, Blue Mountains City Council, Camden Council, Cumberland City Council, Hawkesbury City Council, The Hills Shire Council, Liverpool City Council and the City of Parramatta.

'The member councils have made excellent progress in reducing energy costs and carbon emissions during the short life of the program,' says Calvert. And there's more to come.

'Thanks to an agreement with Endeavour Energy, the electricity distributor for Greater Western Sydney, Western Sydney councils will install 52,200 new energy-saving LED streetlights, replacing older, less-efficient lamps [that have] mercury vapour and high-pressure sodium.'

Under the Western Sydney Energy Program, coordinated by WSROC, the rollout of the LED streetlights is expected to save Western Sydney ratepayers more than \$3.2 million in



energy and maintenance costs each year, as well as reduce greenhouse gases by 14,000 total carbon dioxide.

Residents across the participating council areas will also benefit from higher-quality street lighting. The new LEDs have:

- greater uniformity of light across and along streets
- better colour rendering and visibility
- less nuisance waste light spill (including reduced sky glow).

'In considering the program a once-in-20-year opportunity to improve their street lighting network, some councils have taken the chance to review and improve compliance with Australian Standards for street lighting,' says Calvert.

'This has involved not only increasing light levels to achieve compliance where lighting was insufficient, but also reducing light levels where over-lighting was found.



'Some councils have also taken the opportunity to mitigate the negative impacts of public lighting on areas and/or animal species sensitive to light at night through the deployment of glare shielding and considering alternative colour temperatures.

'A stand-out upgrade under the program has been the City of Parramatta's deployment of around 4500 smart streetlights on its major roads.

'In partnership with Endeavour Energy, Parramatta has deployed "smart" streetlights that can be monitored and controlled remotely. This will not only result in improved maintenance and road safety outcomes – with faulty lights identified and repaired more quickly – but will also make further energy and emissions savings through the application of energy-saving features like constant light output, trimming and dimming.

'Compared to the basic LED upgrade, City of Parramatta will further reduce energy and greenhouse emissions by around 46 per cent [by] implementing this "smart" lighting design,' Calvert continues.

'A notable additional feature of the smart installation is the reduction in over-lighting, thereby further reducing nuisance light spill and glare.

'The City of Parramatta's approach is consistent with that increasingly being taken by distribution areas across the country, and marks a step change in the management and operation of street lighting. Street lighting makes up a very large part of Councils' electricity bill.

'Through the Western Sydney Energy Program, WSROC works closely with Western Sydney councils and in partnership with Endeavour Energy to replace older,

inefficient streetlights with the latest energy-saving LED lights.

‘Public street lighting costs ratepayers millions of dollars each year, with street lighting dominating councils’ energy costs.

‘So, anything councils can do to reduce costs – and carbon emissions – will allow councils to redirect funding to other projects, infrastructure and wider services.

The Western Sydney Energy Program is among the most ambitious street lighting replacement projects that New South Wales has ever seen.

‘The eight councils have also joined WSROC’s Western Sydney Electric Vehicle Roadmap, with a focus on assisting councils with electric vehicle (EV) transition plans, charging for fleet, and advocacy and policy development to support community uptake of EVs.

The Western Sydney Energy Program has aligned and maximised the councils’ energy and cost-saving efforts.

This is absolutely vital as Western Sydney’s rapid population growth and hot climate continue to place increasing pressure on our electricity grid, and cause electricity bills to rise.

‘Ensuring that Western Sydney is prepared to transition to an energy-efficient, low-carbon future is critical for our communities.

‘The Western Sydney Energy Program exists to support participating councils by establishing an aligned position, based on best practice, so that future regional development is both cost-effective and futureproofed with a significantly reduced carbon footprint,’ says Calvert.

The Western Sydney Energy program is focused on four areas of activity:

- installation of low-cost, low-emissions renewable energy generation and storage
- transport infrastructure to deliver a low-cost and low-emissions future
- helping the community access services to reduce energy costs
- implementing best practice in energy planning and design for key precincts and facilities.



From left: Liverpool City Deputy Mayor Karress Rhodes; Blacktown City Mayor Tony Bleasdale; and Endeavour Energy General Manager for Business Services Andrew Pitman

Western Sydney faces unique circumstances that impact on the region’s energy footprint.

Greater Western Sydney is large and rapidly growing, covering an area of 9391 square kilometres, and with a current population of more than 2.7 million, which is expected to reach 4.1 million by 2041. The region also provides over a million local jobs.

‘Consequently, our infrastructure, economy and community provide both challenges and opportunities relating to energy,’ says Calvert.

‘The councils participating in the Western Sydney Energy Program see great potential for integrated planning and investments to futureproof the region and increase its resilience. Western Sydney provides the scale and diversity to pilot innovation.

‘The region faces serious issues in relation to urban heat, which are likely to become more challenging over time. On hot summer days, for example, energy consumption for cooling can be 100 per cent higher in Western Sydney compared to the eastern suburbs. This all places additional stress on our energy system, increases costs to the community, and can lead to critical health issues.

‘Councils working in cooperation with each other and working closely with major energy providers is essential if [they] are to meet the future challenges we will face, especially with a warming climate and the need to transition to renewable energy sources,’ Calvert says. 🇦🇺

For details about the Western Sydney Energy Program, visit <https://wsroc.com.au/projects/project-western-sydney-energy-program>.