

WESTERN SYDNEY **ENERGY PROGRAM**

Working together for a better energy future



ABOUT WESTERN SYDNEY ENERGY PROGRAM

The Western Sydney Energy Program is a collaboration between nine Western Sydney councils that aims to increase opportunities for energy, cost, and emission savings for councils and their communities.

Towards a future of zero net carbon emissions

Western Sydney councils are leaders in energy efficiency. They are committed to sustainable pathways and pursuing ways to lower energy costs and emissions.

\$1.2m saved annually and counting

Western Sydney councils have already saved more than \$1.2m and almost 500,000 tCO₂e (tonnes of Carbon Dioxide equivalent) annually across a wide range of projects such as lighting and equipment upgrades, waste management, solar installations, and smart cities initiatives.

The Western Sydney Energy Program aims to create a low cost and low emission energy future for Western Sydney.

In 2019, Western Sydney Regional Organisation of Councils (WSROC) launched a new initiative: the Western Sydney Energy Program, which builds on previous, successful energy initiatives.

Nine councils participate in the program and drive action: Blacktown, Blue Mountains, Cumberland, Fairfield, Hawkesbury, the Hills, Lithgow, Liverpool and Parramatta.

The program is coordinated by WSROC with the assistance of Ironbark Sustainability.

Our aspiration:
Deliver an additional 1-2% reduction of Western Sydney's annual community-scale emissions.
This equates to 200,000 tonnes of CO₂e reductions each year

Western Sydney Energy Program strategic focus areas:



Renewable energy transformation

Installation of low cost, low emission energy generation and storage



Transport

Transport infrastructure that enables an innovative and low emissions future



Supporting our community

Helping the community access services to reduce energy costs



Facilities and precincts

Implementing best practice in energy planning and design for key precincts and facilities

This Strategy is aligned with and contributes to key state and federal government policies on energy, including the NSW Government 'net zero emissions by 2050' aspirational target, and the Australian Government's target of 26-28% reduction in GHG emissions, compared to 2005 levels, by 2030.



Solar panels on residential housing in Western Sydney

COLLABORATING TOWARDS ZERO EMISSIONS

The Western Sydney Regional Organisation of Councils (WSROC) has facilitated engagement between Western Sydney councils and other stakeholders on energy initiatives for many years.

In 2019, WSROC and participating councils established the Western Sydney Energy Program in order to build on the success of past and continuing projects and to create a forum for maximising efforts through collaboration.

The Western Sydney Energy Program aims to support councils and communities by working towards more affordable energy and lower energy emissions in the region.

Between February and June 2019, participating councils worked with WSROC and Ironbark Sustainability to develop the initial strategic direction (this document) for the Western Sydney Energy Program and to identify priority projects for implementation.

Program implementation will be kickstarted in 2019 and 2020.

Related WSROC programs:

- **Light Years Ahead**

An energy-efficiency initiative which included street light replacement and solar installation projects 2016 - 2019.

- **Turn Down the Heat**

A strategy and action plan to address urban heat in Western Sydney through adaptation and mitigation.

- **Western Sydney Regional Waste Avoidance and Resource Recovery Strategy**

A regional collaboration on waste management issues.



Street light replacement program in Parramatta LGA

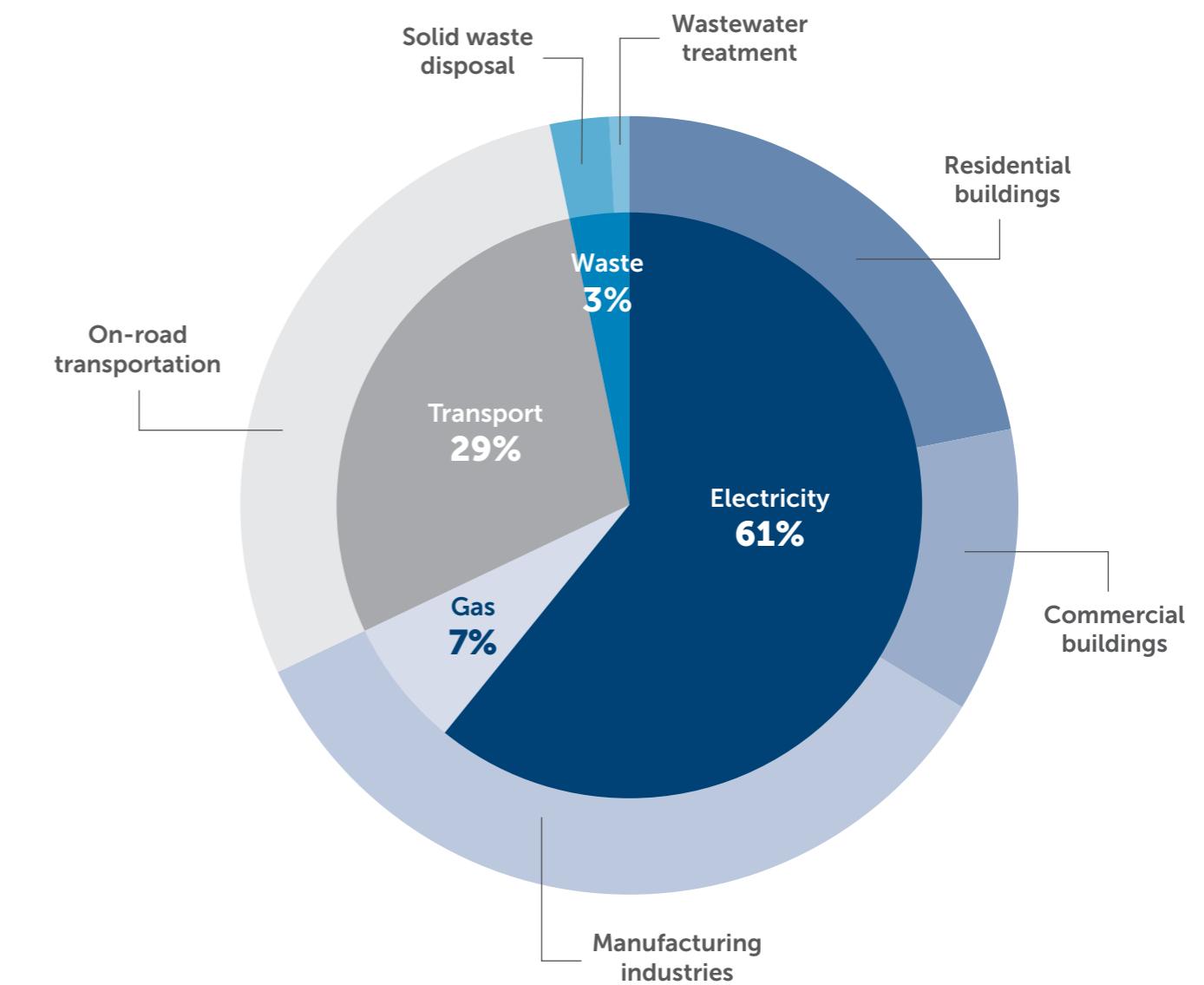


M4 Motorway in Western Sydney

WESTERN SYDNEY'S EMISSIONS FOOTPRINT

Western Sydney has an annual emissions footprint of approximately 20 million tonnes of carbon emissions, which equates to around 1/20th of Australia's national emissions.

The majority of these emissions are from regional electricity use, followed by transportation. Manufacturing, on-road transportation and residential buildings are shown to be key contributors.



Source: Developed by Ironbark Sustainability in accordance with the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories.

KEY ISSUES AND OPPORTUNITIES

Complex social, economic and environmental trends are emerging in the region and will impact energy futures.

Economic powerhouse

Greater Western Sydney is Australia's third largest economy and provides opportunities for new infrastructure and accelerated technological adaptation.

Policy focus

Current policy initiatives strongly focus on Western Sydney, providing opportunities for investment and planning from all levels of government. This includes the Greater Sydney Commission's 2056 plans for the Western Parkland and Central River Cities, and the Western Sydney airport.

Growth

Already home to 2.5 million people, the region's population is expected to increase with an additional 1 million by 2036¹. This will have major impacts on energy demand and greenhouse gas emissions.

New technology

An anticipated increase in electric vehicles will impact energy use and requires infrastructure updates.

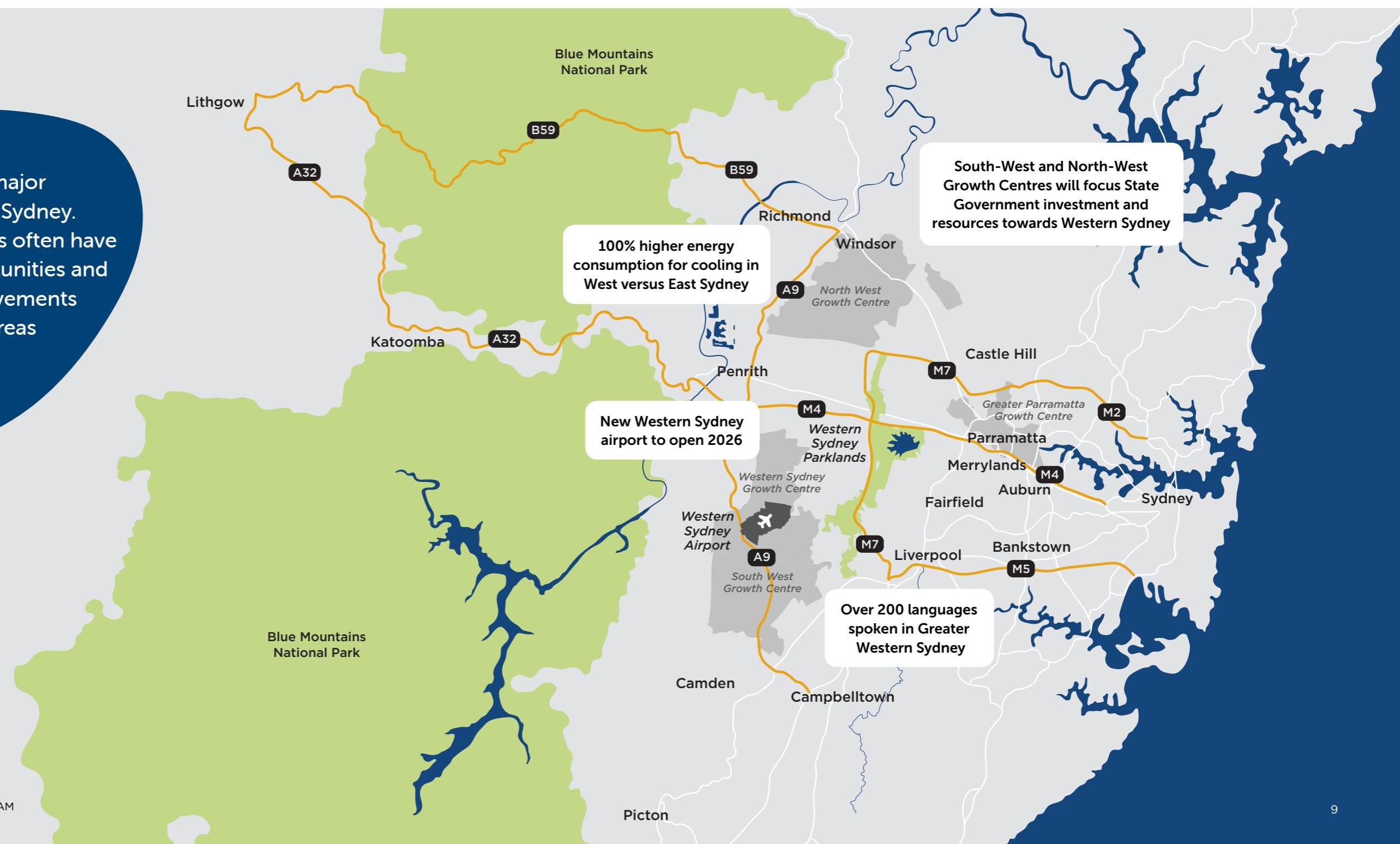
Heat

Urban heat is a major issue for Western Sydney; leading to health risks and increased energy demand for cooling; putting stress on the electricity grid.

Costs

Cost of energy is a huge burden on Western Sydney communities, especially vulnerable people.

¹ DPIE, 2016 population household projections



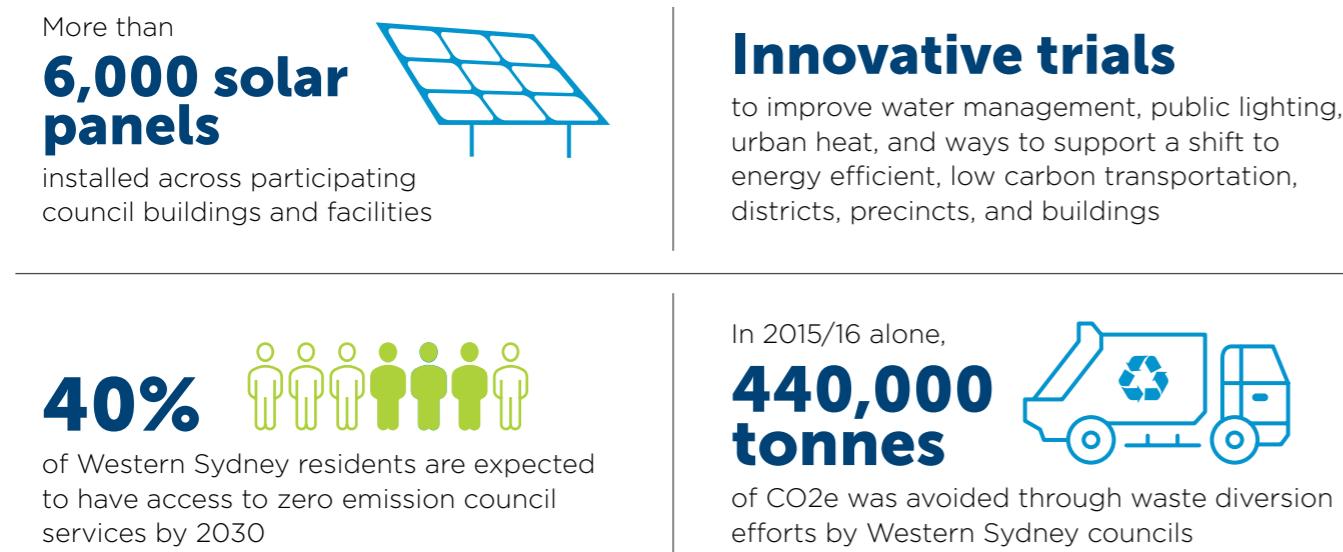
PUTTING THE PROGRAM INTO ACTION

The Western Sydney Energy program builds upon existing initiatives such as:

Light Years Ahead – A WSROC energy efficiency initiative:



Other Western Sydney council initiatives:



SIGNIFICANCE OF IMPACTS

The Western Sydney Energy Program anticipates two kinds of impact

Direct impacts from projects and **indirect impacts** from the program's advocacy and input into planning activities, as well as intangible outcomes from collaboration, learning, and demonstration of civic leadership.



KEY ASPIRATIONS

A key aspiration for the program is to deliver projects that result in 1-2% reduction in the Western Sydney Energy Program region's annual community-scale emissions. This equates to projects with the potential for 200,000 tonnes of CO₂e emission reductions each year.

Although ambitious, this aspiration has been agreed upon to help prioritise projects with a strong evidence-base, capable of producing quantitative results.

In its first two years of implementation, the Western Sydney Energy Program also aspires to create a sustainable financing mechanism to ensure its longevity and continuity. This has been factored into the program's design, assessment tools and processes.

Reducing annual emissions by 200,000 tonnes of CO₂e, is equivalent to taking 46,000 cars of the road each year.



Engaging with stakeholders across the region

WORKING WITH OTHERS TO CREATE CHANGE

The nature of Australia's energy system means that the most effective opportunities for transformational change often lie outside the direct actions and control of councils.

As a result, some of the largest impacts from the program may occur via the advocacy, partnerships and influence of the program on other levels of government, business and the community.

The power of these indirect impacts can be immense. Collaboration between councils and other stakeholders is a key strength of the program and is critical for achieving lasting change.



Collaboration is key to the Western Sydney Energy Program

WESTERN SYDNEY ENERGY PROGRAM: PRIORITIES

The program's steering committee identified priority actions for the initial 2-3 years of the program. These are listed below. Actions will be reviewed regularly and updated where required.



RENEWABLE ENERGY

Installation of low cost, low emission energy generation and storage

PROGRAM INTERVENTIONS	<ol style="list-style-type: none">Onsite solar for council facilities (Years 1-3)Collaboration on renewable energy electricity procurement (Years 1-3)
DELIVERY TIMEFRAME	Within 9 months then ongoing
IMPACT (ASPIRATION)	Direct: >200,000 tCO2e-; social & economic benefits Indirect: social & community benefits and opportunities for vulnerable communities and business



Residential street in the Liverpool Local Government Area



TRANSPORTATION

Regional transport infrastructure that delivers a low carbon, low cost transport future in the region, and supporting councils to lead by example

PROGRAM INTERVENTIONS	<ol style="list-style-type: none">Supporting councils to transition their fleet to low carbon vehiclesRegional collaboration and advocacy to regional, state and federal partners for supportive transport infrastructure to deliver a low carbon, low cost transport future in the region
DELIVERY TIMEFRAME	Within 2 years then ongoing
IMPACT (ASPIRATION)	Indirect: >200,000 tCO2-e, social & economic benefits to region



Identifying opportunities to reduce vehicle emissions



SUPPORTING OUR COMMUNITY

Helping local businesses and homes to access services for low cost, low emissions energy

PROGRAM INTERVENTIONS	<ol style="list-style-type: none"> 1. Collaborative community information and outreach program for Western Sydney 2. Extending the WSEP regional electricity program to the community, providing business and community access to low-cost, low emission solar energy
DELIVERY TIMEFRAME	<ul style="list-style-type: none"> • Outreach program within 12 months and ongoing • Community projects (such as solar bulk buy programs) within 2 years
IMPACT (ASPIRATION)	<p>Direct: Improved council services and connection to community Indirect: Residential and business access to financial savings and improved business outcomes</p>



Support business owners to make an energy transition



FACILITIES AND PRECINCTS

Enabling councils to collaboratively implement best practices in planning and design for next generation energy systems as the region develops

PROGRAM INTERVENTIONS	<ol style="list-style-type: none"> 1. Projects at council buildings and facilities to embed leading energy technologies, design and management 2. Support and collaboration to include ecologically sustainable development (ESD) and low carbon precinct-level interventions in urban planning 3. Advocacy and collaboration to develop energy-related planning controls, pilots and projects at facility, precinct and regional scales
DELIVERY TIMEFRAME	<ul style="list-style-type: none"> • Supporting LSPS, LEP and DCP content to July 2020 then ongoing • Projects within 2 years then ongoing
IMPACT (ASPIRATION)	<p>Direct: 50,000 to 200,000 tCO2e-, social & economic benefits to region Indirect: >200,000 tCO2-e, social & economic benefits to region</p>



Collaboration to future proof our cities

MEASURING IMPACT

The Western Sydney Energy Program has developed a project opportunity assessment tool that supports analysis and prioritisation of opportunities, based on quantitative insight.

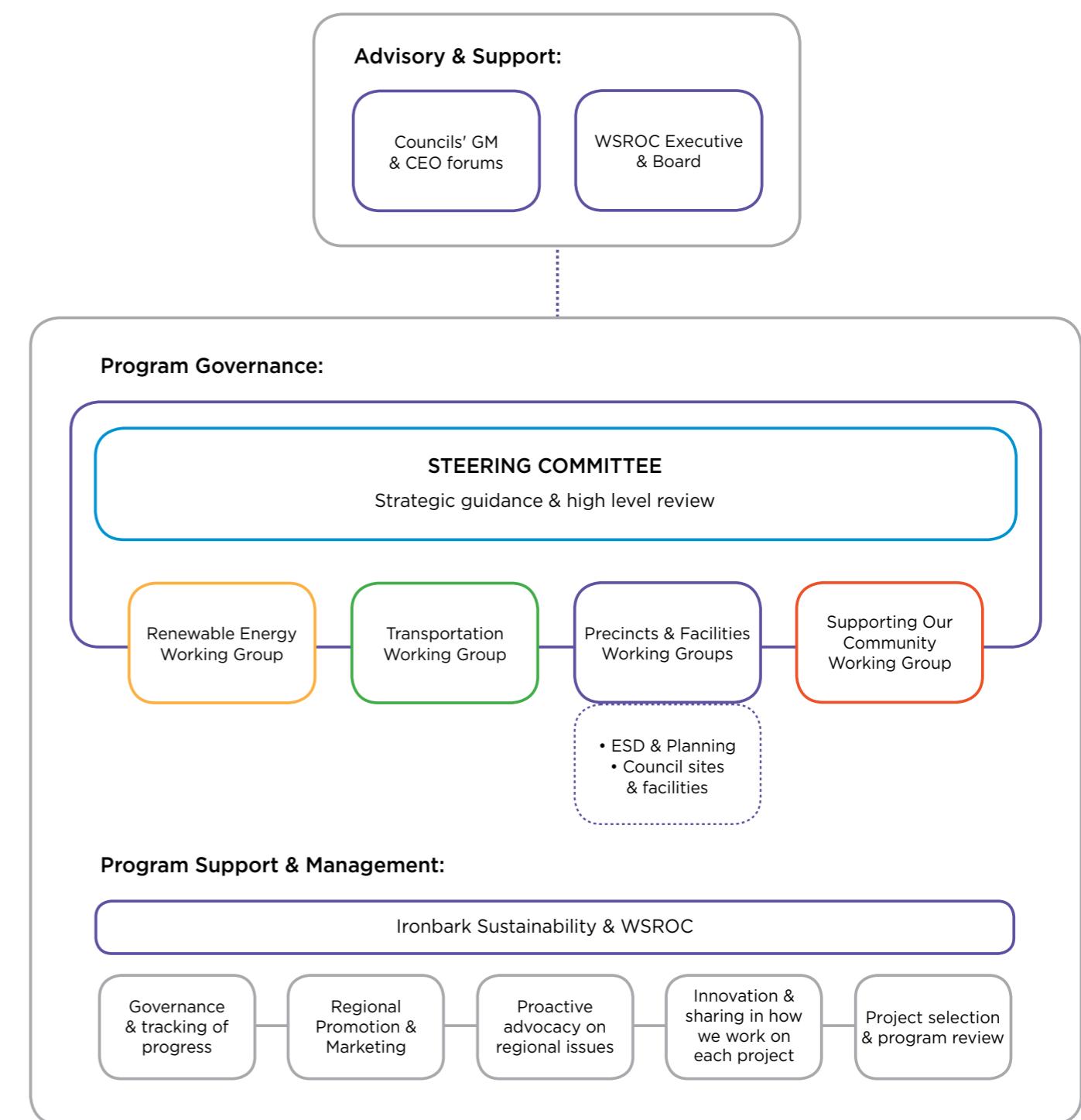
Projects are assessed according to their financial quality, potential environmental benefits, potential social impact, demand from councils for the intervention, and execution risk.

Impacts from the program will be collated and reviewed on an annual basis.



MANAGEMENT OF THE PROGRAM

The program is coordinated by WSROC with the support of Ironbark Sustainability. The steering committee provides strategic direction to the program and is made up of representatives of participating councils.



Working towards a better future for generations to come

Participating councils:



WSROC acknowledges Aboriginal and Torres Strait Islander peoples as the traditional custodians of the lands and waters of Greater Western Sydney. We pay our respect to Elders past, present and future.

WSROC facilitated the development of this strategy on behalf of participating councils.



The Western Sydney Regional Organisation of Councils' (WSROC) mission is to build collaboration between local governments across Greater Western Sydney, promoting Western Sydney, its people and places through advocacy, business improvement, strategic leadership, research and partnerships.

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