



SCIENCE AND  
INDUSTRY  
ENDOWMENT  
FUND



# STEM Community Partnerships Program

## Blacktown local scenario

### Environmental sustainability and climate change

A major challenge for Western Sydney is the preservation of its unique natural environment while also allowing growth in its urban population. Blacktown City Council has developed an Environmental Sustainability Framework that outlines a set of objectives and focus areas to conserve and enhance the local environment. The goal is to become a carbon neutral organisation by embedding best-practice environmental sustainability management.

Urban growth in Western Sydney is inevitable with Greater Western Sydney expected to be home to more than 50% of Greater Sydney Region's population by 2036. Local industry and Councils have the opportunity to be the catalyst to reduce natural environment impacts through meaningful planning and management of natural resources. Investment in sustainable power generation has seen steady progress in resources such as wind and solar energy. However, progress on storage technology for electricity generated through renewables is required to provide consistency and continuity across Blacktown and the national grid. These changes in electricity supply have a direct effect not only on the environment but also on the profitability and viability of businesses.

Council's response to the environmental effects of climate change have been logical, meaningful, and simple in its implementation. Backing a multitude of environmentally sustainable initiatives, like sustainable purchasing, sustainable events management, reduction in pesticide use and a sustainable management practise for parks and reserves. The response has also included implementation of recharge stations for electric cars in Blacktown and Mt Druitt. Blacktown City faces tough choices in the future. The rapid growth of the area provides an opportunity to implement large-scale sustainability measures and new technologies across developing communities.

How your Council tackles the complexity of this issue impacts you and your community now and in the future.

### Your task

Your task is to use the information above and resources provided below as a start to identify a local problem and design a STEM-focussed solution.

(Question, Design, Explore, Communicate)



Blacktown Council Carpark  
<https://www.plugshare.com/location/89099>

## Resources

### CSIRO research

- Global megatrends report <https://www.csiro.au/en/Do-business/Futures/Reports/Our-Future-World>
- National Hydrogen Roadmap [https://www.csiro.au/~media/Do-Business/Files/Futures/18-00314\\_EN\\_NationalHydrogenRoadmap\\_WEB\\_180823.pdf?la=en&hash=36839EEC2DE1BC38DC738F5AAE7B40895F3E15F4](https://www.csiro.au/~media/Do-Business/Files/Futures/18-00314_EN_NationalHydrogenRoadmap_WEB_180823.pdf?la=en&hash=36839EEC2DE1BC38DC738F5AAE7B40895F3E15F4)

### Reports

- Responding to climate change strategy, Blacktown City Council <https://www.blacktown.nsw.gov.au/files/content/public/about-council/plans-policies-and-reports/environmental-reports/blacktown-city-council-responding-to-climate-change-strategy.pdf>
- Ecologically sustainable development, Blacktown City Council <https://www.blacktown.nsw.gov.au/Community/Our-environment/Ecologically-sustainable-development>
- Local Strategic Planning Statement, Blacktown City Council, August 2019 [https://www.blacktown.nsw.gov.au/files/assets/public/draft-blacktown-lsps\\_30aug2019.pdf](https://www.blacktown.nsw.gov.au/files/assets/public/draft-blacktown-lsps_30aug2019.pdf)
- World Energy Needs and Nuclear Power, World Nuclear Association, December 2020 <http://www.world-nuclear.org/information-library/current-and-future-generation/world-energy-needs-and-nuclear-power.aspx>
- World Energy Outlook 2020, IEA, October 2020 <https://www.iea.org/reports/world-energy-outlook-2020>

### Articles

- A Salty Solution to Solar after Dark, CSIRO News Blog, CSIRO, May 2016 <https://blog.csiro.au/salty-solution-solar-dark/>
- 'Heat refuges' may be one solution to Western Sydney's climate emergency, ABC, January 2021 <https://www.abc.net.au/news/2021-01-14/western-sydney-heat-refuge-strategy-needed-for-summer-heatwaves/13026882>
- Blacktown City Council acknowledges climate emergency and moves toward 0, Mirage, February 2020 <https://www.miragenews.com/blacktown-city-council-acknowledges-climate-emergency-and-moves-toward/>
- Urban island heat effect: Rising temperatures in Aussie cities could create death traps, News.com.au, May 2017 <https://www.news.com.au/technology/environment/climate-change/urban-island-heat-effect-rising-temperatures-in-aussie-cities-could-create-death-traps/news-story/0b035c4707ea8f81e32ee0df4fa546bf>

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