



🕒 14/04/2016 💬 0

🏠 Home / News / World's first zero carbon neighbourhood planned for WA

World's first zero carbon neighbourhood planned for WA

An innovative project led by Curtin University researchers in the Western Australian suburb of White Gum Valley aims to create the world's first zero carbon neighbourhood.

Curtin University has partnered with Low Carbon Living CRC, Western Power, LandCorp, the City of Fremantle and Solar Balance for the project, which aims to achieve its goals using solar photovoltaic (PV) and battery storage technologies. Funded by a \$1 million grant from the Australian Renewable Energy Agency (ARENA), the project is set to take place over the next three years and will showcase how a strata neighbourhood can involve solar storage technologies.

Curtin Research Fellow Jemma Green said the research being completed at the Curtin University Sustainability Policy Institute (CUSP) was instrumental in bringing the idea of a citizen utility to life. She explained that the strata will function as a quasi-utility that will own and operate the solar power infrastructure and sell power directly to homeowners and tenants.

A similar project involving three apartments was used to model the concept last year in Western Australia (WA) using WA Strata Law. The new project, according to Green, is a large scale deployment of the model using different housing types with different energy profiles, and adapting for the strata and community titling laws in all states and territories to create a national solution.

More than 1.4 million homes in Australia make use of solar PV systems, however until now the use of such systems on strata housing has been restricted.

Developed by CUSP's Professor Peter Newman, Professor Greg Morrison, Dr Vanessa Rauland, Joshua Byrne and Jemma Green, together with a team of PhD students, the innovations in solar energy and battery storage will be implemented as part of LandCorp's development, WGV in the WA suburb of White Gum Valley.

All 80 dwellings in the WGV residential development feature climate sensitive technologies, creative urban greening and innovative water management strategies with around half of these dwellings to incorporate solar storage. The process would be monitored closely from installation to management including the power consumption of the new inhabitants.

Electric vehicles will be made available for rent to the residents, demonstrating how strata can become a citizen utility and create a zero carbon neighbourhood.

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