

# The Well

## Zero cost energy future

Treating and pumping water and wastewater to South Australia's 1.7 million people is an energy intensive process and we are one of the biggest electricity users in the state.

A household in South Australia that has two parents, two kids and a swimming pool might use 15,000 kilowatts (15 megawatts) of electricity in a year. Two retirees who live in an apartment and don't use much electricity might use less than five megawatts in a year. While a household's annual electricity bill might reach a few thousand dollars, our bill in 2018-19 was almost \$83 million.

By investing in technology to generate and store renewable energy, we are aiming to achieve zero net electricity costs from 2020-21.

To do this, we are investing more than \$300 million to install 154 megawatts of solar generation (about 500,000 solar panels) and 34 megawatt hours of energy storage (such as batteries) at sites across South Australia including the Adelaide Hills, South East, Eyre Peninsula, Fleurieu Peninsula, Far North and Riverland.

Generating and storing energy onsite will reduce our reliance on expensive grid electricity. Any excess energy will be sold back into the electricity grid to help balance out the costs when we need to buy electricity during peak demand or low solar productivity

### Solar photovoltaic panels

'Photovoltaic' refers to the process of converting light (photons) into electricity (voltage). Photovoltaic panels are also known as solar panels or solar PV panels.

Solar panels are designed to absorb light. They are dark-coloured (usually black or blue) and covered with anti-reflective an coating.

Some systems have fixed panels, and some have panels that move to track the sun throughout the day. Both systems are designed to capture the most energy from the available sunlight at that site.

### Did you know?

- 1,000 watts is a kilowatt (kW), 1,000kW is a megawatt (MW), and 1,000MW is a gigawatt (GW).
- The environmental benefits of installing 500,000 solar panels across the state include reducing CO<sup>2</sup> emissions by more than 89,000 tonnes a year – equivalent to planting seven million trees or removing more than 32,000 cars from the road per year.
- Biogas is used to power some of our wastewater treatment plants, and we use hydroelectric energy generation at the Adelaide Desalination Plant.
- At Bolivar Wastewater Treatment Plant, renewable energy generated is sourced entirely from biogas which is a by-product of the sewage treatment processes. Biogas generated at Bolivar produces enough electricity to power 4,000 houses per year.

