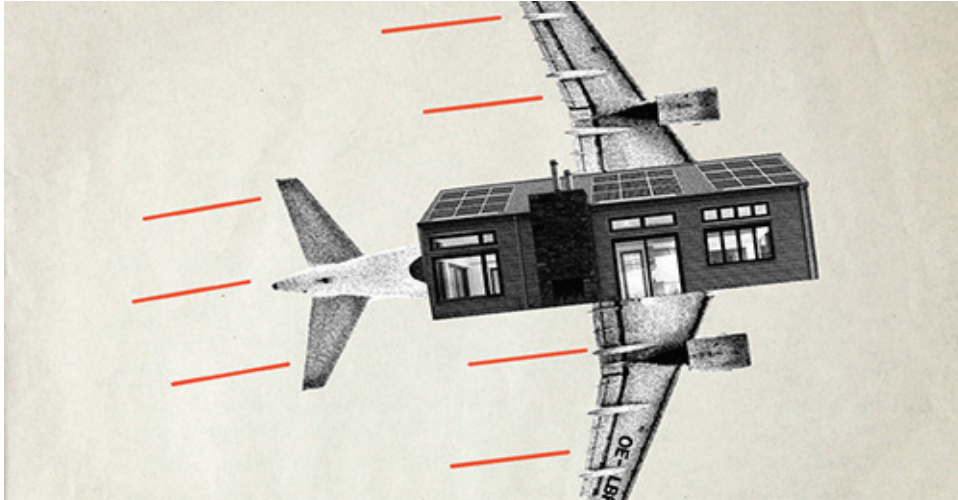


# ADELAIDE'S SOLAR AIRPORT

**Did you know that Adelaide Airport is home to the largest solar rooftop install in South Australia?**



## THE PROBLEM

All airports use a huge amount of energy to service a vast number of passengers from all over the world, right around the clock.

Adelaide Airport is currently the fourth-largest domestic airport and sixth-largest international airport in Australia. More than 7.7 million passengers pass through the airport each year.

Recognising that the world is heading towards a carbon-constrained future, the people in charge of Adelaide Airport were determined to find a more renewable energy source, and so in 2007, invested in solar PV\* as a potential solution by installing panels on their domestic and international terminals.

\*SOLAR PV – PHOTOVOLTAICS (PV) ARE USED AS A WAY OF GENERATING ELECTRICITY BY USING SOLAR CELLS TO CONVERT ENERGY FROM THE SUN INTO A FLOW OF ELECTRONS.

## THE SOLUTION

These panels were considered a great success and the airport management team was inspired to do more.

In late 2015/early 2016 a huge, 1.17MW (megawatts) addition to Adelaide Airport's rooftop solar capacity was installed on the roof of the airport's short term car park. This brought the airport's total solar capacity to 1.28MW.

The system is South Australia's largest rooftop solar install and Australia's largest solar car park. It is expected to offset 100% of the car park's electricity consumption, with excess power to be consumed within the main terminal. Overall, it supplies about 10% of the airport's energy needs.

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Adelaide Airport also has a range of other energy efficiency initiatives, including sensor-operated and LED lighting, and smart heating and cooling. In addition 10% of its purchased retail electricity comes from certified GreenPower providers. The airport has also started upgrading its fleet of vehicles including the introduction of plug-in electric vehicles.



*The rooftop of the Adelaide Airport car park covered in solar panels -*

<https://onestepoffthegrid.com.au/adelaide-airport-completes-1-17mw-rooftop-solar-install-south-australias-largest/>

## MORE GOOD NEWS

In terms of reducing Adelaide Airport's overall energy consumption, the new system has been incredibly successful. It has also:

### **1. Set a national and global example**

Having such a big solar installation in an international airport offers a range of businesses in Australia and around the world a working example of large scale solar installations. Impressively, South Australia already leads the way when it comes to adopting solar PV technology, with PV use fast approaching one third of all households. In fact, Australia is a world leader in household solar PV, with just over 15% of Australian households switched on to solar.

### **2. Innovative Inverters and Solar Panels**

*Inverters* - Solar panels output Direct Current (DC). Because DC electricity cannot be used directly by most household appliances nor fed into the mains grid, it first needs to be converted to Alternating Current (AC). A solar inverter performs this conversion.

# ADELAIDE'S SOLAR AIRPORT

The inverters installed at the Adelaide Airport were designed and implemented by Solgen, who worked with the Airport to push engineering and design boundaries. Solgen completely customised the solar distribution board and inverters into a single room on the top level of the car park, ensuring that valuable car parking space wasn't lost.

*Solar panels* - A solar panel is a panel designed to absorb the sun's rays as a source of energy for generating electricity or heating. Almost 4,500 solar panels were installed with the unique capability of mitigating the effects of shading across the array from existing and potential/future infrastructure. A remote single switch was also installed to enable immediate shut-down at a panel level, which enhances the overall safety of the system in the event of an emergency.

THINK NOTHING CAN BE DONE ABOUT CLIMATE CHANGE? THINK AGAIN.

GENERATION YES.