



## Commercial grid connect Adelaide Central Bus Station Adelaide, Australia

Tindo, the Kurna Aboriginal name for sun, is the name of an initiative by Adelaide City Council to deliver a purely electric-powered community bus. Tindo is the first electric bus in the world to be recharged using 100% solar energy.

Tindo is recharged by a 50kW BP Solar electricity system. This system is one of the largest grid-connected solar photovoltaic (PV) systems in the state and will make the bus service carbon neutral. Generating almost 70 megawatt-hours of clean electricity each year, the system delivers the energy required to recharge Tindo's batteries each day. With an operational range of 200 kilometres between charges, the air-conditioned solar electric bus is able to carry up to 27 passengers.

"Tindo and the solar recharging system at the Adelaide Central Bus Station represent a significant investment by the Council, in association with the Adelaide Solar City program, into building an environmentally sustainable city for the future," said Michael Harbison, Lord Mayor of Adelaide City.

The solar system is located on the top floor of the Bus Station's multi-level car park and comprises 320 solar panels, eight inverters and a weather station that measures, the sunlight, temperature and wind speed. The data is collected and shown live on the Adelaide City Council website.

Everyday, Adelaide citizens and visitors to the city will be able to demonstrate environmental leadership by taking a free bus which is also emission-free.

## Commercial grid connect Adelaide Central Bus Station – Adelaide, Australia

**Location:**

Adelaide, South Australia

**Project participants:**

Customer: - Adelaide City Council  
Implementation: - BP Solar (solar design, supply and commissioning)  
- Solaris Technology (installation)

**Project completion:**

December 2007

**Project value:**

Approximately \$540,000

**Size:**

50kWp

**Area:**

1100m<sup>2</sup> (including the solar array frames)

**Estimated electricity generated:**

70MWh per year

**CO<sub>2</sub> reduction:**

Approximately 70 tonnes per year

**System components:**

320 x BP3155N multicrystalline solar panels  
8 x 6kW SMC6000A inverters  
Data acquisition equipment

**Special challenges:**

The data acquisition system was the first of its kind to be implemented in a BP Solar-designed grid-connect system. The challenges were:

- learning how the new equipment functioned and how it would integrate with existing products, and
- co-ordinating with the Council's IT department to achieve data retrieval and real-time data display that can be seen on its website.

This project was also the first commercial system by BP Solar to use the brand new BP Solar-developed 'heliobar' mounting rail. Custom-made structures were designed and engineered to interface with the new rail to allow for easy installation.



The Tindo bus is used by the people of Adelaide as a free service.



The solar system is located on the top floor of the Bus Station's car park and comprises of 320 solar panels.



Tindo can travel for approximately 200km before requiring a battery recharge.