

BUSINESS CASE STUDY

December 2009

Zone A Architects Pty Ltd



Turning an office into a mini power station

Company profile

Zone A is a small architectural firm servicing the Alice Springs community and region. They relocated to their Larapinta Drive premises in March 2008. Originally a residential double brick home, extensive renovations were carried out with a focus on energy efficiency and design for the local environment.

Zone A approached Alice Solar City with a view to installing a photovoltaic solar power system on the building. After their energy consumption records for 12 months were received from Power and Water Corporation, a walk through energy survey was conducted.

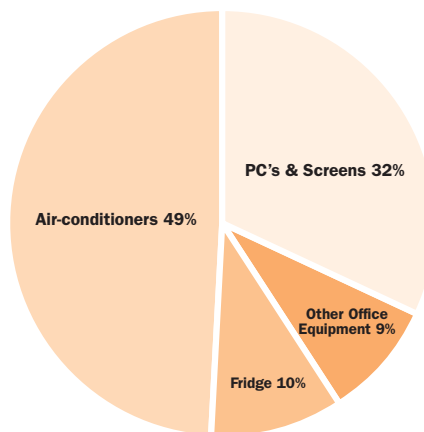
Energy survey results

Energy management was a key design goal in the fit-out of the Zone A building. The energy survey identified that the building was already very energy (and water) efficient. Just as importantly the occupants were conscious of their energy use and actively controlled their energy consumption, resulting in very low energy use per square metre per occupant.

Annual electricity consumption was calculated to be 9000 kWh. Air-conditioning accounted for around 49% of consumption, computing equipment 32%, with other office

equipment contributing a further 9%. The fridge was calculated to be responsible for around 10%.

Electricity consumption breakdown



ALICE SOLAR CITY RECOMMENDATIONS

- Install a photovoltaic solar power system. A 3kW solar system will produce an estimated 4800 kWh per annum, which will meet over 50% of the 9000 kWh per annum of electrical consumption
- Upgrade fridge
- Improve insulation of original building
- Reduce heat load on western wall with shading
- Enable energy saving features on office equipment and turn equipment off after hours

Potential energy reduction

Estimated at 5526 kWh (p.a)

Potential cost savings

Estimated at \$1741 (p.a)

Alice Solar City incentive value

\$21,800

What Zone A has done so far:

Zone A already had a number of energy efficiency initiatives in place. As such the solar power system was judged an excellent next step in improving the building's sustainability. Their 3kW BP Solar system was installed onto a custom built frame in front of the building. The system now provides shade and reduces glare through windows in addition to generating clean green energy.

Additionally:

Since having the system installed, there has been an even greater focus on energy consumption amongst staff.

- The old fridge was replaced, saving an estimated 400kWh and \$75 per annum
- Zone A are also designing structures to reduce the summer sun striking their south west facing windows

"It's amazing how conscious we are of our energy consumption now that we have a solar system, and the challenge each day is to consume less than we produce!"

Stuart Chalmers, Owner
Zone A Architects Pty Ltd

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