

## DESIGN SUMMARY



System Design for ...

<b>Design LOADS</b>	<b>SUMMER</b>	<b>WINTER</b>	<b>STAND-ALONE POWER SUPPLIES</b>
			41 Parakee Crescent Peregian Beach, Qld 4101
DC	0.0 kWh per day	0.0 kWh per day	
AC	20.7 kWh per day	16.0 kWh per day	
<b>TOTAL</b>	<b>24.3 kWh per day</b>	<b>18.9 kWh per day</b>	<b>System Designer</b> <i>Mark Wright</i>
	[ Totals include average inverter efficiency ]		<b>BCSE Accreditation</b> <i>A6573846</i>

**Solar Array** comprises **30 195 WATT** modules - TOTAL ... **5,850 WATTS**

Suntech  
STP190S-Ad+24

<b>SOLAR Availability %</b>	<b>BEST MONTH</b>	<b>WORST MONTH</b>	<b>Annual AVERAGE</b>
	Sep 154	Feb 106	119

**Solar Regulator / Controller** **1 6000 W** **48 Volt**

Xantrex  
MPPT60

**Inverter-Charger** **7,000 VA** **48 volt**

Latronics  
LS7048

**Battery Bank** SYSTEM VOLTAGE ... **48 VOLTS 2,200 Ah @ C 100**  
12 Batteries of 4 volts each

4RP2200  
EXIDE

**Battery charger** **60 amp** **48 volt**

Woods  
4860B

**Generator** **6.5 kVA**

Xxxx  
Xxxx

<b>Monthly generator run time ...</b>	<b>BEST MONTH</b>	<b>WORST MONTH</b>
	Sep 2 hrs	Feb 2 hrs

NOTE : Generator run times above are approximations ONLY.  
The actual run times depend heavily on prevailing climatic conditions and the energy used.

**System Notes ...** *Long term solar radiation and temperature data for BRISBANE has been used for this design.  
A floor area of approximately 2m<sup>2</sup> is required for installing batteries and other equipment.  
This area must be well ventilated, lockable and should be vermin-proof. Please contact me for more details.*

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*Directly applicable Australian Standards are -  
AS 4509 Stand-alone Power Systems part 1 Safety requirements, 2 System design, 3 Installation and maintenance  
AS 4086 part 2 Secondary batteries for use with stand-alone power systems  
AS/NZS 5033 Installation of photovoltaic (PV) arrays*

signed

Mark Wright

Date : 9 Oct, 2012

*The Business Council for Sustainable Energy is the association representing business involved in the renewable energy industry around Australia. All accreditees are bound by a code of ethics. They are required to design and install power systems in accordance with all relevant Australian Standards and applicable BCSE design and installation guidelines.  
For more information refer to the CEC (BCSE) web-site [www.cleanenergycouncil.org.au](http://www.cleanenergycouncil.org.au)  
The Clean Energy Council (BCSE) National Office can be contacted on (03) 9929 4100*