RS ENERGY
RENEWABLE SUSTAINABLE

RENEWABLE SUSTAINABLE ENERGY ABN: 91605960807

10.56kW SOLAR SYSTEM

ADDRESSED TO:

[redacted]

50 Grove Street
Albion
Queensland 4010
Australia

Prepared by Lewis Cuthbertson on 8th July 2023
Last updated on 12th July 2023

CONTACT

Address
Renewable Sustainable Energy
PO Box 198,
Clayfield Queensland 4011

Phone
Mobile: 0449942735
Office: 1800525227

Online
Email: info@rsenergy.com.au
Website:
http://www.rsenergy.com.au

CLEAN ENERGY COUNCIL ACCREDITED INSTALLER · CLEAN ENERGY COUNCIL ACCREDITED DESIGNER · CLEAN ENERGY COUNCIL MEMBER · REC SOLAR PROFESSIONAL · SUNPOWER Authorised Partner · Fronius SOLUTIONS PARTNER

PROPOSED PANEL LAYOUT

50 Grove Street, Albion
Queensland 4010

SYSTEM DETAILS

Your custom design

System size[1]
10.56 kW_{DC} (STC)

Estimated annual production[2]
19,179 kWh

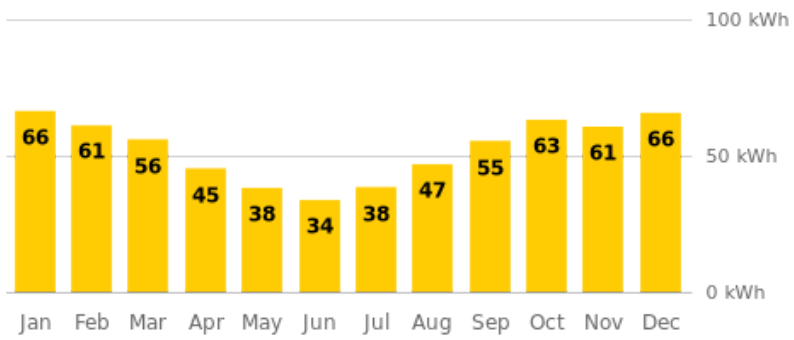
Solar panel
24 × 440W Jinko Solar Tiger Neo - JKM440N-54HL4-V
1722 mm × 1134 mm · Monocrystalline · Datasheet · Warranty

Inverter
1 × Sungrow SG8.0RS-ADA · 8000W
Single phase · 97.8% maximum efficiency · Datasheet · Manual · Warranty

System efficiency[3]
98%

DAILY PRODUCTION PER MONTH

How much electricity will my system generate per day, on average?



UTILITY COSTS

	BEFORE SOLAR	WITH SOLAR
Average monthly bill	$177.95	$76.23 CR ↓ 143% First year average
Annual bill	$2,135.41	$914.70 CR ↓ 143% Estimated annual savings $3,050.11

INCLUDED SERVICES

Warranty & Repair Services

A 10 year workmanship warranty applies to this solar system installation. For other warranty information refer to the Warranty section below.

20 YEAR FINANCIAL SUMMARY

Net present value of investment[4] The Net Present Value (NPV) is the **present day value** of all future cash inflows minus the outflows. Since money is worth more in the present day than in the future, all future cashflows need to be discounted by inflation. A positive NPV indicates a good investment.	$49,375.12
Discounted payback period[4] Similarly, the Discounted Payback Period also accounts for all discounted future cashflows. The resulting period will typically be longer than a "simple payback period" calculation.	2–3 years
Total return on investment[4] The Return on Investment (ROI) is another measure of the efficiency of your solar investment. Imagine you invested $100.00 today and received $300.00 in return. The ROI would be 200%.	558%
Rate of return on cash invested[4] The Rate of Return on Cash Invested (or Internal Rate of Return) is the annual compounded rate of return that the cash flows bring based upon the net cash invested in the year of installation. Think of it as the interest rate that a term deposit would need to provide to match the returns on your solar investment.	35.5%

FINANCIAL ANALYSIS

Your historical electricity bills were used to help size your solar system. Based upon the system size suggested, the expected electricity bill savings over a 20 year period are provided below.

In addition, the first-year electricity bill savings you can expect are provided together with a chart of the monthly solar system output you can expect.

ANNUAL ELECTRICITY BILL OVER TIME[4]

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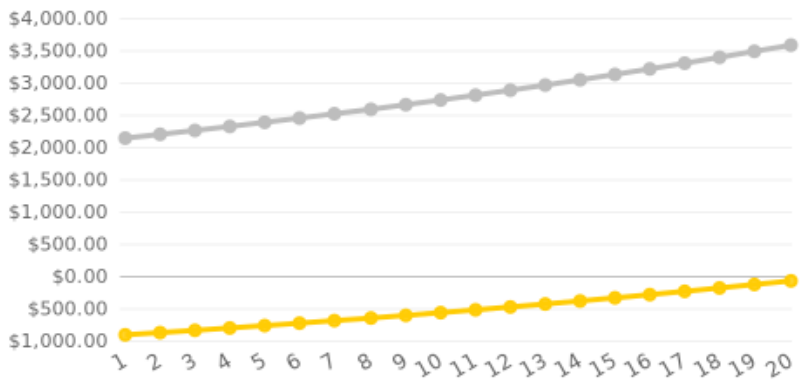
- Electricity bill without solar
- Electricity bill with solar



MONTHLY ELECTRICITY BILL COMPARISON[4]

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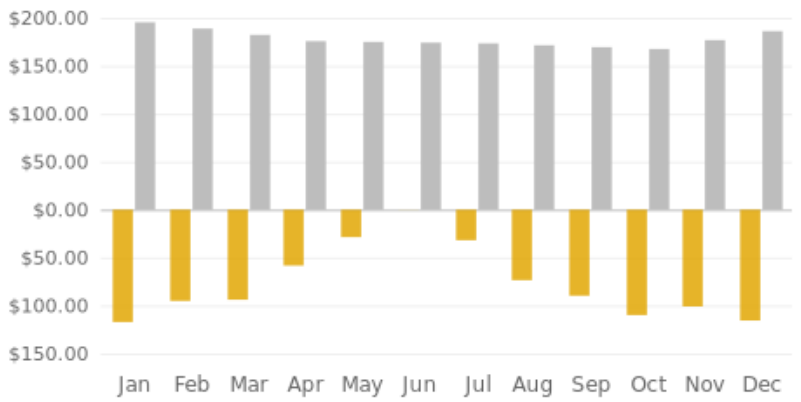
- Electricity bill without solar
- Electricity bill with solar



ENVIRONMENTAL ANALYSIS

Your solar system will generate significant environmental benefits. These come primarily from avoided power plant emissions.

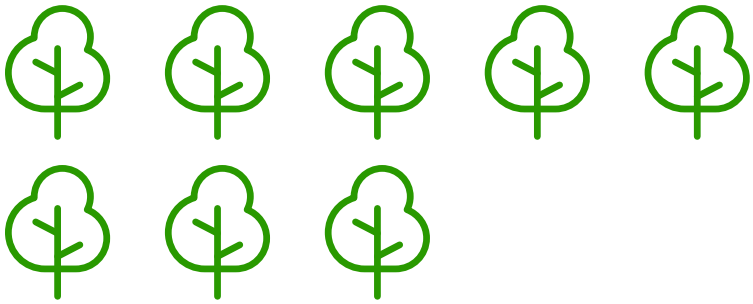
Below is a summary of environmental benefits your solar system will provide.

TREES PLANTED EQUIVALENT

–

347 trees per year[5, 6]

Each tree icon represents 40 trees



AVOIDED EQUIVALENT FUEL

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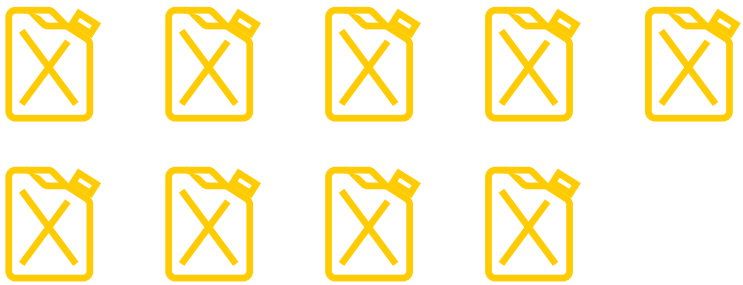
5759 litres of petrol per year[5, 6]

Each fuel can icon represents 580 litres of fuel



AVOIDED COAL BURNT

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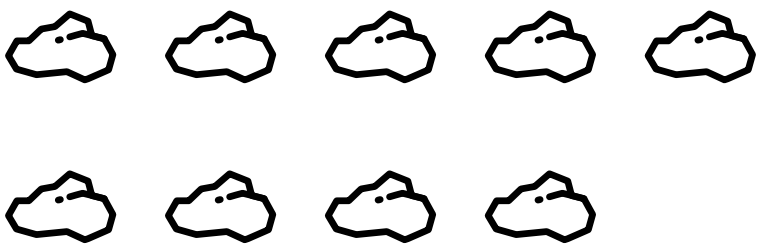
6545 kg of coal per year[5, 6]

Each coal lump icon represents 660 kg of coal



QUOTE

To	Sam Arnold 0408399107 ssarnold88@hotmail.com	**From**	**Renewable Sustainable Energy** ABN: 91605960807 PO Box 198 Clayfield Queensland 4011
Address	50 Grove Street, Albion Queensland 4010		

Description	Quantity	Price	Total
10.56kW solar system		$13,316.00	$13,316.00
24 x 440w Jinko ntype modules (30 year warranty)		(incl.)	
8kw Sungrow premium (10 year warranty)		(incl.)	
Sungrow consumption meter		(incl.)	
10 year installation warranty		(incl.)	
Back to base monitoring		(incl.)	
Shading and performance review conducted by CEC accredited designer		(incl.)	
Installation carried out by in house installation team		(incl.)	
Meter relocation to opposite side of the house		(incl.)	
Hot water time clock		(incl.)	
		Subtotal incl. GST	$13,316.00
		Included GST	$1,210.55
		116 STCs [7] × $38.50	−$4,466.00
		Total incl. GST	**$8,850.00**

ACCEPTANCE

–

Please sign and return to Renewable Sustainable Energy. Be sure to keep a copy for your own records. A 10% ($885.00) deposit is required to initiate the process. Final payments are to be made upon full completion of installation.

PAYMENT

–

Bank account

BSB: 084004
Account no. 247215636

NAB

Client Name

Client Signature

ASSUMPTIONS AND DISCLAIMER

[1] The Standard Test Condition rating (STC) assumes a standard set of optimal operating conditions (25°C cell temperature, 1000 W/m^2 and an air mass of 1.5). The STC rating is most often used by manufacturers to classify the power output of PV modules. To calculate the system's energy production for any future year, the expected degradation in system performance is included (See "PV degradation", in table below).

[2] Energy Output is calculated based on historical solar irradiance at the given location. A typical meteorological year is selected using statistical methods. Factors including panel tilt, orientation (azimuth), and system efficiency are taken into account.

[3] System efficiency is estimated to account for losses caused by a variety of factors. These factors include intermittent shading, cable losses, dirt, scheduled downtime, manufacturer tolerances, inverter efficiency for DC to AC (this does not affect off-grid DC only systems), battery round trip efficiency, and other factors.

[4] Utility electricity price inflation is adjusted based on the given location.(Figures from NATIONAL ELECTRICITY FORECASTING REPORT June 2016 by AEMO.)

[5] Clean Energy Regulator. 2021. Electricity sector emissions and generation data 2019-20. [ONLINE] Available at: http://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/electricity-sector-emissions-and-generation-data/electricity-sector-emissions-and-generation-data-2019-20.

[6] United States Environmental Protection Agency. 2017. Greenhouse Gases Equivalencies Calculator - Calculations and References. [ONLINE] Available at: https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#kilowatt

[7] Australian Small-scale Technology Certificates (STCs) are an incentive provided under the Renewable Energy Target. One certificate is equal to one megawatt hour of eligible renewable electricity either generated or displaced by the installed system. [ONLINE] Read more at: http://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/Agents-and-installers/Small-scale-technology-certificates.

[8] Inflation and effective interest rates are sourced from the RBA. 20 year bond rate is used as the nominal rate. [ONLINE] Available at: https://www.rba.gov.au/

Note The system design may change based on a detailed site audit. Estimated savings are based on past electrical usage and utility rates provided by the customer where applicable. Actual system production and savings will vary based on final system design, configuration, utility rates, applicable subsidies and your energy usage post-solar installation. Utility rates, charges and fee structures imposed by your utility are not affected by this proposal and are subject to change in the future at the discretion of your utility. The production calculations in this report are based on historical climate data for the site location and represent typical estimates of future solar production.

System end-of-life This system's lifetime expectancy is outlined in the Warranty section below. System removal at end-of-life may incur additional costs. Please contact us for more information on System End-of-life Disposal Services.

System portability This system has been designed for and is intended to be permanently fixed to the property as shown in the Proposed Panel Layout section above. It is not portable and should not be moved without a professional. Please contact us if you would like to modify the location of your installed solar system.

ASSUMED VALUES

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DC Array Power	Tilt	Azimuth
8.36kW	0°	9°
2.2kW	0°	279°

Azimuth measured clockwise from North

System efficiency[3]
98%

AC system size
8kW

Export limit
No export limit

Quarterly
$520.00 (winter)

Utility rate inflation
2.75% per annum

Self-consumption rate
40%

Daily supply charge
$1.00

Current electricity price
$0.25

Feed-in Tariff
$0.12

System lifetime
20 year

Inflation rate[8]
2.1% per annum

Effective interest rate[8]
1.36% per annum

PV degradation
Jinko Solar Tiger Neo
JKM440N-54HL4-V
99% for the first year
-0.4% per year to year 30

WARRANTY

Product	Type	Standard warranty	Downloads
Jinko Solar Tiger Neo JKM440N-54HL4-V 440W	Solar panel	25 years product, 30 years performance	Warranty file
Sungrow SG8.0RS-ADA 8000W	Inverter	10 years	Warranty file

System component warranties are different from the system lifetime. Please see the Assumed Values page above.

MANUFACTURERS

Product	Manufacturer	Contact	Address
Jinko Solar Tiger Neo JKM440N-54HL4-V	JINKO SOLAR AUSTRALIA HOLDINGS CO. PTY LTD ABN: 93 154 662 889	cs@jinkosolar.com +61 1300 326 182	Level 2/152 Marsden Street Parramatta NSW 2150
Sungrow Residential SG8.0RS-ADA	Sungrow Australia Group Pty Ltd ABN: 76 168 258 679	service@sungrowpower.com.au +61 1800 786 476	Suite 1703/99 Mount Street North Sydney NSW 2060