

## THE ROYAL HOTEL MEANDARRA

3 Sara St, Meandarra, Qld 4422

Jason Corcoran and his family moved in August 2018 from Canberra to Meandarra to manage his new business 'The Royal Hotel'. Having had solar photovoltaic (PV) panels in Canberra and because of the high energy costs of the business at over \$52 per day, Jason decided to engage Solar Energy and Battery Storage Solutions (SEBSS) to design a suitable PV system to reduce reliance on grid power.

SEBSS analyzed the electricity bills from September 2018 to February 2019, and checked the roof space of the Royal Hotel Meandarra and recommended to use two inverters: a 20 kW (for north facing panels) and a 5 kW (for east and west panels). The 90 panels (Canadian) used were 350 W making 31.5 kW



The PV system was installed and connected in mid May 2019. Analysis showed that the electricity cost per day reduced by between \$21.5 and \$24 per day. The system generates an average 136 kWh/day of which 40% is used by the load; thus reducing grid usage by 53 kWh/day. The system also exports 60% to the grid earning 7.861 cents/kWh. The table below gives a summary of the daily and annual savings. The reduction in the annual bill is about \$8000 and the investment is on track to pay for itself in less than 4 years.

**Grid Consumption before and after PV**

Summary	Before PV	After PV	Saving
T20 kWh/day	153.9	100.3	53.6
T33 kWh/day	7.3	7.3	0.0
Grid kWh/day	161.2	107.6	53.6
Cost \$/day	\$47.90	\$23.90	\$24.00
Effective c/kWh	29.687	22.204	7.483

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## Annual Average Savings of the PV System

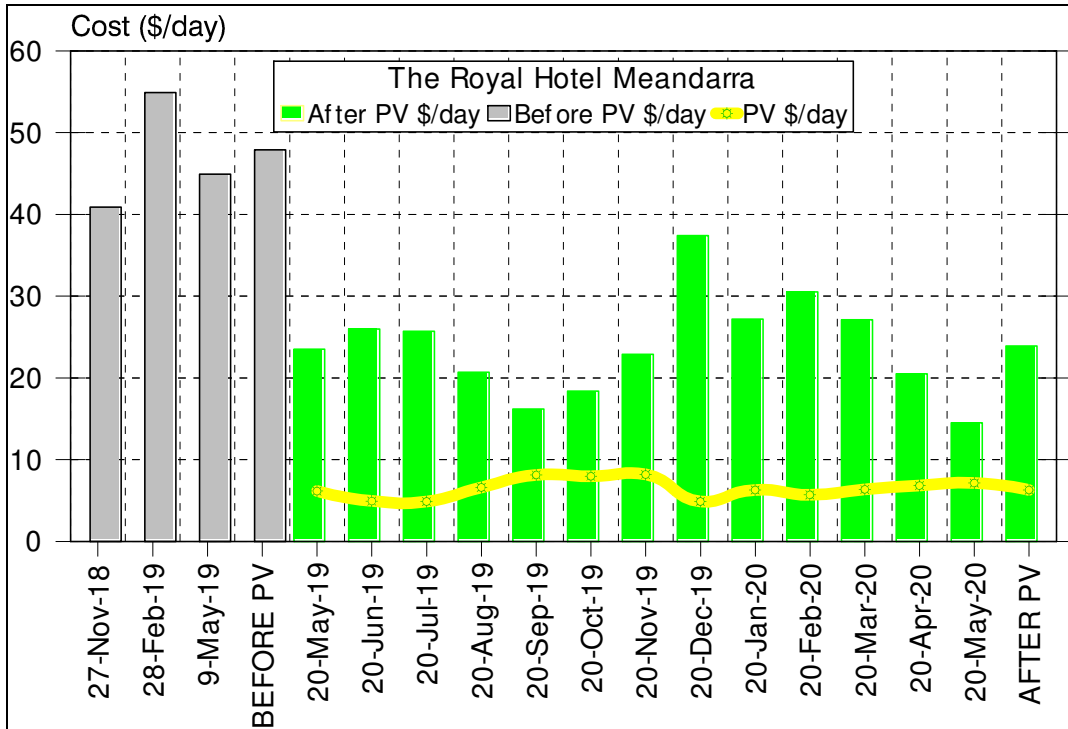
Average Saving	kWh	\$/day	\$/year
Grid Reduction	53.6	\$15.0	\$5,477
PV Export to Grid	82.4	\$6.5	\$2,364
Total Saving	136.0	\$21.5	\$7,841



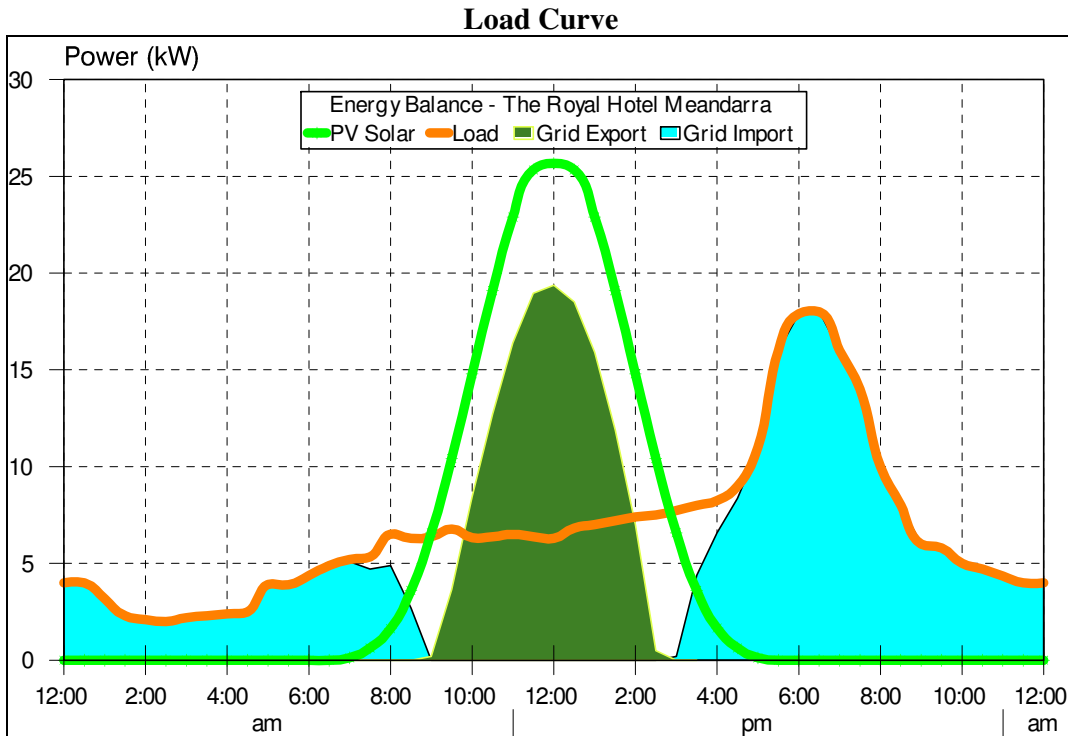
## ELECTRICITY DATA (NMI 3044387601)

From	To	T20 kWh	T33 kWh	PV kWh	T20/day kWh	T33/day kWh	PV/day kWh	Cost per day	Cost per
27-Sep-18	27-Nov-18	7824	489		128	8		\$40.7	\$0.298
27-Nov-18	28-Feb-19	16617	566		179	6		\$54.9	\$0.297
28-Feb-19	09-May-19	9887	571		143	8		\$44.8	\$0.295
09-May-19	20-May-19	990	91	724	90	8	66	\$23.5	\$0.239
20-May-19	20-Jun-19	2927	260	1642	94	8	53	\$26.0	\$0.253
20-Jun-19	20-Jul-19	2939	268	1777	98	9	59	\$25.7	\$0.240
20-Jul-19	20-Aug-19	2742	292	2615	88	9	84	\$20.7	\$0.212
20-Aug-19	20-Sep-19	2397	293	3213	77	9	104	\$16.2	\$0.187
20-Sep-19	20-Oct-19	2589	227	3052	86	8	102	\$18.4	\$0.196
20-Oct-19	20-Nov-19	3247	205	3240	105	7	105	\$22.9	\$0.206
20-Nov-19	20-Dec-19	4391	198	1874	146	7	62	\$37.4	\$0.245
20-Dec-19	20-Jan-20	3567	148	2496	115	5	81	\$27.2	\$0.227
20-Jan-20	20-Feb-20	3844	197	2256	124	6	73	\$30.5	\$0.234
20-Feb-20	20-Mar-20	3275	205	2356	113	7	81	\$27.1	\$0.225
20-Mar-20	20-Apr-20	2817	190	2699	91	6	87	\$20.5	\$0.211
20-Apr-20	20-May-20	2092	193	2736	70	6	91	\$14.5	\$0.191

## ANALYSIS OF DATA



The cost of electricity dropped from \$47.9 to \$23.9 per day.



While grid usage dropped from 161 kWh/day to 107 kWh/day PV exports 82 kWh.



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