



KATNOOK ESTATE ENERGY USAGE REDUCTION

POWER CONSUMPTION

Meter	SAAAAAD2646						
	kWh	Peak use	Peak cost	Off peak use	Off peak cost	Export kWh	Refund
Jan-13	23,037	23037	\$4,859				
Feb-13	24,961	24961	\$5,013				
Mar-13	36,658	36658	\$6,734				
Apr-13	23,964	23964	\$3,153				
May-13	20,375	20375	\$2,885				
Jun-13	19,534	19534	\$2,580				
Jul-13	13,813	13813	\$2,169				
Aug-13	10,207	7713	\$1,523	2494	\$142		
Sep-13	10,161	7492	\$1,480	2669	\$152		
Oct-13	14,728	9076	\$1,792	5653	\$323		
Nov-13	11,350	7392	\$1,460	3958	\$226		
Dec-13	9,608	5921	\$1,170	3687	\$210		
Totals	218396	199936	\$34,816	18460	\$1,054		

Excludes fees and service charges

KATNOOK WINERY

Federal Grant
Clean Technology Program & Clean Food and Foundries investment Program
(Green Ochre / Andy Chambers)

Issues:

- Heavy Energy Users
- Refrigeration Unit
 - Non Insulated Vessels (cooling / warming)
 - Crusher / Must pump
 - Other....

Opportunities:

- Power Factor Correction
- Efficient Refrigeration system
- Heat capture
- Power generation
- Cold Air Capture

REFRIGERATION SYSTEM

OLD

Two reciprocating compressors / air condensers

- 1 x 600R Tranne Unit, - 27 tonnes
Energy hungry and noisy
- 1 x 400R Tranne Unit, - 17 tonnes
Energy hungry and noisy
- 2 x 13,600 l brine tanks

NEW

McQuay International - Series ACZC

Twin independent system & circuits, each comprising 2 Scroll compressor units, using R-410A refrigerant, Air condensers with fans with heat recovery.

MicroTech 111 controller.

115 KW Cooling Capacity

33 KW Heat recovery (40 l/min + 10°C to approx 50°C)

Sound levels - 72. 4 dB

Inputs ??? 56KW

1 x 26,000 brine tank

MCQUAY UNIT



BRINE TANK & HOT WATER



TANK INSULATION

- Polarclad / Paul Farrelly
- Prefabricated 75mm Polystyrene foam clad with Aluminium sheets

Original Budget - approx 31% of storage

NOT Insulated	Budgeted Cost			
9000	2	\$2,900	\$5,800	
14000	2	\$3,200	\$6,400	
22750	4	\$4,200	\$16,800	
47000	12	\$6,000	\$72,000	
701,000		Total Cost	\$101,000	31%

SOLAR ENERGY PRODUCTION

Design Ecology - Geoff Lobban

92 KW System

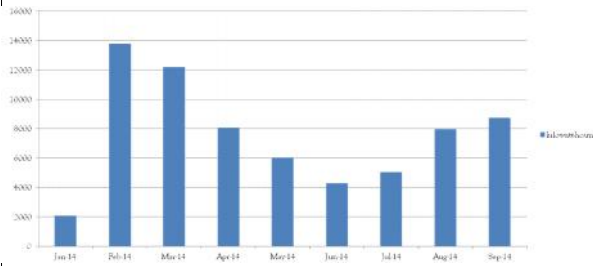
- North Facing 46KW
- West Facing 54 KW
- Est. Annual production 128MWh

Issues

- Power Networks SA
- Compliance / Timing / Metering
- Use a project Manager ...?

KATNOOK 92 KW SYSTEM

Katnook Energy Production YDT



Total Energy YTD: 69 MWh

Green House Gases: CO2 282,332 lbs, NO2 115 lbs, SO2 27lbs

Carbon offset 128 Tonnes / 27 acres of forest...?

POWER CONSUMPTION Y14

Meter	SAAAAAD2646						
	kWh	Peak use	Peak cost	Off peak use	Off peak cost	Export kWh	Refund
Jan-13	23,037	23,037	\$4,859				
Feb-13	24,961	24,961	\$5,013				
Mar-13	36,658	36,658	\$6,734				
Apr-13	23,964	23,964	\$3,153				
May-13	20,375	20,375	\$2,885				
Jun-13	19,534	19,534	\$2,580				
Jul-13	13,813	13,813	\$2,169				
Aug-13	10,207	7,713	\$1,523	2494	\$142		
Totals YTD	172,550		\$28,915				
Jan-14	10,214	10,214	\$1,092				
Feb-14	9,608	-5,921	-\$1,170	-3687	-\$210		
Feb-14	10,212	10,211	\$677				
Mar-14	14,492	14,492	\$879			2363	\$101
Apr-14	17,535	17,535	\$1,063			647	\$26
May-14	15,735	15,735	\$1,038			463	\$19
Jun-14	11,497	11,497	\$781			775	\$32
Jul-14	8,734	8,734	\$563			1176	\$38
Aug-14	5,501	5,501	\$292			2573	\$72
Totals YTD	84,311		\$5,215			7997	\$288

POWER CONSUMPTION & COST

JANUARY 2013 - AUGUST 2014



