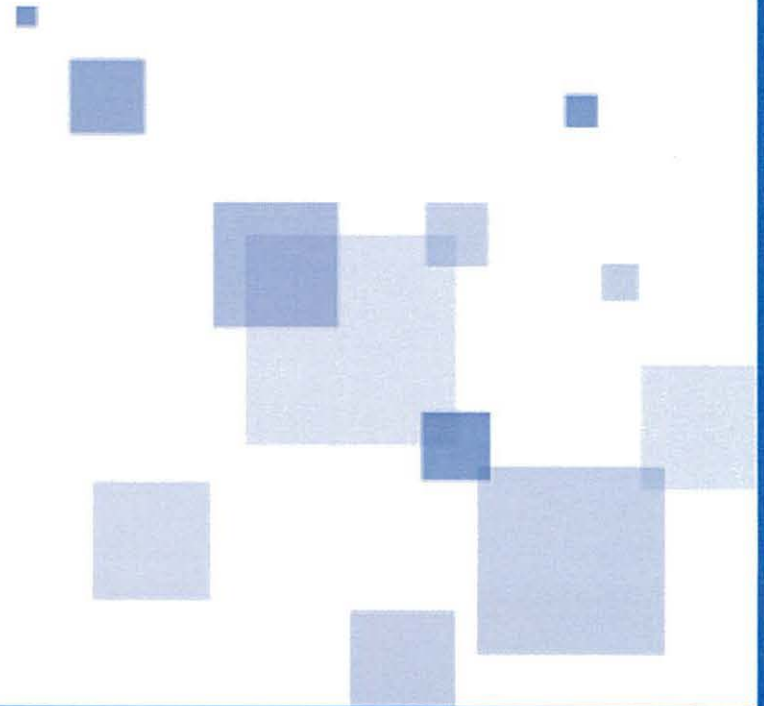


Energy Efficiency Opportunities Public Report 2013

Ergon Energy Corporation Limited



Part 1 - Corporation Details

Controlling Corporation

Ergon Energy Corporation Limited

Table 1.1 - Major changes to corporate group structure or operations

There have been no significant changes to the corporate group structure or operations that would influence total energy use at Isolated System power stations. However, relevant sub-groups within Ergon Energy have been reorganised under a single point of accountability to rationalise the operation and maintenance of Ergon's remote Area Power Stations.

Declaration of accuracy and compliance

The information included in this report has been reviewed and noted by the board of directors and is to the best of my knowledge, correct and in accordance with the *Energy Efficiency Opportunities Act 2006* and Energy Efficiency Opportunities Regulations 2006.

As it is a requirement for this report to be made readily available to key stakeholders and interested members of the public, this report is authorised to be published by Ergon Energy on the Ergon Energy website (www.ergon.com.au).



Ian Meleod, Chief Executive

Date

23 May 2014.

Part 2 – Assessment Outcomes

Table 2.1 – Assessment details

Name of entity	Saibai Island Power Station Representative of 16 Torres Strait Island power stations, including Saibai.	
Total energy use in the last financial year	166,470	GJ
Total percentage of energy use assessed when assessments were undertaken	20	%
Description of the way in which the entity carried out its assessment:		
<p>Ergon Energy examined and analysed the Power Generation statistical data gathered from the Saibai Island Power Station during the assessment period. It then isolated the related areas where gains in energy consumption have been achieved, and provided evidence of efficiency gains through analysis of the statistical performance data.</p> <p>A number of projects have been identified through stakeholder suggestions from the Gen-Ex program, data analysis, technological developments, and continuous improvement processes. During the assessment period the Isolated Systems Group within Ergon Energy investigated a number of energy efficiency proposals from the Gen-Ex program and identified suggestions for analysis and possible future implementation utilising process control (PDCA) methodology.</p>		

Table 2.2 - Energy efficiency opportunities identified in the assessment

Status of opportunities identified to an accuracy of better than or equal to $\pm 30\%$		Total number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0–2 years		2–4 years		> 4 years		
			Number	GJ	Number	GJ	Number	GJ	
Business response	Implemented	0	0	0	0	0	0	0	0
	Implementation commenced	0	0	0	0	0	0	0	0
	To be implemented	0	0	0	0	0	0	0	0
	Under investigation	16	16	164.3	0	0	0	0	164.3
	Not to be implemented	32	0	0	0	0	32	786.1	786.1
Outcomes of assessment	Total identified	48	16	164.3	0	0	32	786.1	950.4

Table 2.3 - Details of significant opportunities identified in the assessment

#	Opportunity Description	Voluntary Information	
		Equipment type	
1	Assessment of ancillary loads – lightings and air conditioning. Recommendation to replace all light fittings with compact fluorescent lamps and install motion sensor for security. Encourage switch off lighting policy when nobody present. Adjust temperature of air conditioning units to 25°C. Regular maintenance including cleaning air filters and hosing down external units to minimise dust, salt and insect build-up.	Equipment type	Lighting and Air Conditioning
		Business response	Under investigation
		Energy saved (GJ)	164.3 GJ
		Greenhouse gas abated (CO ₂ -e)	33.07 tonne CO ₂ -e
		\$ saved (approx.)	\$12,500 / year
		Payback period	1-2 years
2	Reduce parasitic load required to cool the “charge air” and “jacket water” circuits of the gen-set engine. Option 1. Change electric cooling fan from on/off type operation to a variable speed type unit.	Equipment type	Electric motor driven fan
		Business response	Not to be implemented
		Energy saved (GJ)	450.0 GJ
		Greenhouse gas abated (CO ₂ -e)	90.55 tonne CO ₂ -e
		\$ saved (approx.)	\$ 35,000 / year
		Payback period	In excess of 4 years
3	Reduce parasitic load required to cool the “charge air” and “jacket water” circuits of the gen-set engine. Option 2. Increase size of CA & JW radiators to reduce fan absorbed power required for cooling.	Equipment type	Electric motor driven fan
		Business response	Not to be implemented
		Energy saved (GJ)	336.1 GJ
		Greenhouse gas abated (CO ₂ -e)	67.62 tonne CO ₂ -e
		\$ saved (approx.)	\$ 26,000 / year
		Payback period	In excess of 4 years

Note: Though the payback periods associated with opportunities 2 & 3 are in excess of 4 years when examined as stand-alone measures, the costs associated with implementing the measures may decrease if measures are installed during required gen-set replacement. As such, the value associated with implementing these measures may be reviewed in the future, in line with scheduled gen-set replacement.