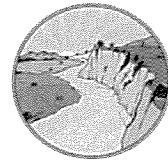


MEMORANDUM



Rangitikei
COUNCIL

TO: Assets/Infrastructure Committee

FROM: George McIrvine

DATE: 04 March 2016

SUBJECT: **Electricity supply to Council**

FILE: 5-CF-4-

TABLED DOCUMENT

Tabled at Assets/Infrastructure

On 17 March 2016

Background

Electrical power usage costs are higher than budget

There is been an issue highlighted with the Taihape Wastewater Treatment Plant meters being billed at estimated amounts for a number of years with no actual reading being made. I have as yet been unable to ascertain when the last actual meter reading occurred but it is likely to have been 2-3 years ago. Information received recently is that the meter reader no longer works for the power company because of not reading this meter.

The actual large increase in power costs points to increased usage from the new WWTP where increased aeration is required.

Current situation

The meter was physically read on 10/9/2015 and a smart meter installed to prevent recurrence of this issue of no meter reading it did however highlight a significant discrepancy between the amount of power previously invoiced to RDC and what Meridian had supplied.

It is understood that Meridian in line with industry practice are installing smart meters (and have done so in this case) and will have in a few months have an on-line portal where actual use and cost can be monitored by the users largely in real time.

David Millar - Email.

"There is a large outstanding bill around 120,000 to pay for this site as a result of that actual read. Joanna will be putting a report forward for guidance from Council on how to address this.

James has further information on usage at this site, but the excerpt attached in Appendix 1 (provided by Meridian for the analysis of our recent 6-month contract extension) shows: a) their historic low estimates, b) the high consumption resulting from the actual read, and c) the more accurate reads obtained since (bear in mind invoice periods change)."

Negotiations with Meridian

Currently the amount of the back-charge is being negotiated with Meridian the amount invoiced was higher than noted by David at \$138,746.30 GST excl.

Our current position, which Joanna has put to Meridian, is that it is unrealistic to charge our ratepayers now for costs for prior years, which we could not budget for because of Meridian not reading their meter. We have offered to pay

the increased power use of about 21000 KWH per month to the start of this financial year see monthly details below so to date of the invoice it would be \$20,000 approximately.

Joanna has also made the point to Meridian that if we had seen the higher power usage we would have moved to time of use (TOU) metering for the Taihape Pump station in the one-year agreement negotiated in March 2015¹: that would have halved our costs. This has been done in the contract extension just negotiated until 31 August 2016. A fallback position could be to look at half the bill under this basis, as we did not have the information to act on increased power usage because of their error.

Electricity contract management

From the limited information on this it is clear there is a management issue with this supplier with no one person being in charge or responsible for power usage and the resulting costs.

The responsibilities seem to be spread across a number of people within the Shared Services arrangements and these staff have changed, moved on and in some cases returned over time. I believe that this needs to be looked at with one person tasked with monitoring the power usage, performance and use of the power by Council's plants and the resulting costs.

In terms of energy management the low power estimated (and charged) could have been calculated from the equipment installed in the updated plant and should have been highlighted when the use was less than that forecast.

Monitoring of use of Power

From the Meridian bills in the purchase order system from early 2014 monthly power usage was seen at 1500 kWh with the note that in 2013 for the same period we used 165kWh. In late 2015, it looks as if the power requirements for this are circa 20,000 kWh per month so budgets for this will have to increase. It also highlights that there seems no advance warning or knowledge of this increased electricity usage due to infrastructure projects and this is not reflected in the annual budgets. There is a need for whole of life project costs to be established including increased operating costs over the life of the project at the start of the project rather than on completion. This would also apply to our Rural Water Schemes particularly HRWS.

In discussions with David Miller there is an opportunity for Council to conduct EECA energy audits as attached as [Appendix 3](#). EECA Business Support currently offers Energy Audits at two different levels. It would seem prudent that we undertake a Level 1 Audit and using industry benchmarks gain a high-level understanding of the power use against benchmarks. It is understood that Council would qualify to have some of these costs reimbursed so this would seem a prudent first step along with having clear accountability for this cost type and supplier.

Recommendations

1. That the report 'Electricity supply to Council' be received.
2. That regarding the arrears for power usage at the Taihape Papakai Pump station, Council agrees either:
 - a. to pay the full Meridian invoice, or
 - b. to endorse the approach to negotiate downward the amount due to Meridian as it stemmed from their errors,
3. That Council endorse the EECA audit approach and having a clear accountability around this cost type and supplier.

George McIrvine
Group Manager, Finance & Business Support

¹ The report to Council on that contract renewal is attached as [Appendix 2](#). Council resolved to take a one-year term (15/RDC/039).

Appendix 1

BILL_ID	STATEMENT_DATE	DUE_DATE	INSTALLATION_ADDRESS	ICP	INVOICE_FROM_DATE	INVOICE_TO_DATE	USAGE
2100199312-616890832	29/12/2015	15/01/2016	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	30/10/2015	17/12/2015	45,400
2100199312-616598192	30/11/2015	14/12/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	30/09/2015	29/10/2015	21,500
2100199311-616295848	28/10/2015	11/11/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	20/08/2015	29/09/2015	572,700
2100199311-615703637	28/08/2015	11/09/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	5842001PC0AE	21/07/2015	19/08/2015	1,600
2100199311-615097028	28/07/2015	11/08/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	20/06/2015	20/07/2015	1,700
2100199311-614809070	29/06/2015	13/07/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	22/05/2015	19/06/2015	1,600
2100199311-614516352	28/05/2015	11/06/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	22/04/2015	21/05/2015	1,600
2100199311-614221132	28/04/2015	12/05/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	21/03/2015	21/04/2015	1,800
2100199311-613942065	30/03/2015	13/04/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	21/02/2015	20/03/2015	1,500
2100199311-613671214	2/03/2015	16/03/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	20/01/2015	20/02/2015	1,800
2100199311-613361928	28/01/2015	11/02/2015	TAIHAPE SEWERAGE PONDS, PAKAKAI ROAD, TAIHAPE	0035842001PC0AE	19/12/2014	19/01/2015	1,800

Appendix 2

REPORT



SUBJECT: **Electricity Contract Renewal**
TO: Council

FROM: David Rei Miller

DATE: 26 February 2015

FILE: 6-CF-4-9

1. Executive Summary

- 1.1 The contract for electricity supply to Rangitikei District Council needs to be renewed. Four tenders were received from each of the retailers that supply our area, based on Manawatu District Council and Rangitikei District Council aligning their contracts. The cheapest rates are available from incumbent Meridian Energy, whose rates were approximately \$10,000/year (3%) cheaper than the next cheapest tenderer.

2. Background

- 2.1 Tenders were requested from all four electricity retailers that supply our area: Meridian Energy, Genesis Energy, Mercury Energy and Contact Energy. Actual consumption data from 2013-2014 was used to evaluate these four tenders. The results for Rangitikei District Council are shown in the following table. NHH refers to Non-Half Hourly meters, and TOU to Time of Use.

Table 1: Cost Comparison

Retailer	Rangitikei District Council (\$/yr)		
	NHH	TOU	RDC Total
Meridian	346,549	32,794	379,343
Genesis	426,990	33,941	460,931
Mercury	356,100	33,478	389,577
Contact	657,669	37,079	694,747

- 2.2 Meridian Energy was the cheapest by approximately \$10,000/year (3%). In addition to being the cheapest, Meridian Energy is also the incumbent. This means that re-signing with them would not involve a lengthy process of transferring data between retailers. From experience, transferring between retailers is a major exercise for organisations as large as our own, and can involve loss of information as well as issues with historic billing.
- 2.3 These rates were provided on the basis that contracts for Manawatu District Council and Rangitikei District Council would be aligned. This means in effect that while each Council would still have separate contracts, they would benefit from being part of a larger package that results in better prices from energy companies. In addition, Infrastructure staff operate across both Councils under Shared Services. This means that ongoing management of electricity supplies for each Council would be easier. Combining with Manawatu District Council almost doubles the annual spend on electricity, and the number of ICPs (metered connections). Meridian has offered an additional 1% saving for aligning these contracts. This saving has been included in the figures shown in the table above. Manawatu District Council will be approached at their 19 March SP&P Committee meeting to renew their electricity contract with Meridian and align their contract with Rangitikei District Council.

Copy for Assets/Infrastructure Committee, 17 March 2016

- 2.4 The term of this contract would be 2 years. If in future, Rangitikei District Council wanted to cancel this contract, for example if we wished to sign on to a future MWLASS agreement, the penalty would be \$100 plus \$20/ICP/month remaining for NHH meters i.e. \$100 plus \$2,480 per month remaining. There is no penalty for contract termination of TOU meters. Meridian have been approached to provide a 1-year contract offer as well, for comparison. This will be presented to Council at the earliest opportunity.
- 2.5 Discussions were had with Meridian about the All of Government contract that MBIE oversees. The All of Government contract enables small organisations with a small number of ICPs to secure better rates than they would otherwise be able to. For organisations as large as our own, however, there is little to nothing to be gained by being on the All of Government contract, particularly if our contract is bundled with Manawatu.

3. Recommendations

- 3.1 That the report 'Electricity Contract Renewal' be received.
- 3.2 That Council indicates the term of contract desired (1 year or 2 years).
- 3.3 That Rangitikei District Council sign a contract with Meridian Energy, aligned with the Rangitikei District Council contract (with alignment of contracts contingent on acceptance by Manawatu District Council).

David Rei Miller
Asset Engineer - Utilities

Appendix 3

EECA BUSINESS™ Support

Energy Audits

Setting a benchmark standard for energy use

Energy audits are a crucial part of the energy management process. They determine how efficiently energy is being used, identify energy and cost-saving opportunities, and highlight potential improvements in comfort and productivity.

Auditors visit your sites, examine your processes, measure energy use and identify areas of waste.

Many of their recommendations may require little or no capital investment. Savings from implementing these simple, low-cost energy saving opportunities will often recover the cost of the energy audit in less than 12 months.

An energy audit will also identify a number of more capital-intensive opportunities for implementation, and some requiring further investigation.

High performance measures

Our energy audits are performed to the Australasian Energy Auditing Standard AS/NZS 3598. Auditors are accredited by the Energy Management Association of New Zealand (EMANZ).

How you'll benefit from an energy audit

- An audit gives you benchmarks to compare your energy use with similar businesses.
- Estimated costs of identified improvements are provided so you can prioritise the options in order of cost and benefit.

The types of energy audits included in this programme

This programme is suitable for all businesses interested in identifying energy saving opportunities. It includes energy audits of the following systems:

- compressed air
- pumps
- fans
- process heat (boilers, steam and hot water systems)
- refrigeration.

Audit Phases



Investigation

Obtain all relevant energy consumption data

- historical energy consumption
- mechanical plant configuration
- floor areas, staff number, production levels



Site Survey

Obtain detailed information pertaining to the overall site

- Interview key staff
- Understand major energy end-uses
- Identify potential energy saving opportunities



Technical Analysis

Determines overall energy efficiency

- Energy end use breakdown
- Establish energy baselines
- Analyse energy saving measures



Reporting

Compile and show energy use in an easy-to-understand format

- Details of current energy use
- Performance against benchmarks
- Energy end use breakdown
- Savings opportunities including detailed costs and benefits

An energy auditor will give advice on areas such as fuel switching, heat recovery, equipment, and controls. They may also make recommendations on tariff assessment and negotiation, although this work is outside the scope of the Energy Audit Standard.

It's a good idea to select an auditor who has had experience in a similar industry or is familiar with the processes you use.

Types of Energy Audits

1

A base level audit identifies and broadly quantifies energy efficiency opportunities in selected technology areas across a site.

EECA BUSINESS Funding and Eligibility

Funding available is \$800 per system, up to \$2,400 per audit.

2

Investment level audit

An investment level audit is detailed and comprehensive and may involve energy simulation and computer modelling. Energy consumption data for specific subsystems are collected over a significant period of time, and analysed to a level that will support an investment decision.

EECA BUSINESS Funding and Eligibility

Funding is available up to 40% of audit cost, to maximum of \$20,000 per audit.

How EECA BUSINESS can help you

The Energy Audits programme supports businesses to determine how efficiently energy is being used and identify energy and cost saving opportunities. We offer access to technical experts, practical advice and financial assistance.

Our account managers and Programme Partners can help with all areas of energy management, including developing plans to ensure continuous improvement.

Energy audits are a crucial initial step in the energy management process and often identify

energy savings of 15-20%



Case Study

Christchurch Casino

An energy audit of Christchurch Casino identified opportunities to improve the energy efficiency of air-conditioning, fresh-air intake and lighting systems. Optimisation of these systems and the installation of a new, very efficient air-handling unit on the main gaming floor have reduced electricity consumption by 18.5%. These improvements have saved the Casino over 1 GWh in energy savings per year and resulted in cost savings of \$138,000 per year.



To find out more about EECA BUSINESS support and to find an EECA BUSINESS Programme Partner, visit www.eecabusiness.govt.nz or email business@eeca.govt.nz

