



Report to Entrust

The Energy Solutions Programme

Financial Year 2016/17

August 2017

1 The Energy Solutions Programme

The Company and the Trust agreed that the Energy Solutions Programme Investment for the past year would be spread across overhead improvement (undergrounding and customer owned ROW poles) and new technologies (sustainable substations and a community energy efficiency programme).

Through our commitment to keep the Trust informed on the focus and achievements of the Company, and in particular this programme, we submit this report for the 2016/17 year

2 Expenditure of the Energy Solutions Programme

This programme replaced the Overhead Improvement Programme (OIP) of the previous DREOR.

The Minimum Undergrounding Investment amounts of the last 3 years of the previous deed were:

Year ending June 2013	\$13.3M
Year ending June 2014	\$13.4M
Year ending June 2015	\$13.7M

The new deed requires the Energy Solutions Programme Investment to be \$10.5M each year, unless agreed otherwise.

The total investment made over the past year has been \$7.270M, and is detailed below:

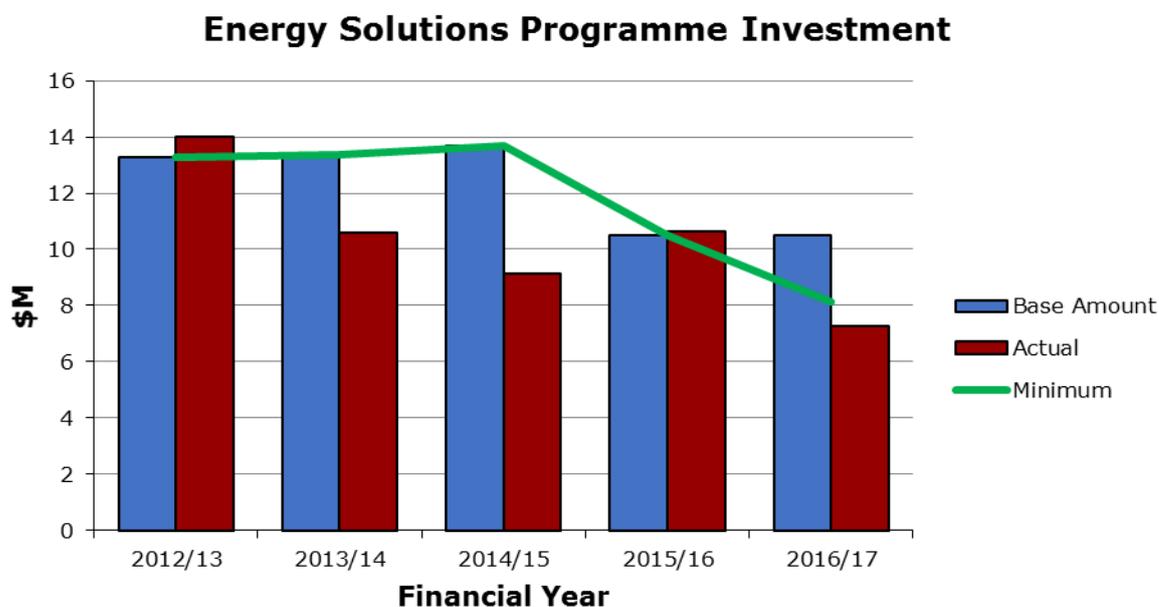
Overhead Improvement:	
Undergrounding	\$4.558M
Undergrounding contributions	(\$0.129M)
ROW pole replacements	\$2.000M
New Technologies:	
Sustainable Substations	\$0.325M
Energy Efficiency Community Programme	<u>\$0.516M</u>
	\$7.270M

3 Energy Solutions Programme Investment

The actual OIP and Energy Solutions Programme Investment expenditure throughout each year of the past five years of the combined programmes is summarised in the table below:

	Target Investment	Actual Investment	Difference
2012/13	\$13.3M	\$14.0M	\$0.7M
2013/14	\$13.4M	\$10.6M	(\$2.8M)
2014/15	\$13.7M	\$9.1M	(\$4.6M)
2015/16	\$10.5M	\$10.6M	\$0.1M
2016/17	\$10.5M	\$7.3M	(\$3.2M)

The investment for the year 2016/17 was \$7.3M. With this, the actual expenditure over the past 5 years is \$51.6M – an average of \$10.3M. To meet the Energy Solutions Programme Investment, considering Clause 4.4 of the deed, investment during the 2016/17 year needed to be \$8.1M.



4 Achievements in 2016/17

Undergrounding

We highlighted in our report last year that securing Chorus' cooperation to convert the telephone lines simultaneously had been limiting our ability to progress with undergrounding projects. This limitation continued through this past year.

After completing the large-scale project in Pakuranga, late in 2015, Chorus advised that they no longer wished to invest in undergrounding copper telephone services.

They did advise a desire to continue to work with Vector on undergrounding projects, but only under a concept where all customers can be converted to fibre services and the copper infrastructure displaced.

We trialled the feasibility of this concept during the past year on a small resident initiated project in Alberon Street, Parnell. Before commencing the project, we sought commitment from all residents to move their subscription to a fibre telecommunications service on the basis that it was not going to burden them financially. However, this commitment could not be met by all the telecommunication service providers in the street, which resulted in some of the residents deciding to remain with their existing contracts. Consequently, Chorus had to install new underground copper infrastructure to sustain service to those customers. As a result, this alternative approach has been deemed as unfeasible from a Chorus perspective.

Despite the disappointing result for Chorus in Alberon Street, the residents there have expressed their delight with removal of the poles and the subsequent other improvements made in their street, e.g. investments by Auckland Transport in new streetlights, kerbs and footpaths. Despite these setbacks, we have managed to complete and progress undergrounding projects to the value of \$4.558M.

We completed undergrounding projects in Burwood Crescent and Bell Road in Remuera, and Glanville Terrace in Parnell. We are still progressing with undergrounding works in Franklin Road in Freemans Bay, and we commenced a substantial undergrounding project in Massey Road, Mangere.

Pleasingly, all overhead improvement works have been delivered without a lost time injury and have received complimentary customer feedback upon completion. These projects provided positive brand exposure to Entrust through co-branded project signs, co-branded project information flyers, and references in project correspondences.

The following photos depict the "before and after" images of some of the undergrounding works completed through the year.



Alberon Street, Parnell



Alberon Street, Parnell



Burwood Crescent, Remuera



Burwood Crescent, Remuera



Massey Road, Mangere





Massey Road, Mangere

Progress of the undergrounding work happening. New underground networks (power and telephone) are installed first and all properties are connected to these new networks before any of the old overhead reticulation can be removed. This old reticulation will start to be removed in December or January.

Right-Of-Way Pole Replacements

We have replaced 680 poles across the Trust District during the year to improve safety associated with customer owned poles down right-of-ways (ROW). We have allocated \$2M of this investment within the overhead improvement programme.

The picture below depicts a new ROW pole in the Avondale area:



55 Tiverton Street, Avondale

Sustainable Substations

This initiative involved the installation of solar panels and battery packs at some of Vector's zone substations to displace or reduce the energy consumption from the grid.

Installations at three substations were completed in the financial year. This program is not yet completed and will carry over into the current financial year.



Solar panels on the roof of Mt Wellington Substation

Energy Efficiency Community Programme

Entrust and Vector undertook a community based energy efficiency project in the South Auckland area in partnership with the Auckland Council.

This project had three components:

- We installed ten battery energy systems in the community
- We conducted energy audits in 300 residential homes
- We installed LED lighting and iSmart hot water control units to improve the energy efficiency of these homes

This programme is continuing into FY'18 and will see Vector installing further battery systems installed and a further 300 home audits to be completed, by Auckland Council.

4 Summary

The Energy Solutions Programme for 2016/17 was impacted significantly by the changes in investment strategies by our traditional collaboration partners. Some of the shortfall was made up by increasing the investment in ROW poles during the year, while the new technology projects and related expenditure will be carried over into the next financial year.

As a result of the above, expenditure for the Energy Solutions Programme Investment during 2016/17 did not reach the target for the year. The Base Amount or the target averaged over the past 5 years has not been satisfied.



Andre Botha
Chief Networks Officer