Appendix 4b – RIN Requirement 1.5 – DMIA Responses

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1.5 In respect of the DMIA:

(a) **provide an explanation of each demand management project or program for which approval is sought;**

Standby Power Reporting: PowerView

Standby power is the power that electrical appliances consume when they are not completely switched off. A common example is when the television is turned off using the remote control, but the power point switch is on and the equipment is still consuming power. Another attribute of standby power is that it is always on and this leads to possible energy savings during peak times that will lead to reductions in peak demand.

Although individual appliances may only consume a small amount of standby power, the combined standby power consumption of all appliances in a home can use up to 12% of a household's total energy consumption. Standby Power Reporting: PowerView was developed to inform customers of their standby power usage and allows them to view their energy consumption via a web portal and take actions towards reducing their standby power consumption.

Rooty Hill Residential Demand Management Program

In August 2010, approval was given to implement phase 1 of the Rooty Hill Residential Demand Management (DM) Program and commence the acquisition of residential customers to the air conditioning (AC) cycling (CoolSaver) program and the peak time rebate (PeakSaver) program.

A Peak Time Rebate (PTR) was selected over Dynamic Peak Pricing (DPP), as this product rewarded the customer by paying them $1.50 per kWh for energy reduction below their calculated baseline rather than penalising them for using energy during the peak period. The reward approach has been tested successfully overseas and we saw this as an opportunity for higher customer participation as the program will deliver a monetary incentive rather than increasing costs to their energy bills. This program was marketed as PeakSaver and was the first innovative peak time rebate demand management program offered in Australia.

The costs sought for this project consist only of the Peak Time Rebate algorithm development and external contractor resource to develop marketing strategies to recruit residential customers. All other costs for this program are claimed through D-factor and tabled in the Report on Demand Management Projects for FY 2010/11.

(b) **explain, for each demand management project or program identified in the response to paragraph 1.5(a), how it complies with the DMIA criteria detailed at section 3.1.3 of the DMIS, with particular reference to:**

(i) **the nature and scope of each demand management project or program;**

Standby Power Reporting: PowerView

The installation of residential interval meters has allowed Endeavour Energy to offer a web-based monitoring tool, showing the daily load profile. This provides users with the opportunity to identify their standby power consumption.

Endeavour Energy offered this product to 3,000 customers who have remotely read interval meters. Customers were provided with tips on how to reduce standby power consumption

Standby power consumption was monitored and comparisons of consumption before the trial to during the trial will be analysed to confirm any reductions.

This product is branded PowerView.

Rooty Hill Residential Demand Management Program

Peak demand in Endeavour Energy's network area has grown significantly over the past decade, reflecting the transformation of rural and semi-rural land into new urban developments, and a sharp increase in the popularity and use of air conditioners.

Penetration of air conditioners across NSW was 59% in 2009 and significantly higher in Western Sydney. This is of particular concern because the peak demand from air conditioning loads can be both very large and of short duration, resulting in poor utilisation of fixed assets. In addition, the generation and distribution systems tend to be at their lowest capacity during very hot weather when air conditioner demands are likely to be at a maximum.

The Rooty Hill zone substation area was chosen due to network constraint and part of the overall Rooty Hill Demand Management Program outlined in the Report on Demand Management Projects for FY 2010/11.

(ii) **the aims and expectations of each demand management project or program;**

Standby Power Reporting: PowerView

Standby power consumed by a household is as a result of appliances being left on standby rather than switched off. This leads to millions of tonnes of GHG emissions each year in Australia alone. This trial focuses on advising customers of the impact of their standby power and encourages change in behavioural and consumption patterns.

1. Inform customers of their consumption patterns

2. Reduce overall energy consumption

3. Reduce standby power consumption leading to reduced peak demand

Rooty Hill Residential Demand Management Program

The overall program is to be delivered over three years and two phases with phase 1 heavily focused on developing the systems and investigating the correct approach to adopt for implementing the broader campaign during phase 2.

The objectives of the residential DM program are to:

- Reduce peak demand from the residential initiatives by 1,000kVA by year 3
- Educate participants and the public on the benefits of these initiatives
- Gain an understanding of customer behaviour and acceptance of these initiatives for future expanded programs
- Develop systems and processes to make future programs cheaper to implement
- Put Endeavour Energy's network business in a solid position to offer cost-effective DM initiatives to accompany any potential smart meter roll-out if mandated by the Government

(iii) **the process by which each demand management project or program was selected, including the business case for the demand management project and consideration of any alternatives;**

Standby Power Reporting: PowerView

This was an energy efficiency/demand management program designed to educate customers on their energy consumption patterns and encourage customers to take actions to reduce their standby power consumption that leads to a reduction in peak demand. This program was designed to provide customers with some benefits associated with smart metering such as the viewing of household consumption data on a 30 minute interval basis. This program formed part of the Blacktown Solar City program.

The cost of the program was also greatly reduced due to the smart meters already deployed and the data communications to retrieve the data already being in place.

Rooty Hill Residential Demand Management Program

The Rooty Hill Residential Demand Management program is part of the wider Rooty Hill Demand Management Program. The business case for the Rooty Hill Demand Management Program is based on network constraint.

(iv) **how each demand management project or program was/is to be implemented;**

Standby Power Reporting: PowerView

Endeavour Energy offered this product to over 3,000 customers who had a remotely read interval meter. Every night data from the Echelon meter was uploaded to a secure website, which could then be accessed through a range of graphs. The data was usually available within 48 hours.

Customers were encouraged to use the data and tips on energy efficiency to manage their energy use and reduce their standby power consumption.

Standby power consumption was then monitored and compared with data from before the trial to during the trial. This was also compared to standby power consumption of households who were not registered but received power saving tips, and with the standby power consumption of other households with remotely read interval meters.

Rooty Hill Residential Demand Management Program

The PeakSaver program is based on providing a financial reward to customers that reduce electricity consumption rather than penalising them for consuming electricity during peak times. They are paid for the quantity of electricity not consumed. To

calculate this quantity, a baseline profile of what the customer would have consumed on a hot day needed to be developed.

For this program to operate, many systems needed to be developed to manage the following functions:

- Customer recruitment
- Event notification
- Customer record management
- Metering data acquisition and storage
- Payment calculation, monitoring and storage
- Baseline algorithm development (the subject of this DMIA claim)

(v) **the implementation costs of the demand management project or program; and**

Standby Power Reporting: PowerView

Implementation costs for the PowerView program is mainly attributed to the web portal and the costs associated with hosting the website. The PowerView web portal was designed and implement by an external vendor who also provides the hosting services.

Rooty Hill Residential Demand Management Program

Costs claimed under DMIA for the Rooty Hill Residential Demand Management Program are only the costs incurred for the development of the baseline algorithm, an external marketing contractor to develop recruitment strategies and the market research vendor. All other costs incurred through this program are claimed under D-factor.

(vi) **any identifiable benefits that have arisen from the demand management project or program, including any off peak or peak demand reductions;**

Standby Power Reporting: PowerView

The program results are currently under analysis provided by an external analytics and research company.

Rooty Hill Residential Demand Management Program

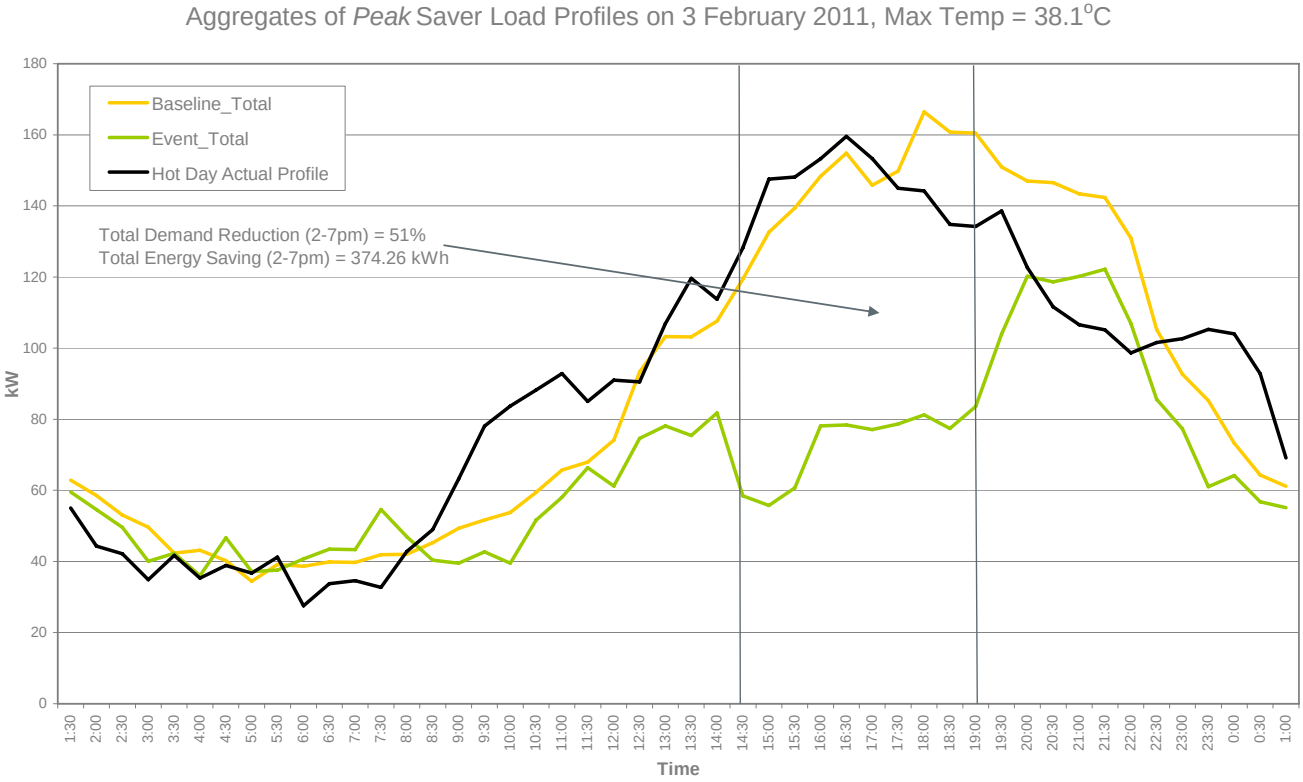
There were four events conducted out of a possible six during the 2010/11 summer, being:

- Tuesday 25 January 2011
- Tuesday 1 February 2011
- Thursday 3 February 2011
- Tuesday 1 March 2011

The main driver for calling an event was a sequence of hot days and a resultant rise in the peak demand on the affected zone substation. Event days were working days only, excluding public holidays. The results showed positive participation from PeakSaver customers and a higher than expected kVA demand reduction per participant (1.7 as compared to 1.0). An explanation for the PeakSaver result is a high level of participant buy-in, as identified by the survey conducted.

*Peak*Saver RESULTS SUMMARY

	25 Jan 2011	1 Feb 2011	3 Feb 2011	1 Mar 2011
Participants	34	38	38	38
Max. Temperature	36.2°C	40.0°C	38.1°C	31.5°C
Total Energy Reduction	111kWh	296kWh	374kWh	128kWh
Average Demand Reduction compared to baseline	29%	41%	51%	36%
Average kVA Reduction / Customer compared to baseline	0.7kVA	1.6kVA	2.0kVA	0.7kVA
Peak kVA Reduction / Customer	1.2kVA	1.7kVA	2.2kVA	1.0kVA



(c) **provide an overview of developments in relation to the demand management projects or programs completed in previous years, and any results to date;**

No demand management projects or programs were completed in previous years that were funded by DMIA.

(d) **state whether the costs associated with each demand management project or program identified in the response to paragraph 1.5(a) are:**

(i) **recoverable under any other jurisdictional incentive scheme, and if so, which scheme;**

(ii) **recoverable under any other Commonwealth or State Government scheme, and if so, which scheme; and**

(iii) **included in the forecast capex or forecast opex allowances or any other incentive scheme (such as the D–factor scheme for NSW) approved in the Distribution Determination.**

Funding of the Powerview and Rooty Hill Residential Demand Management Program is not:

(i) recoverable under any other jurisdictional incentive scheme

(ii) recoverable under any other Commonwealth or State Government scheme

(iii) included in the forecast capex or forecast opex allowance or any other incentive scheme

It should be noted that the Standby Power Reporting: PowerView program did form part of Blacktown Solar City but was funded by Endeavour Energy.

(e) **provide an explanation of how the total amount of DMIA spent in the previous regulatory year has been calculated, including details of any assumptions and methodologies.**

Not applicable.