

# Audit of Endeavour Energy's D-factor Claim for FY2011/12



Final Report to Endeavour Energy

2 November 2012



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### 1. Introduction

#### 1.1. SCOPE OF WORK

Endeavour Energy commissioned Futura Consulting to audit its justification and claim for recovery of expenses associated with DM programs under the D-factor for FY11/12. Specific issues reviewed in relation to each the DM programs selected by Endeavour Energy for inclusion in its D-factor submission to the AER for FY11/12 were as follows:

- Was there a need for capacity augmentation?
- Did the DM program involve measures and strategies that appropriately targeted the time of peak demand on the network element in question?
- What has been the expenditure on the DM programs in FY11/12, and are those costs reasonable?
- What was the value of the deferral to be provided by the DM program, and has this been calculated in accordance with the AER's Guideline: Calculation of Avoided Distribution Costs?
- How much revenue has Endeavour Energy foregone, and has this been calculated in accordance with the AER's Guideline: Methodology for Estimating Foregone Revenue?

#### 1.2. DATA SOURCES USED

Futura Consulting accessed and cited the following information sources to conduct the review of Endeavour Energy's Demand Management programs in FY11/12 for the D-factor determination.

- D-factor Determination Summary: Each program has a summary sheet that briefly
  describes the DM program or measure, the payments made and the peak reductions
  achieved.
- DM Program Financial Models and Summaries: For each DM program, the model
  calculates the financial effects from the deferral of the supply side option in terms of
  capital and operational costs. The associated summary provides a supplemental
  source of information characterising the network constraint in terms of hours and
  MVA at risk.
- Quotes by the Substation Asset Management Technical Officers: These quotes
  are done as a costing step when looking at the preferred supply side option. The
  costs included have not generally been used as the deferral value because they are
  done much later than the DM programs are approved. However they have served as
  another useful source of costing information that informs the reasonableness of the
  initial cost estimate.



- Equipment Costing Reference: This document provides an approximate cost
  reference for a wide range of augmentation works and hardware that may be
  required. It is typically used by the network planning group as the first source of cost
  estimation in developing supply-side options. These are the estimates that are most
  often available at the time the DM programs are developed and approved, and
  therefore have generally served as the cost estimates used in developing the ADC
  Caps in the detailed program reviews later in this report.
- Strategic Asset Management Plan (SAMP): The SAMP is a document that forecasts capital expenditure over a rolling 10 year period.
- Request for Proposals (RFPs) for DM Services: In some cases, an RFP was
  issued to solicit proposals for DM program services and measures. These
  documents describe the constraint, the load forecast, and give indicative program
  payments available.
- **Customer monitoring and verification data:** Endeavour Energy provided complete details of monitoring and verification reports for all DM programs.
- Energy and demand revenue foregone: Endeavour Energy provided spreadsheets detailing the calculation of energy and demand revenue foregone for all DM programs.
- EE personnel: Futura also had access to Endeavour Energy personnel responsible
  for the DM network planning process, specific asset augmentation plans, and DM
  program design and implementation experience. These sources were exceedingly
  valuable in accessing the appropriate information and resolving remaining questions.

#### 1.3. OVERVIEW OF AUDIT FINDINGS

Based on our professional judgement and experience in DM programs for network augmentation deferral, review of the network and program documentation provided by Endeavour Energy, and detailed discussions with Integral Energy's DM program implementation staff, Futura Consulting concludes that the information provided on each of the DM programs contained in Endeavour Energy's D-factor claim for FY11/12 is correct.

#### 1.4. PROGRAM BY PROGRAM FINDINGS

Programs implemented by Endeavour Energy, under the D-factor include:

- Programs implemented (or approved) in FY11/12;
  - Mamre, Eschol Park and Customer A (extension).
- Programs operational in FY11/12; and
  - Arndell Park, Granville, Liverpool, Parramatta, Rooty Hill and Bawley Point.



- Programs that concluded prior to FY11/12;
  - Minto, Castle Hill, Nowra, Wetherill Park, Customer A, Campbelltown, Unanderra, Leabons Lane, Blacktown Solar Cities, Chipping Norton, and Windsor/Richmond.

A summary of Futura Consulting's D-factor audit findings for FY11/12 for each of the programs listed above is presented in tabular form in the following sections.

### 3. Programs Operational in FY11/12

Mamre ZS			
Audit topic area		Load forecasts	
Network element and constraint	The Mamre Zone Substation supplies the Mamre industrial area and the surrounding residential areas. These areas are experiencing natural growth in demand predominantly from the industrial area. This is resulting in current capacity limits being reached and the need for additional electricity network to supply this increase in electrical demand. Based on a review of revisions to the Summer Demand Forecast 2012 – 2021 issued in 22 September 2011, the expected load at risk on the Mamre ZS was 2.8 MVA in FY12/13, 5.3 MVA in FY13/14, and 8.8 MVA in FY14/15.		
Audit topic area		Supply-side augmentation	
Description and cost	Based on Futura Consulting's professional judgement and comparison of the information documented in Endeavour Energy's 2011 to 2021 SAMP with the Network Planning Branches Equipment Costing Reference, the project cost of \$6m for the augmentation of the Mamre ZS by the addition of a third 45 MVA 132/11 kV transformer and associated 11kV busbar extension works is considered reasonable.		
Audit topic area	Non-tariff measures implemented in FY11/12		
Description	The Mamre ZS DM Program aims to reduce summer afternoon peak demand by 8.8 MVA to defer the construction of a third 132/11 kV transformer and associated 11kV busbar works by two years. A DM SP was contracted via a public tendering process in FY11/12 to approach customers, perform free level 1 audits and to implement approved DM initiatives in the Erskine / Minchinbury industrial areas.		
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
Item	Reported Result	Comment	
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Mamre ZS DM Program in FY11/12	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$0	No legal costs were incurred	
External DM consultants and customer incentive payments (ex GST)	\$0	Although an external DM contractor was engaged in FY11/12 to market the program to customers no consultant costs or customer incentive payments were incurred during this period.	
Independent review of FY10/11 d-factor claim	\$0	Mamre ZS DM Program was not part of the independent review of EE's 10/11 d-factor claim.	
Total (ex GST)	\$0	The total DM costs claimed are correct.	
	The costs associated with	the Mamre ZS DM program are reasonable.	



Mamre ZS		
Audit topic area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result	Comment
Reference year	FY11/12	Reflects the approval year and signing of contracts with a DM SP to implement the Mamre ZS DM program.
Deferral period	2 year	Agrees with requirement of EE's SAMP 2011-2021 and RFP 1496/11P
ADC in reference year (\$k 11/12)	\$823	The calculation of the ADC in the reference year is correct
DM costs prior to FY11/12 (PV) (\$k 11/12)	\$0	The program was approved for implementation in FY11/1:
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$823	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consulti correct	ing's review, the calculations associated with the ADC cap are
Audit topic area	Energy	and demand revenue foregone for FY11/12
ltem	Reported Result	Comment
kWh Reduction	0	
Tariff Basis	n/a	
DUOS Rate(s)	n/a	
Total energy revenue foregone (\$k)	0	

No foregone energy or demand revenue has been claimed for the Mamre ZS DM Program in FY11/12  $\,$ 

Audit topic area	Additional amount to reflect time value of money		
ltem	Reported Result	Comment	
Additional Amount for Equivalent Recovery in Year t (\$k)	\$0	Review of EE's spreadsheets of the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct	
	No additional amount to reflect time value of money has been claimed for the Mamre ZS DM Program.		

0

n/a

n/a

0

kVA Reduction

DUOS Rate(s)

Total demand revenue foregone (\$k)

Tariff Basis



### ESCHOL PARK ZS

Audit topic area	Load forecasts  The Minto Zone Substation supplies the Minto industrial area, commercial centre and the surrounding residential areas. These areas are experiencing natural growth in demand predominantly from the industrial area. This is resulting in current network capacity limits being reached and the need for additional electricity network to supply this increase in electrical demand. Based on a review of Endeavour Energy's RFP 1494/11P (Provision of Demand Management Services for Eschol Park), issued on 4 November 2011, the expected load at risk on the Minto ZS was forecast at 9.7 MVA in FY12/13, 10.6 MVA in FY13/14, and 11.4 MVA in FY14/15.		
Network element and constraint			
Audit topic area	Supply-side augmentation		
Description and cost	The proposed network option to address the constraint is the construction of the new Eschol Park ZS, which comprises 2 x 25 MVA 66/11 kV transformers and 2x11kV sections. Based on Futura Consulting's professional judgement and comparison of the information documented in Endeavour Energy's 2011 to 2021 SAMP with the Network Planning Branches Equipment Costing Reference, the project cost of \$20.5m for the construction of the Eschol Park ZS is considered reasonable.		
Audit topic area Non-tariff measures imple		tariff measures implemented in FY11/12	
Description	The Eschol Park ZS DM Program aims to reduce summer afternoon peak demand by 9.0 MVA to defer the construction of the new Eschol Park ZS by two years. Approvals were given in FY11/12 to engage a DM SP to approach customers, perform free level 1 audits and to implement approved DM initiatives in the Minto industrial area and a generation service company, to provide network support by injecting power into the Minto ZS network during peak demand periods upon receiving notification from Endeavour Energy. Both firms were sought via a public tendering process.		
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
Item	Reported Result	Comment	
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Eschol Park ZS DM Program in FY11/12	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$7,126	Review of the tax invoice provided by EE confirms that the payment claimed for legal costs is correct.	
External DM consultants and customer incentive payments (ex GST)	\$0	An external DM contractor was engaged in the current FY12/13 to market the program to customers and therefore no consultant costs or customer incentive payments were incurred during FY11/12.	
Independent review of FY10/11 d-factor claim	\$0	Eschol Park ZS DM Program was not part of the independent review of EE's 10/11 d-factor claim.	
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Audit topic area	Calculation of avoided distribution cost (ADC)		
Item	Reported Result	Comment	
Reference year	FY10/11	Reflects the FY the Eschol Park ZS DM Program was approved for implementation by EE	
Deferral period	2 year	Agrees with requirement of EE's SAMP 2011 to 2021 and 1494/11P.	
ADC in reference year (\$k 10/11)	\$2,131	The calculation of the ADC in the reference year is correct.	
DM costs prior to FY11/12 (PV) (\$k 10/11)	\$0	The program was approved for implementation in FY11/12	
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$2,345	The maximum allowable cost recovery in FY11/12 is correct	
	Based on Futura Consulting's review, the calculations associated with the correct.		

Audit topic area	Energy and demand revenue foregone for FY11/12		
Item	Reported Result	Comment	
kWh Reduction	0		
Tariff Basis	n/a		
DUOS Rate(s)	n/a		
Total energy revenue foregone (\$k)	0		
kVA Reduction	0		
Tariff Basis	n/a		
DUOS Rate(s)	n/a		
Total demand revenue foregone (\$k)	0		

No foregone energy or demand revenue has been claimed for the Eschol ZS DM program in FY11/12  $\,$ 

Audit topic area	Additional amount to reflect time value of money		
Item	Reported Result	Comment	
Additional Amount for Equivalent Recovery in Year t (\$k)	\$1.500	Review of EE's spreadsheets of the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct	
-	The estimated additional amount to reflect time value of money is correct		



### CUSTOMER A ZS (EXTENSION)

Audit topic area	Load forecasts		
Network element and constraint	The Customer A DM Program was originally implemented in April 2005. The objective of the program was to defer the augmentation of the Customer A ZS for one year based on the 2005 SAMP. Demand reduction initiatives were implemented at Customer A. The original DM program was successful in assisting to defer this project. The SAMP 2009-2019 has the Customer A ZS augmentation scheduled for commissioning in 2012-13. The 2010 summer forecast has Customer A ZS exceeding its firm rating by 2 MVA.		
Audit topic area	Supply-side augmentation		
Description and cost	The proposed network option is the augmentation of the Customer A ZS by construct a third 25 MVA transformer, 33 kV busbar and additional 11 kV feeder breakers. Bas on Futura Consulting's professional judgement and comparison of the information documented in Endeavour Energy's 2009 to 2019 SAMP with the Network Planning Branches Equipment Costing Reference, the project cost of \$7.17m for these works i considered reasonable.		
Audit topic area	Non-tariff measures implemented in FY11/12		
Description	The Customer A ZS (extension) DM Program aims to reduce summer afternoon pedemand by 2.0 MVA to defer the planned augmentation works on the Customer A one year. Approvals were given in FY10/11 to enter into an agreement with Customer to implement additional demand and energy reduction initiatives at Customer A. Initiatives implemented and commissioned in FY11/12 include lighting upgrades are controls, a HVAC chiller upgrade and a solar PV demonstration project.		
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
•		down of FY11/12 non-tariff program costs	
Item	Reported Result	Comment	
-			
Item	Reported Result	Comment	
Item Program set-up (ex GST)	Reported Result	Comment  No set-up costs were incurred  No administrative costs have been claimed for the	
Item Program set-up (ex GST) Administration (ex GST) Marketing (ex GST)	Reported Result \$0 \$0	Comment  No set-up costs were incurred  No administrative costs have been claimed for the Customer A DM program for FY10/11	
Item  Program set-up (ex GST)  Administration (ex GST)  Marketing (ex GST)  Legal (ex GST)  External DM consultants and customer incentive	Reported Result \$0 \$0 \$0	Comment  No set-up costs were incurred  No administrative costs have been claimed for the Customer A DM program for FY10/11  No marketing costs were incurred	
Item Program set-up (ex GST) Administration (ex GST)	Reported Result \$0 \$0 \$0 \$0 \$0	Comment  No set-up costs were incurred  No administrative costs have been claimed for the Customer A DM program for FY10/11  No marketing costs were incurred  No legal costs were incurred  Review of data presented by EE confirms that the	



### CUSTOMER A ZS (EXTENSION)

Audit topic area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result	Comment
Reference year	FY10/11	Agrees with FY the program was approved by EE
Deferral period	1 year	Agrees with the requirement set out in EE's 'Customer A DM Program Extension' internal approvals memo.
ADC in reference year (\$k 10/11)	\$398	The calculation of the ADC in the reference year is correct
DM costs prior to FY11/12 (PV) (\$k 10/11)	\$0	There were no DM costs incurred prior to FY11/12
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$438	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consulti	ng's review, the calculations for the ADC cap are correct
Audit topic area	Energy and demand revenue foregone for FY11/12	

Audit topic area	Energy a	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	3,997,681	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N10	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$17.486	The energy revenue foregone calculation is correct
kVA Reduction	1,282	Review of monitoring and verification data from EE confirms that the measured demand foregone is correct
Tariff Basis	N10	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$33.664	The demand revenue foregone calculation is correct

Based on review of the customer monitoring and verification data, in combination with the customer's tariff classes, and 2011/12 network tariffs, the estimated foregone revenue for FY11/12 is correct

Audit topic area	Additional amount to reflect time value of money	
Item	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$50.962	Review of EE's spreadsheets for the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct
The estimated additional amount to reflect the time value of money is correct		amount to reflect the time value of money is correct



ARNDELL PARK ZS			
Audit topic area		Load forecasts	
Network element and constraint	Audited in FY10/11 - not i	ncluded in the present review	
Audit topic area		Supply-side augmentation	
Description and cost	Audited in FY10/11 - not i	ncluded in the present review	
Audit topic area	Non-	tariff measures implemented in FY11/12	
Description	The Arndell Park DM program aims to reduce summer afternoon peak demand by 6.9 MVA to defer the construction of Huntingwood 132 kV ZS by one year. A DM SP was contracted via the public tendering process in FY10/11 to approach customers, perform free level 1 audits and to implement approved DM initiatives in the Arndell Park and Huntingwood industrial areas.		
Audit topic area	Break	down of FY11/12 non-tariff program costs	
Item	Reported Result	Comment	
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Arndell Park DM program in FY11/12	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$0	No legal costs were incurred	
External DM consultants and customer incentive payments (ex GST)	\$202,538	Review of data presented by EE confirms the payments to DM consultants and customers were correct	
Independent review of FY10/11 d-factor claim	\$2,511	Review of invoices presented by EE confirms that the payment claimed is correct	
Total (ex GST)	\$205,049	The total DM costs claimed are correct	
	The costs associated with	the Arndell Park DM program are reasonable	
Audit topic area	Calculation of avoided distribution cost (ADC)		
Item	Reported Result	Comment	
Reference year	FY10/11	Audited in FY10/11 - not included in the present review	
Deferral period	1 year	Audited in FY10/11 - not included in the present review	
ADC in reference year (\$k 10/11)	\$1,951	Audited in FY10/11 - not included in the present review	



ARNDELL PARK ZS		
DM costs prior to FY11/12 (PV) (\$k 10/11)	\$16	The program was approved for implementation in FY10/1
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$2,129	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consultion correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy a	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	1,021,559	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$8.250	The energy revenue foregone calculation is correct
kVA Reduction	1,355	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$88.994	The demand revenue foregone calculation is correct
		stomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone rrect
Audit topic area	Additional amount to reflect time value of money	
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$63.614	Review of EE's spreadsheets of the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct
	The estimated additional a	amount to reflect time value of money is correct



GRANVILLE ZS			
Audit topic area	Load forecasts		
Network element and constraint	Audited in FY09/10 - not in	ncluded in the present review	
Audit topic area		Supply-side augmentation	
Description and cost	Audited in FY09/10 - not in	ncluded in the present review	
Audit topic area	Non-	tariff measures implemented in FY11/12	
Description	A DM SP was contracted via a public tendering process in FY09/10 to approach customers, to perform free level 1 audits and to implement approved DM initiatives in the Granville commercial and industrial areas. Power factor correction and lighting projects implemented in FY11/12 will address the summer peak load constraints on the Granville ZS.		
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
Item	Reported Result Comment		
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Granville DM program in FY11/12	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$0	No legal costs were incurred	
External DM consultants and customer incentive payments (ex GST)	\$95,401	Review of data presented by EE confirms the payments to DM consultants and customers were correct	
Independent review of FY10/11 d-factor claim	\$2,511	Review of invoices presented by EE confirms that the payment claimed is correct	
Total (ex GST)	\$97,912	The total DM costs claimed are correct	
	The costs associated with	the Granville DM program are reasonable	
Audit topic area	Calculation of avoided distribution cost (ADC)		
Item	Reported Result	Comment	
Reference year	FY09/10	Audited in FY09/10 - not included in the present review	
Deferral period	2 years	Audited in FY09/10 - not included in the present review	
ADC in reference year (\$k 09/10)	\$885	Audited in FY09/10 - not included in the present review	



GRANVILLE ZS		
DM costs prior to FY11/12 (PV) (\$k 09/10)	\$66	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$992	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consultir correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy a	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	231,271	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff bases are correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$2.759	The energy revenue foregone calculation is correct
kVA Reduction	612.5	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$76.880	The demand revenue foregone calculation is correct
		stomer monitoring and verification data, in combination with and 2011/12 network tariffs, the estimated foregone revenue
Audit topic area	Additional amount to reflect time value of money	
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$37.364	Review of EE's spreadsheets for the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct
	The estimated additional a	amount to reflect the time value of money is correct



Audit topic area		Load forecasts
Network element and constraint	Audited in FY06/07 - not in	ncluded in the present review
Audit topic area		Supply-side augmentation
Description and cost	Audited in FY06/07 - not in	ncluded in the present review
Audit topic area	Non-	tariff measures implemented in FY11/12
Description	There were no DM measures implemented in FY11/12, however two power factor correction projects that were implemented in 2010/11 had payments awarded to participating customers in FY11/12.	
Audit topic area	Breako	down of FY11/12 non-tariff program costs
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Liverpool DM program for FY11/12
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM service provider and customer payments (ex GST)	\$20,422	Review of data presented by EE confirms that the payment claimed is correct
Independent review of FY10/11 d-factor claim	\$2,511	Review of invoices presented by EE confirms that the payment claimed is correct
Total (ex GST)	\$22,933	The total DM costs claimed are correct
	The costs associated with	the Liverpool DM program are reasonable
Audit topic area	Calcu	lation of avoided distribution cost (ADC)
ltem	Reported Result	Comment
Reference year	FY06/07	Audited in FY06/07 - not included in the present review
Deferral period	2 years	Extended for 1 additional year in FY2010/11
ADC in reference year (\$k 06/07)	\$1,474	Revised ADC for extended deferral in FY10/11
DM costs prior to FY11/12 (PV) (\$k 06/07)	\$507	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$1,546	The maximum allowable cost recovery in FY11/12 is correct



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Audit topic area	Energy and demand revenue foregone for FY11/12		
ltem	Reported Result	Comment	
kWh Reduction	10,062,580	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct	
Tariff Basis	N19	The tariff basis is correct	
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.	
Total energy revenue foregone (\$k)	\$100.675	The energy revenue foregone calculation is correct	
kVA Reduction	5,468	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct	
Tariff Basis	N19	The tariff basis is correct	
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.	
Total demand revenue foregone (\$k)	\$851.489	The demand revenue foregone calculation is correct	

Based on review of the customer monitoring and verification data, in combination with the customer's tariff classes, and 2011/12 network tariffs, the estimated foregone revenue for FY11/12 is correct

Audit topic area	Additional amount to reflect time value of money	
Item	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$205.199	Review of EE's spreadsheets for the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct

The estimated additional amount to reflect the time value of money is correct



PARRAMATTA ZS			
Audit topic area	Load forecasts		
Network element and constraint	Audited in FY04/05 - not inc	cluded in the present review	
Audit topic area		Supply-side augmentation	
Description and cost	Audited in FY04/05 - not inc	cluded in the present review	
Audit topic area	Non-ta	riff measures implemented in FY11/12	
Description	The measures implemented under the Parramatta DM program in FY11/12 consisted of one initiative which comprised a power factor correction project with a major commercial sector customer. This will be the last initiative implemented in under the program as the Parramatta DM program has now concluded. In aggregate, initiatives installed to date (power factor correction, curtailable loads in the C&I sector, and energy efficiency improvements to lighting in the commercial) have adequately addressed the season and hours of this constraint.		
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
Item	Reported Result Comment		
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Parramatta DM program for FY11/12	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$0	No legal costs were incurred	
External DM service provider and customer payments (ex GST)	\$7,719	Review of data presented by EE confirms that the payment claimed is correct	
Independent review of FY10/11 d-factor claim	\$2,511	Review of data presented by EE confirms that the payment claimed is correct	
Total (ex GST)	\$10,230	The total DM costs claimed are correct	
	The costs associated with the	he Parramatta DM program are reasonable	
Audit topic area	Calculation of avoided distribution cost (ADC)		
ltem	Reported Result	Comment	
Reference year	FY04/05	Audited in FY04/05 - not included in the present review	
Deferral period	3 years Extended to FY09/10	Audited in FY08/09 - not included in the present review	
ADC in reference year (\$k 04/05)	\$5,374 for 5 year deferral	Audited in FY08/09 to reflect the additional 2 years of deferral	



Parramatta ZS		
OM costs prior to FY11/12 (PV) (\$k 04/05)	\$508	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 \$k 11/12)	\$9,681	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consulti correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy	and demand revenue foregone for FY11/12
ltem	Reported Result	Comment
«Wh Reduction	1,881,129	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue oregone (\$k)	\$29.119	The energy revenue foregone calculation is correct
VVA Reduction	5,311	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue oregone (\$k)	\$804.570	The demand revenue foregone calculation is correct
		istomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone irrect
Audit topic area	Additional amount to reflect time value of money	
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year (\$k)	\$177.594	Review of EE's spreadsheets for the additional amount fo equivalent recovery in Year t (\$k) confirms that the calculation is correct



BAWLEY POINT ZS			
Audit topic area	Load forecasts		
Network element and constraint	Audited in FY07/08 - not inc	cluded in the present review	
Audit topic area		Supply-side augmentation	
Description and cost	Audited in FY07/08 - not inc	cluded in the present review	
Audit topic area	Non-ta	riff measures implemented in FY11/12	
Description	The 1,259 kVA back-up generator initially commissioned in FY07/08 to provide additional capacity over the holiday Christmas and Easter holiday periods when the peak demand in the Bawley Point, Termeil and Kioloa areas exceeds the network capacity was re-commissioned for FY11/12. The distributed generation solution adequately addressed the season and hours of this constraint		
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
Item	Reported Result	Comment	
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Bawley Point DM program for FY10/11	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$0	No legal costs were incurred	
External DM service providers and customer incentive payments (ex GST)	\$195,439	Review of the internal invoice listing presented by EE confirms that the payment claimed to external DM service providers claimed is correct	
Independent review of FY11/12 d-factor claim	\$2,511	Review of invoices presented by EE confirms that the payment claimed is correct	
Total (ex GST)	\$197,950	The total DM costs claimed are correct	
	The costs associated with the	ne Bawley Point DM program are reasonable	
Audit topic area	Calculation of avoided distribution cost (ADC)		
Item	Reported Result	Comment	
Reference year	FY07/08	Audited in FY07/08 - not included in the present review	
Deferral period	3 years	Audited in FY08/09 - not included in the present review	
ADC in reference year (\$k 07/08)	\$1,355 for 3 year deferral	Extended from a 2 year deferral to a 3 year deferral	



t (\$k)		calculation is correct
Additional Amount for Equivalent Recovery in Year	\$41,657	Review of EE's spreadsheets for the additional amount for equivalent recovery in Year t (\$k) confirms that the
Item	Reported Result	Comment
Audit topic Area	Additional Amount to reflect time value of money	
	The distributed generation revenue	n solution did not result in any foregone energy or demand
Total demand revenue foregone (\$k)	\$0	n/a
DUOS Rate(s)	n/a	n/a
Tariff Basis	n/a	n/a
kVA Reduction	0	There was no foregone demand associated with the Bawley Point DM program
Total energy revenue foregone (\$k)	\$0	n/a
DUOS Rate(s)	n/a	n/a
Tariff Basis	n/a	n/a
kWh Reduction	0	There was no foregone energy associated with the Bawley Point DM program
ltem	Reported Result	Comment
Audit topic Area	Energy	and demand revenue foregone for FY11/12
	Based on Futura Consulti correct	ng's review, the calculations associated with the ADC cap are
Maximum Allowable Cost Recovery in FY11/12 (\$k 10/11)	\$330	The maximum allowable cost recovery in FY11/12 is correct
DM costs prior to FY11/12 (PV) (\$k 07/08)	\$1,130	The DM costs prior to FY11/12 are correct
BAWLEY POINT ZS		



ROOTY HILL ZS		
Audit topic area	Load forecasts	
Network element and constraint	Audited in FY09/10 - not included in the present review	
Audit topic area		Supply-side augmentation
Description and cost	Audited in FY09/10 - not i	ncluded in the present review
Audit topic area	Non-	tariff measures implemented in FY11/12
Description	The Rooty Hill ZS is summer peaking, and the measures implemented under the DM program in FY11/12, which included power factor correction, energy efficient lighting and curtailable loads in the C&I sector, adequately addressed the season and hours of this constraint. In FY11/12, EE expanded the residential sector air-conditioner cycling and peak time rebate (PTR) programs initially implemented to address the constraint on the Rooty Hill ZS in FY10/11.	
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administration costs were incurred
Marketing (ex GST)	\$0	Marketing costs are covered in external DM consultants and customer incentive payments below
Legal (ex GST)	\$0	No legal costs were incurred
External DM consultants and customer incentive payments (ex GST)	\$383,962	Review of data presented by EE confirms the payments to DM consultants and customers were correct
Independent review of FY10/11 d-factor claim	\$2,511	Review of invoices presented by EE confirms that the payment claimed is correct
Total (ex GST)	\$386,473	The total DM costs claimed are correct
	The costs associated with	the Rooty Hill DM program are reasonable
Audit topic Area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result	Comment
Reference year	FY09/10	Audited in FY09/10 - not included in the present review
Deferral period	2 years	Audited in FY09/10 - not included in the present review
ADC in reference year (\$k 09/10)	\$1,100	Audited in FY09/10 - not included in the present review



DM costs prior to FY11/12 (PV) (\$k 09/10)	\$249	The DM costs claimed prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$1,030	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consultir correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy a	and demand revenue foregone for FY11/12
ltem	Reported Result	Comment
kWh Reduction	44,882	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	<b>N</b> 19	The tariff bases are correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$26.076	The energy revenue foregone calculation is correct
kVA Reduction	2,538	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$171.516	The demand revenue foregone calculation is correct
		stomer monitoring and verification data, in combination with and 2011/12 network tariffs, the estimated foregone revenue
Audit topic area	Additional amount to reflect time value of money	
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$122.911	Review of EE's spreadsheets of the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct
t (\$k)		• • • • • • • • • • • • • • • • • • • •

### 4. Programs That Concluded Prior to FY11/12

MINTO ZS			
Audit topic area	Load forecasts		
Network element and constraint	Audited in FY07/08 - not included in the present review		
Audit topic area		Supply-side augmentation	
Description and cost	Audited in FY07/08 - not in	ncluded in the present review	
Audit topic area	Non-t	ariff measures implemented in FY11/12	
Description	The program was concludinglemented in FY11/12	The program was concluded following the FY09/10 summer and no DM measures were implemented in FY11/12	
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
Item	Reported Result	Comment	
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Minto DM program for FY10/11	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$0	No legal costs were incurred	
External DM service provider and customer payments (ex GST)	\$0	No payments were made to DM consultants or customers	
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11	
Total (ex GST)	\$0	The total DM costs claimed are correct	
	There are no program cos	ts associated with the Minto DM program for FY11/12	
Audit topic area	Calculation of avoided distribution cost (ADC)		
Item	Reported Result	Comment	
Reference year	FY07/08	Audited in FY07/08 - not included in the present review	
Deferral period	7 years	Audited in FY07/08 - not included in the present review	
ADC in reference year (\$k 07/08)	\$1,838	Audited in FY07/08 - not included in the present review	



MINTO ZS		
DM costs prior to FY11/12 (PV) (\$k 07/08)	\$283	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$2,278	The maximum allowable cost recovery in FY10/11 is correct
	Based on Futura Consulti correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy	and demand revenue foregone for FY11/12
ltem	Reported Result	Comment
kWh Reduction	688,334	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$7.190	The energy revenue foregone calculation is correct
kVA Reduction	1,897	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$295.435	The demand revenue foregone calculation is correct
		istomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone irrect
Audit topic area	Additional amount to reflect time value of money	
Item	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$63,684	Review of EE's spreadsheets for the additional amount fo equivalent recovery in Year t (\$k) confirms that the calculation is correct
	The estimated additional	amount to reflect the time value of money is correct



CASTLE HILL ZS		
Audit topic area	Load forecasts	
Network element and constraint	Audited in FY04/05 - not included in the present review	
Audit topic area		Supply-side augmentation
Description and cost	Audited in FY04/05 - not inc	cluded in the present review
Audit topic area	Non-ta	riff measures implemented in FY11/12
Description	The program was conclude FY11/12	d in FY06/07 and no DM measures were implemented in
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Castle Hill DM program for FY10/11
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM consultants and customer incentive payments (ex GST)	\$0	No payments were made to DM consultants or customers
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11
Total (ex GST)	\$0	The total DM costs claimed are correct
	There are no program costs	associated with the Castle Hill DM program for FY11/12
Audit topic Area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result Comment	
Reference year	FY02/03	Audited in FY04/05 - not included in the present review
Deferral period	3 years to FY05/06	Audited in FY04/05 - not included in the present review
ADC in reference year (\$k 02/03)	\$611 for 3 year deferral	Audited in FY04/05 - not included in the present review



CASTLE HILL ZS		
DM costs prior to FY11/12 (PV) (\$k 02/03)	\$151	The DM costs claimed prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$1,087	The maximum allowable cost recovery for FY11/12 is correct
	Based on Futura Consultion correct	ng's review, all calculations associated with the ADC cap are
Audit topic area	Energy a	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	3,227,222	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$40.628	The energy revenue foregone calculation is correct
kVA Reduction	909	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$141.574	The demand revenue foregone calculation is correct
		stomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone rrect
Audit topic Area	Additional amount to reflect time value of money	
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$38.343	Review of EE's spreadsheets for the additional amount fo equivalent recovery in Year t (\$k) confirms that the calculation is correct
	The estimated additional a	amount to reflect the time value of money is correct



Nowra ZS		
Audit topic area	Load forecasts	
Network element and constraint	Audited in FY04/05 - not included in the present review	
Audit topic area		Supply-side augmentation
Description and cost	Audited in FY04/05 - not inc	cluded in the present review
Audit topic area	Non-ta	riff measures implemented in FY11/12
Description	The program was conclude FY11/12	d in FY06/07 and no DM measures were implemented in
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Nowra DM program for FY11/12
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM consultants and customer incentive payments (ex GST)	\$0	No payments were made to DM consultants or customers
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11
Total (ex GST)	\$0	The total DM costs claimed are correct
	There are no program costs	s associated with the Nowra DM program for FY11/12
Audit topic area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result	Comment
Reference year	FY02/03	Audited in FY04/05 - not included in the present review
Deferral period	3 years	Audited in FY04/05 - not included in the present review
ADC in reference year (\$k 02/03)	\$435	Audited in FY04/05 - not included in the present review



Nowra ZS		
DM costs prior to FY11/12 (PV) (\$k 02/03)	\$43	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$925	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consultir correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy a	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	\$0	All DM measures were power factor correction. There is no foregone energy, as energy is charged on the basis of kWh, which is not affected by power factor correction
Tariff Basis	n/a	
DUOS Rate(s)	n/a	
Total energy revenue foregone (\$k)	\$0	
kVA Reduction	436	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$67.898	The demand revenue foregone calculation is correct
		stomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone rrect
Audit topic area	Additio	nal amount to reflect time value of money
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$14.288	Review of EE's spreadsheets for the additional amount fo equivalent recovery in Year t (\$k) confirms that the calculation is correct
	The estimated additional a	amount to reflect the time value of money is correct



WETHERILL PARK ZS		
Audit topic area	Load forecasts	
Network element and constraint	Audited in FY04/05 - not included in the present review	
Audit topic area		Supply-side augmentation
Description and cost	Audited in FY04/05 - not inc	luded in the present review
Audit topic area	Non-ta	riff measures implemented in FY11/12
Description	The program was concluded in FY07/08 and no DM measures were implemented in FY11/12	
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Wetherill Park DM program for FY10/11
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM consultants and customer incentive payments (ex GST)	\$0	No payments were made to DM consultants or customers
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11
Total (ex GST)	\$0	The total DM costs claimed are correct
	There are no program costs	associated with the Wetherill Park DM program for FY11/12
Audit topic area	Calculation of avoided distribution cost (ADC)	
ltem	Reported Result	Comment
Reference year	FY03/04	Audited in FY04/05 - not included in the present review
Deferral period	3 years	Audited in FY04/05 - not included in the present review
ADC in reference year (\$k 03/04)	\$2,924 for 3 year deferral	Audited in FY04/05 - not included in the present review



DM costs prior to FY11/12 (PV) (\$k 03/04)	\$109	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY10/11 (\$k 11/12)	\$6,044	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consulti correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy	and demand revenue foregone for FY11/12
ltem	Reported Result	Comment
kWh Reduction	201,822	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$1.628	The energy revenue foregone calculation is correct
kVA Reduction	5,447	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19/N21	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$462.057	The demand revenue foregone calculation is correct
		stomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone rrect
Audit topic area	Additional amount to reflect time value of money	
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year : (\$k)	\$97.578	Review of EE's spreadsheets for the additional amount fo equivalent recovery in Year t (\$k) confirms that the calculation is correct



Customer A ZS		
Audit topic area	Load forecasts	
Network element and constraint	Audited in FY05/06 - not included in the present review	
Audit topic area		Supply-side augmentation
Description and cost	Audited in FY05/06 - not in	cluded in the present review
Audit topic area	Non-t	ariff measures implemented in FY11/12
Description	The program was concluded in FY07/08 and no DM measures were implemented in FY11/12	
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
ltem	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Customer A DM program for FY11/12
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM consultants and customer incentive payments (ex GST)	\$0	No payments were made to DM consultants or customers
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11
Total (ex GST)	\$0	The total DM costs claimed are correct
	There are no program cost	ts associated with the Customer A DM program for FY11/12
Audit topic area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result	Comment
Reference year	FY04/05	Audited in FY05/06 - not included in the present review
Deferral period	2 years	Audited in FY05/06 - not included in the present review
ADC in reference year (\$k 04/05)	\$699	Audited in FY05/06 - not included in the present review



CUSTOMER A ZS		
DM costs prior to FY11/12 (PV) (\$k 04/05)	\$167	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$1,037	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consulticorrect	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	5,238,906	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N10	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$24.728	The energy revenue foregone calculation is correct
kVA Reduction	1,811	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N10/N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$140.731	The demand revenue foregone calculation is correct
		stomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone rrect
Audit topic area	Additio	nal amount to reflect time value of money
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$34.819	Review of EE's spreadsheets for the additional amount fo equivalent recovery in Year t (\$k) confirms that the calculation is correct



CAMPBELLTOWN ZS		
Audit topic area	Load forecasts	
Network element and constraint	Audited in FY05/06 - not in	ncluded in the present review
Audit topic area		Supply-side augmentation
Description and cost	Audited in FY05/06 - not in	ncluded in the present review
Audit topic area	Non-	tariff measures implemented in FY11/12
Description	The program was concluded in FY08/09 and no DM measures were implemented in FY11/12	
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Campbelltown DM program for FY11/12
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM service provider and customer payments (ex GST)	\$0	No payments were made to DM consultants or customers
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11
Total (ex GST)	\$0	The total DM costs claimed are correct
	There are no program cos	ets associated with the Campbelltown DM program for FY11/12
Audit topic area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result	Comment
Reference year	FY05/06	Audited in FY05/06 - not included in the present review
Deferral period	1 year	Audited in FY05/06 - not included in the present review
ADC in reference year (\$k 03/04)	\$515	Audited in FY05/06 - not included in the present review



DM costs prior to FY11/12 (PV) (\$k 03/04)	\$393	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$217	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consulti correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	155,160	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$1.083	The energy revenue foregone calculation is correct
kVA Reduction	1,418	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$220.825	The demand revenue foregone calculation is correct
		istomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone rrect
Audit topic area	Additional amount to reflect time value of money	
Item	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$46.698	Review of EE's spreadsheets for the additional amount fo equivalent recovery in Year t (\$k) confirms that the calculation is correct



Unanderra ZS			
Audit topic area	Load forecasts		
Network element and constraint	Audited in FY06/07 - not in	Audited in FY06/07 - not included in the present review	
Audit topic area		Supply-side augmentation	
Description and cost	Audited in FY06/07 - not in	cluded in the present review	
Audit topic area	Non-ta	Non-tariff measures implemented in FY11/12	
Description	The program was concluded in FY08/09 and no DM measures were implemented in FY11/12		
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
ltem	Reported Result	Comment	
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Unanderra DM program for FY11/12	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$0	No legal costs were incurred	
External DM service provider and customer payments (ex GST)	\$0	No payments were made to DM consultants or customers	
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11	
Total (ex GST)	\$0	The total DM costs claimed are correct	
	There are no program cost	s associated with the Unanderrra DM program for FY11/12	
Audit topic area	Calculation of avoided distribution cost (ADC)		
Item	Reported Result	Comment	
Reference year	FY06/07	Audited in FY06/07 - not included in the present review	
Deferral period	2 years	Audited in FY06/07 - not included in the present review	
ADC in reference year (\$k 07/08)	\$1,413	Audited in FY06/07 - not included in the present review	



DM costs prior to FY11/12 (PV) (\$k 07/08)	\$317	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$1,766	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consultion correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy a	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	59,665	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$0.806	The energy revenue foregone calculation is correct
kVA Reduction	2,415	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$200.735	The demand revenue foregone calculation is correct
		stomer monitoring and verification data, in combination with es, and 2011/12 network tariffs, the estimated foregone rrect
Audit topic area	Additional amount to reflect time value of money	
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$42.412	Review of EA's spreadsheets for the additional amount fo equivalent recovery in Year t (\$k) confirms that the calculation is correct
	The estimated additional a	amount to reflect the time value of money is correct



## LEABONS LANE ZS (COMMERCIAL AND BLACKTOWN SOLAR CITIES (BSC) NON-TARIFF RESIDENTIAL)

Audit topic area	Load forecasts	
Network element and constraint	Audited in FY07/08 - not included in the present review	
Audit topic area	Supply-side augmentation	
Description and cost	Audited in FY07/08 - not in	cluded in the present review
Audit topic area	Non-ta	ariff measures implemented in FY11/12
Description	The program was concluded in FY08/09 and no DM measures were implemented in FY11/12	
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Leabons Lane (Commercial and BSC Non-tariff Residential) DM program for FY11/12
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM service provider and customer payments (ex GST)	\$0	No payments were made to DM consultants or customers
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11
Total (ex GST)	\$0	The total DM costs claimed are correct
	There are no program costs associated with the Leabons Lane (Commercial and BSC Non-tariff Residential) DM program for FY11/12	
Audit topic area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result Comment	
Reference year	FY03/04	Audited in FY04/05 - not included in the present review
Deferral period	Extended to FY09/10	Audited in FY08/09 - not included in the present review
ADC in reference year (\$k 03/04)	\$986 Audited in FY07/08 - not included in the present review	



### LEABONS LANE ZS (COMMERCIAL AND BLACKTOWN SOLAR CITIES (BSC) NON-TARIFF RESIDENTIAL)

DM costs prior to FY11/12 (PV) (\$k 03/04)	\$399	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$1,260	The maximum allowable cost recovery in FY11/12 is correct

Based on Futura Consulting's review, the calculations associated with the ADC cap are correct

Audit topic area	Energy and demand revenue foregone for FY11/12	
	Reported Result	Comment
kWh Reduction	2,464,926	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19/N29/N70	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$218,112	The energy revenue foregone calculation is correct
kVA Reduction	4,857	Review of monitoring and verification data presented by EE confirms that the measured demand foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$156.820	The demand revenue foregone calculation is correct

Based on review of the customer monitoring and verification data, in combination with the customer's tariff classes, and 2011/12 network tariffs, the estimated foregone revenue for FY11/12 is correct

Audit topic area	Additional amount to reflect time value of money	
Item	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$78.901	Review of EE's spreadsheets for the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct

The estimated additional amount to reflect the time value of money is correct



### BLACKTOWN NORTH / MARAYONG ZS (BSC Non-TARIFF RESIDENTIAL)

BLACKIOWN NORTH	MIARATONG 20 (D	SC NON-TARIFF RESIDENTIAL)
Audit topic area	Load forecasts	
Network element and constraint	Audited in FY07/08 – not included in the present review	
Audit topic area		Supply-side augmentation
Description and cost	Audited in FY07/08 – not	included in the present review
Audit topic area	Non-	tariff measures implemented in FY11/12
Description	The program was concluded in FY08/09 and no DM measures were implemented in FY11/12	
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Blacktown North / Marayong ZS (BSC Non-tariff Residential) DM program for FY10/11
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM consultants and customer incentive payments (ex GST)	\$0	No payments were made to DM consultants or customers
Independent review of FY10/11 d-factor claim	\$0	Costs associated with the FY10/11 d-factor audit have been apportioned to the programs that were operational in FY10/11
Total (ex GST)	\$0	The total DM costs claimed are correct
	There are no program costariff DM program for FY1	sts associated with the Blacktown North/Marayong BSC non- 1/12
Audit topic Area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result	Comment
Reference year	FY05/06	Audited in FY07/08 - not included in the present review
Deferral period	1 year	Audited in FY07/08 - not included in the present review
ADC in reference year (\$k 05/06)	\$931	Audited in FY07/08 - not included in the present review



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BLACKTOWN NORTH	/ Marayong ZS (BS	6C Non-tariff Residential)
DM costs prior to FY11/12 (PV) (\$k 05/06)	\$215	The DM program costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$1,270	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consulting correct	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy a	and demand revenue foregone for FY11/12
Item	Reported Result	Comment
kWh Reduction	2,410,446	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N29/N70	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$217.610	The energy revenue foregone calculation is correct
kVA Reduction	0	There was no peak demand reduction claimed for the Blacktown North/Marayong BSC non-tariff DM program
Tariff Basis	n/a	
DUOS Rate(s)	n/a	
Total demand revenue foregone (\$k)	\$0	
		istomer monitoring and verification data, in combination with and 2011/12 network tariffs, the estimated foregone revenue
Audit topic area	Additional amount to reflect time value of money	
Item	Reported Result	Comment

Audit topic area	Additional amount to reflect time value of money	
Item	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$45.794	Review of EE's spreadsheets of the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct
The estimated additional amount to o reflect time value of money is correct		amount to o reflect time value of money is correct



CHIPPING NORTON ZS	6		
Audit topic area	Load forecasts		
Network element and constraint	Audited in FY08/09 - not included in the present review		
Audit topic area	Supply-side augmentation		
Description and cost	Audited in FY08/09 - not included in the present review		
Audit topic area	Non-tariff measures implemented in FY11/12		
Description	The program was concluded in FY10/11 and no DM measures were implemented in FY11/12		
Audit topic area	Breakdown of FY11/12 non-tariff program costs		
Item	Reported Result	Comment	
Program set-up (ex GST)	\$0	No set-up costs were incurred	
Administration (ex GST)	\$0	No administrative costs have been claimed for the Chipping Norton DM program for FY10/11	
Marketing (ex GST)	\$0	No marketing costs were incurred	
Legal (ex GST)	\$0	No legal costs were incurred	
External DM consultants and customer incentive payments (ex GST)	\$0	No payments were made to DM consultants or customers	
Independent review of FY10/11 d-factor claim	\$2,511	No payments were made to DM consultants or customers	
Total (ex GST)	\$2,511	The total DM costs claimed are correct	
	The costs associated with	the Chipping Norton DM program are reasonable	
Audit topic area	Calculation of avoided distribution cost (ADC)		
Item	Reported Result	Comment	
Reference year	FY08/09	Audited in FY08/09 - not included in the present review	
Deferral period	1 year	Audited in FY08/09 - not included in the present review	
ADC in reference year (\$k 08/09)	\$1,109	Audited in FY08/09 - not included in the present review	
DM costs prior to FY11/12 (PV) (\$k 08/09)	\$250	The DM costs prior to FY11/12 are correct	



### **CHIPPING NORTON ZS**

Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12) \$1,143

The maximum allowable cost recovery in FY11/12 is

correc

Based on Futura Consulting's review, the calculations associated with the ADC cap are correct  $\,$ 

Audit topic area	Energy and demand revenue foregone for FY11/12	
	Reported Result	Comment
kWh Reduction	544,459	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$4.442	The energy revenue foregone calculation is correct
kVA Reduction	2,267	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$353.086	The demand revenue foregone calculation is correct

Based on review of the customer monitoring and verification data, in combination with the customer's tariff class and 2011/12 network tariffs, the estimated foregone revenue for FY11/12 is correct

Audit topic area	Additional amount to reflect time value of money	
Item	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$75.767	Review of EE's spreadsheets of the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct

The estimated additional amount to reflect time value of money is correct



WINDSOR RICHMOND	zs	
Audit topic area	Load forecasts	
Network element and constraint	Audited in FY08/09 - not included in the present review	
Audit topic area	Supply-side augmentation	
Description and cost	Audited in FY08/09 - not included in the present review	
Audit topic area	Non-tariff measures implemented in FY11/12	
Description	The program was concluded in FY10/11 and no DM measures were implemented in FY11/12	
Audit topic area	Breakdown of FY11/12 non-tariff program costs	
Item	Reported Result	Comment
Program set-up (ex GST)	\$0	No set-up costs were incurred
Administration (ex GST)	\$0	No administrative costs have been claimed for the Windsor Richmond DM program for FY11/12
Marketing (ex GST)	\$0	No marketing costs were incurred
Legal (ex GST)	\$0	No legal costs were incurred
External DM consultants and customer incentive payments (ex GST)	\$0	No payments were made to DM consultants or customers
Independent review of FY10/11 d-factor claim	\$2,511	Review of invoices presented by EE confirms that the payment claimed is correct
Total (ex GST)	\$2,511	The total DM costs claimed are correct
	The costs associated with	the Windsor Richmond DM program are reasonable
Audit topic area	Calculation of avoided distribution cost (ADC)	
Item	Reported Result	Comment
Reference year	FY08/09	Audited in FY08/09 - not included in the present review
Deferral period	1 year	Audited in FY08/09 - not included in the present review
ADC in reference year (\$k 08/09)	\$747	Audited in FY08/09 - not included in the present review



WINDSOR RICHMOND	25	
DM costs prior to FY11/12 (PV) (\$k 08/09)	\$111	The DM costs prior to FY11/12 are correct
Maximum Allowable Cost Recovery in FY11/12 (\$k 11/12)	\$847	The maximum allowable cost recovery in FY11/12 is correct
	Based on Futura Consultic	ng's review, the calculations associated with the ADC cap are
Audit topic area	Energy and demand revenue foregone for FY11/12	
Item	Reported Result	Comment
kWh Reduction	132,470	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correct
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total energy revenue foregone (\$k)	\$1.344	The energy revenue foregone calculation is correct
kVA Reduction	478	Review of monitoring and verification data presented by EE confirms that the measured energy foregone is correc
Tariff Basis	N19	The tariff basis is correct
DUOS Rate(s)	FY11/12 (ex GST)	The DUOS rates used are correct.
Total demand revenue foregone (\$k)	\$74.439	The demand revenue foregone calculation is correct
		istomer monitoring and verification data, in combination with and 2011/12 network tariffs, the estimated foregone revenue
Audit topic area	Additional Amount to reflect time value of money	
ltem	Reported Result	Comment
Additional Amount for Equivalent Recovery in Year t (\$k)	\$16.476	Review of EE's spreadsheets of the additional amount for equivalent recovery in Year t (\$k) confirms that the calculation is correct



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