



2 March 2009

Mr Chris Pattas
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Network Regulation South
Australian Energy Regulator
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Dear Chris,

Distribution Loss Factors 2009/2010

Clause 3.6.3 of the National Electricity Rules (NER) requires Distribution Network Service Providers (DNSPs) to determine distribution loss factors (DLFs) to apply in the next financial year and provide these to NEMMCO for publication by 1 April in each year. Before providing the distribution loss factors to NEMMCO for publication, the DNSP is required to obtain the approval of the Australian Energy Regulator (AER) for the distribution loss factors. Accordingly, Jemena Electricity Networks (Vic) Ltd (JEN, formerly known as Alinta AE) submits its DLFs for 2008/2009 for approval.

The average DLFs to apply in the financial year 2009/2010 are as follows:

Average DLFs	A	B	C	D	E
Short sub transmission	1.0055	1.0115	1.0293	1.0445	1.0516
Long sub transmission	1.0235	1.0295	1.0473	1.0609	1.0673

JEN has adopted the methodology published by the Essential Services Commission in February 2007 for the determination of distribution loss factors. This methodology is based on the methodology jointly developed by the Victorian distribution businesses, having regard to the principles of clause 3.6.3 (h) of the NER and is consistent with the methodology used for the calculation of DLFs in previous years.

Attached for the Australian Energy Regulator's consideration and approval are:

- a. Attachment 1 - Distribution Loss Factors for Jemena Electricity Networks for the year 2009/2010:
 - A. Network Average DLFs for Customers and Embedded Generators
 - B. Site Specific DLFs for Large Customers
 - C. Site Specific DLFs for Large Embedded Generators

- b. Attachment 2 - Reconciliation of the network losses for the year 2007/08 in accordance with Clause 3.6.3(h) (2) of the National Electricity Rules (NER).

- c. Attachment 3 – Jemena Electricity Networks' MSATS codes.
- d. Attachment 4 - The methodology paper published by the Essential Services Commission, Victoria (ESC) – Guidance Paper: Calculation Methodology for Distribution Loss Factors for the Victorian Jurisdiction (14 February 2007).
- e. Attachment 5 - ESC's certification that the proposed DLFs have been determined in accordance with the published methodology.

Should you require further information or clarification on the matters discussed in this submission please contact Gabriel Wan (03 8544 9615) or myself (03 8544 9036).

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Anton Murashev', with a stylized flourish at the end.

Anton Murashev
Manager Asset Regulation & Strategy

Attachment 1 – Jemena Electricity Networks DLFs 2009/10

A. Network Average DLFs for Customers and Embedded Generators

Network DLFs for 2009/10 for AER's Approval

	DLF A	DLF B	DLF C	DLF D	DLF E
Short Subtransmission	1.0055	1.0115	1.0293	1.0445	1.0516
Long Subtransmission	1.0235	1.0295	1.0473	1.0609	1.0673

The following 2007/2008 financial year data was used in the process of calculating the 2009/2010 forward looking DLFs above:

Energy Procured in 2007/08 (MWh)

Energy obtained from transmission connections	4,736,101
Energy obtained from embedded generation and other distributors	- 150,085
Total Energy Procured	4,586,016

Energy Supplied in 2007/08 (MWh)

Total annual energy supplied	4,449,947
Less supply to other distributors	- 40,979
Net Energy Supplied (pa)	4,408,967

Net Metered Energy Supplied in 2007/08 (MWh)

	DLF A	DLF B	DLF C	DLF D	DLF E	Total
Short Subtransmission	371,011	0	903,542	1,089,368	1,912,820	4,276,741
Long Subtransmission	0	0	0	0	132,226	132,226

Calculated Losses in 2007/08 (MWh)

	DLF A	DLF B	DLF C	DLF D	DLF E	Total
Short Subtransmission	1883	0	25599	47418	96826	171,726
Long Subtransmission	0	0	0	0	9137	9,137

Network DLF based on data from 2007/08

	DLF A	DLF B	DLF C	DLF D	DLF E
Short Subtransmission	1.0050	1.0110	1.0293	1.0445	1.0516
Long Subtransmission	1.0236	1.0295	1.0478	1.0630	1.0701

B. Site Specific DLFs for Large Customers

Qualified Customers Site Specific DLF for year 2009/10

NMI	DLF
VDDD000495	1.0066
6001280255	1.0048
VDDD000244	1.0123
VDDD000134	1.0147
VDDD000136	1.0038
VDDD000286	1.0110
VDDD000224	1.0131

C. Site Specific DLFs for Large Embedded Generators

Somerton Power Station (Connected to SMTS-SSS-ST-SMTS 66kV Loop¹) February 2009

Distribution Loss Factor for Somerton Power Station (SPS) for the Period it is Operating.

1. Average loop loss, as determined from PSSE load flows and historical load profile, for the period when the power station is operating
 $= 0.662 \text{ MW}^2$
2. $ELL_{\text{SPS operating period}} = \text{Energy Loop Loss for SPS operating period}$
 $= 0.662 \text{ MW} * 876 \text{ hr}^3$
 $= 579.9 \text{ MWh}$
3. $ELC_{\text{SPS operating period}} = \text{Energy Loop Consumption (Sales) for SPS operating period}$
 $= 84 \text{ MW}^1 * 0.80 * 876 \text{ hr}$
 $= 58,867 \text{ MWh}$
4. $ESO_{\text{SPS operating period}} = \text{Energy Sent Out by SPS for operating period}$
 $= 120 \text{ MW}^1 * 876 \text{ hr}$
 $= 105,120 \text{ MWh}$
5. $DLF A_{\text{SPS operating period}} = 1 + \text{Losses} / \text{Magnitude of sales less generation for SPS operating period}$
 $= 1 + \frac{ELL_{\text{SPS operating period}}}{(ELC_{\text{SPS operating period}} - ESO_{\text{SPS operating period}})}$
 $= 1 + 579.9 / (58,867 \text{ MWh} - 105,120 \text{ MWh})$
 $= \underline{0.9875}$

¹ Somerton Power Station is at present connected to the TTS-SSS-ST-EPG-TTS 66kV Loop. As part of the South Morang 66kV development, this loop will be re-arranged to form SMTS-SSS-ST-SMTS 66kV loop by around mid June 2009.

² The load flow studies were based on a loop demand equalling 80% of forecast maximum demand (84MW) for 2009/10 and an average generator output at the same level for the year 2007/08 (120 MW).

³ Assume generator total running hours for 2009/10 would be at similar levels as in year 2007/08.

Attachment 2

Reconciliation for year 2006/07

Qualified Site Specific Customers			
NMI	Metered Consumption (MWh)	Approved DLF	Calculated Purchase (MWh)
VDDD000495	176354	1.0097	178065
6001280255	133593	1.0055	134328
VDDD000244	73825	1.0149	74925
VDDD000134	76994	1.0177	78357
VDDD000136	59359	1.0046	59632
VDDD000286	44822	1.0133	45418
VDDD000224	48433	1.0158	49198

General Network Customers					
Network Level	Approved DLF Short Sub transmission	Approved DLF Long Sub transmission	Metered energy through network level (MWh)	General Network Customers Sales (MWh)	Calculated Purchase (MWh)
DLF A - SUB/T LINE	1.007	1.024	371011	1705	1717
DLF B - ZONE SUB	1.014	1.032	0	0	0
DLF C – HV	1.037	1.054	903542	659468	683868
DLF D - DIST Tx TERMINALS	1.054	1.071	1089368	1089368	1147758
DLF E – LV	1.062	1.079	2086025	2045046	2174291

Reconciliation	
Calculated Purchase based on approved DLF (MWh)	4,627,558
Net energy supplied (MWh)	4,408,967
Estimated theft & other unmetered loss (@0.2% of sales) (MWh)	8,818
Calculated overall losses based on approved DLF (MWh)	227,409
Measured overall losses (Top Down Loss) (MWh)	177,049
Reconciliation error (MWh)	50,360
Reconciliation error (%)	1.14

Attachment 3

Jemena Electricity Networks' MSATS Codes

Region	Code	Description
VIC	CAFP	Site Specific VDDD000136
VIC	CAGP	Site Specific VDDD000134
VIC	CAPA	Site Specific 6001280255
VIC	CFMC	Site Specific VDDD000244
VIC	CHBL	Lower voltage side of ZS, long feeder
VIC	CHBS	Lower voltage side of ZS, short feeder
VIC	CHCA	Site Specific VDDD000286
VIC	CHCL	Distribution line from ZS, long feeder
VIC	CHCS	Distribution line from ZS, short feeder
VIC	CLDL	LV terminals Dist Trans, long feeder
VIC	CLDS	LV terminals Dist Trans, short feeder
VIC	CLEL	LV line from Dist Trans, long feeder
VIC	CLES	LV line from Dist Trans, short feeder
VIC	CSAL	Sub-transmission line, long feeder
VIC	CSAS	Sub-transmission line, short feeder
VIC	CSOG	Generation – Somerton Generator
VIC	CSPT	Site Specific VDDD000224
VIC	CVPC	Site Specific VDDD000495

Note: NMI VDDD000316 (MSATS Code: CLST) do not qualify for a site specific DLF for 2009/10.

Attachment 4 – “Guidance Paper: Calculation Methodology for Distribution Loss Factors (DLFs) for the Victorian Jurisdiction (14 February 2007)”

Attached as a separate file.

Attachment 5 – ESC Certification.

Attached as a separate file.