



11 March 2011

Jemena Electricity
Networks (Vic) Ltd
ABN 82 064 651 083

Mr Chris Pattas
General Manager
Network South Branch
Australian Energy Regulator
GPO Box 520
MELBOURNE VIC 3001

321 Ferntree Gully Road
Mount Waverley VIC 3149
Locked Bag 7000
Mount Waverley VIC 3149
T +61 3 8544 9000
F +61 3 8544 9888
www.jemena.com.au

Dear Chris,

Distribution Loss Factors 2011/2012

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 AEMO for publication by 1 April in each year. Before providing the distribution loss factors to AEMO 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) submits its DLFs for 2011/2012 for approval.

The average DLFs to apply in the financial year 2011/2012 are as follows:

Average DLFs	A	B	C	D	E
Short sub transmission	1.0056	1.0110	1.0265	1.0389	1.0454
Long sub transmission	1.0266	1.0319	1.0474	1.0598	1.0663

JEN has adopted the methodology published by the Essential Services Commission (ESC) 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 AER's consideration and approval are:

- a. Attachment 1 – Distribution Loss Factors for JEN for the year 2011/2012:
 - 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 2009/10 in accordance with Clause 3.6.3(h)(2) of the NER.
- c. Attachment 3 – JEN's MSATS codes.
- d. Attachment 4 – The methodology paper published by the ESC – Guidance Paper: Calculation Methodology for Distribution Loss Factors for the Victorian Jurisdiction (14 February 2007).
- e. Attachment 5 – Certification report by an independent expert 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 on telephone (03) 8544 9615 or me on (03) 8544 9036.

Yours sincerely

Anton Murashev
Manager Asset Regulation & Strategy

Attachment 1 – Jemena Electricity Networks DLFs 2011/12

A. Network Average DLFs for Customers and Embedded Generators

Network DLFs for 2011/12 for AER's Approval

	DLF A	DLF B	DLF C	DLF D	DLF E
Short Sub-transmission	1.0056	1.0110	1.0265	1.0389	1.0454
Long Sub-transmission	1.0266	1.0319	1.0474	1.0598	1.0663

The 2009/2010 financial year data shown below was used in the process of calculating the 2011/2012 forward looking DLFs above:

Energy Procured in 2009/10 (MWh)

Energy obtained from transmission connections	4,805,972
Energy obtained from embedded generation and other distributors	- 197,361
Total Energy Procured	4,608,610

Energy Supplied in 2009/10 (MWh)

Total annual energy supplied	4,446,366
Less supply to other distributors	- 11,798
Net Energy Supplied (pa)	4,434,568

Net Metered Energy Supplied in 2009/10 (MWh)

	DLF A	DLF B	DLF C	DLF D	DLF E	Total
Short Subtransmission	373,310	0	789,027	1,129,104	1,958,468	4,249,909
Long Subtransmission	0	0	0	0	184,659	184,659

Calculated Losses in 2009/10 (MWh)

	DLF A	DLF B	DLF C	DLF D	DLF E	Total
Short Subtransmission	1879	0	21209	46188	92858	162,135
Long Subtransmission	0	0	0	0	11920	11,920

Network DLF based on data from 2009/10

	DLF A	DLF B	DLF C	DLF D	DLF E
Short Subtransmission	1.0050	1.0104	1.0272	1.0412	1.0477
Long Subtransmission	1.0222	1.0275	1.0443	1.0584	1.0649

B. Site Specific DLFs for Large Customers

Qualified Customers Site Specific DLF for year 2011/12

NMI	DLF
VDDD000495	1.0102
6001280255	1.0057
VDDD000244	1.0114
VDDD000134	1.0133
VDDD000136	1.0029

C. Site Specific DLF2011-12 for Large Embedded Generators

Somerton Power Station (Connected to SMTS-SSS-ST-SMTS 66kV Loop)

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
= 0.284 MW¹
2. $ELL_{SPS \text{ operating period}} = \text{Energy Loop Loss for SPS operating period}$
= 0.284 MW * 750 hr²
= 213 MWh
3. $ELC_{SPS \text{ operating period}} = \text{Energy Loop Consumption (Sales) for SPS operating period}$
= 80 MW¹ * 0.80 * 750hr
= 48,000 MWh
4. $ESO_{SPS \text{ operating period}} = \text{Energy Sent Out by SPS for operating period}$
= 100 MW¹ * 750 hr
= 75,000 MWh
5. $DLF A_{SPS \text{ operating period}} = 1 + \text{Losses} / \text{Magnitude of sales less generation for SPS operating period}$
= 1 + $ELL_{SPS \text{ operating period}} / (ELC_{SPS \text{ operating period}} - ESO_{SPS \text{ operating period}})$
= 1 + 213 / (48,000 MWh - 75,000 MWh)
= **0.9921**

¹ The load flow studies were based on a loop demand equalling 80% of forecast maximum demand (80MW * 0.80 = 64MW) for 2011/12 and an average generator output of 100 MW in year 2010.

² Assume generator total running hours for 2011/12 would be at similar levels as in year 2010.

Attachment 2

Reconciliation for year 2009/10

Qualified Site Specific Customers			
NMI	Metered Consumption (MWh)	Approved DLF	Calculated Purchase (MWh)
VDDD000495	172587	1.0066	173726
6001280255	141530	1.0048	142209
VDDD000244	68171	1.0123	69009
VDDD000134	75187	1.0147	76292
VDDD000136	59430	1.0038	59656

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	1.006	1.024	373310	-237	-238
DLF B - ZONE SUB	1.012	1.030	0	0	0
DLF C – HV	1.029	1.047	789027	645669	664588
DLF D - DIST Tx TERMINALS	1.045	1.061	1129104	1129104	1179349
DLF E – LV	1.052	1.067	2154925	2143127	2256611

Reconciliation	
Calculated Purchase based on approved DLF (MWh)	4,621,203
Net energy supplied (MWh)	4,434,568
Calculated overall losses based on approved DLF (MWh)	186,634
Measured overall losses (Top Down Loss) (MWh)	174,042
Reconciliation error (MWh)	12,592
Reconciliation error (%)	0.28%

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	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 6001264751
VIC	CVPC	Site Specific VDDD000495

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 – Certification Report

Attached as a separate file.