

7 May 2012

Paul Dunn  
Network Regulation South  
Australian Energy Regulator  
GPO Box 520  
Melbourne Vic 3001

Dear Paul,

## **REVIEW OF DISTRIBUTION LOSS FACTORS FOR 2012/13**

As required by clause 3.6.3 (i) of the National Electricity Rules (NER), ETSA Utilities seeks approval from the AER for the distribution loss factors (DLFs) described below to apply in the financial year 2012/13. ETSA Utilities understands that, following the AER's approval, the AER will notify AEMO of the distribution loss factors to apply in 2012/13.

The methodology applied to calculate the DLFs for 2012/13 is the same as that applied in previous DLF submissions to the AER. In line with previous submissions to the AER, ETSA Utilities has engaged Energeia to provide an independent review of our DLF calculation. Energeia's report is attached. Harry Colebourn is the principal Energeia consultant involved in this review.

As part of the review two years ago, the historic ETSA Utilities' Distribution Loss Factor Methodology was comprehensively documented. That document, including the calculations involved in preparing this year's 2012/13 DLFs, is attached for the AER's information. The Energeia audit review is also attached.

Energeia has reviewed ETSA Utilities' 2012/13 distribution loss factors and associated methodology. On the basis of the material supplied to Energeia and discussions with ETSA Utilities personnel during the course of this review, Energeia is of the opinion that:

- The process employed by ETSA Utilities in preparing the proposed 2012/13 distribution loss factors is consistent with its historical approach;
- The methodology prepared by ETSA Utilities meets the relevant requirements of clause 3.6.3 of the Rules;
- ETSA Utilities has followed its methodology in preparing the proposed 2012/13 distribution loss factors; and
- The distribution loss factors proposed by ETSA Utilities for 2012/13 are reasonable.

### Distribution Losses Outcome to 2010/11 and Forecasts to 2012/13

The table below details the actual losses over the past twelve years. The net under recovery over this period to 30 June 2011 is 11 GWh. Average losses were recorded in 2010/11 at 6.0% of purchases (including embedded generation) ie. (1 – 11,259 GWh/11,975 GWh). Note that the Photo-Voltaic generation fed back to the grid (net feed-in) has been included with allowance for losses at the residential/small business low voltage DLF.

Year	Energy inputs (A)	Energy outputs			Balances		
		Customer loads	DLF Losses	Total (B)	Annual (A-B)	Opening	Closing
<b>Historical</b>							
1999-00	10,539	9,910	670	10,580	-41	-2	-43
2000-01	11,011	10,291	699	10,989	22	-43	-21
2001-02	10,737	10,153	650	10,803	-66	-21	-87
2002-03	11,073	10,431	679	11,110	-37	-87	-124
2003-04	11,177	10,485	637	11,123	55	-124	-69
2004-05	11,165	10,499	641	11,140	25	-69	-44
2005-06	11,677	10,958	706	11,664	13	-44	-31
2006-07	11,978	11,262	727	11,989	-11	-31	-42
2007-08	12,053	11,347	737	12,084	-31	-42	-73
2008-09	12,051	11,265	726	11,991	60	-73	-14
2009-10	12,221	11,504	695	12,199	22	-14	8
2010-11	11,975	11,259	735	11,994	-19	8	-11

Note: numbers may not add due to rounding.

Note that the 2010/11 DLF's over-recovered actual losses by 19 GWh (see above). The 2011/12 DLF's were lowered marginally. They are now forecast to under-recover by 27 GWh (see below).

To correct this under-recovery, slightly higher DLFs have been proposed for 2012/13. These have been formulated to closely target a nil balance. The 2012/13 loss factors are forecast to slightly over-recover forecast losses at 6.0% of energy inputs (purchases), by 3 GWh. The forecast loss balances are set out below.

Year	Energy inputs (A)	Energy outputs			Balances		
		Customer loads	DLF Losses	Total (B)	Annual (A-B)	Opening	Closing
<b>Estimated</b> (using 2010/11 customer load data, average historical losses, actual DLFs for 2011/12 and forecast DLF's 2012/13)							
2011-12	11,978	11,259	691	11,950	27	-11	16
2012-13	11,978	11,259	722	11,981	-3	16	13

Note: numbers may not add due to rounding.

### Site Specific Loss Factors 2011/12

ETSA Utilities periodically reviews the customer and generator site specific distribution loss factors. All Generators and customers have been reviewed this year except for . [REDACTED] was calculated 2 years ago and no major changes to the region have occurred. The latest 2011 load forecasts for Substations and Transmission Connection Points were used. Load duration curves for the 2008/09 peak year were used (checks were made to ensure that data was reasonable in comparison to past DLF calculations and curves for 2009/10 & 2010/11).

The new City West transmission connection has affected Southern Suburbs customers while the new Findon-Flinders Park 66kV line in the Western Suburbs has been considered for customers in that region. [REDACTED] was recalculated, although the resulting DLF is same as the old DLF.

The following four embedded generation NMI's will have a different DLF assigned from 1 July 2012. Note that the initial DLF code NHV1 [REDACTED] was the same as for a HV connected customer. Note that [REDACTED] NMI 2001000647 is now an inactive NMI, and that plant's output is now through [REDACTED] (NMI 2001000639 and 2001000640)

NMI	DLF Code 2012/13	DLF Code 2011/12
2002220776	NSP1	NHV1
2002221495	NSP2	NHV1
2001000639	NCL1	NSP1
2001000640	NCL1	NSP2
2001000647	NA	NCL1

#### Distribution Loss Factors 2012/13

Site specific distribution loss factors have been tabled below.

The distribution loss factors for 2012/13 for each of the distribution connection point classes were calculated with reference to maintaining a trend towards a zero net over/(under) recovery of losses. The historic differential in loss factors between voltage levels has been retained from previous loss factor calculations, reflecting the average level of losses typically incurred on each voltage segment in a state-wide distribution system.

The tables below contain the distribution loss factors to be applied in the 2012/13 financial year.

#### **Distribution Connection Point Class DLFs**

Class	Tariff	MSATS DLF Code	2012/13 DLF	2011/12 DLF	2010/11 DLF
Low Voltage	Unmetered	NLV2	1.0800	1.0765	1.0814
	Residential	NLV2	1.0800	1.0765	1.0814
	Controlled Load	NLV2	1.0800	1.0765	1.0814
	Business Single Rate	NLV2	1.0800	1.0765	1.0814
	Business Two Rate	NLV2	1.0800	1.0765	1.0814
Low Voltage T/F	Medium LV	NLV1	1.0639	1.0611	1.0650
	LV Demand	NLV1	1.0639	1.0611	1.0650
	Large LV Demand	NLV1	1.0639	1.0611	1.0650
HV	HV	NHV1	1.0381	1.0365	1.0388
Substation	Substation	NZS1	1.0177	1.0169	1.0180

### Site Specific DLF - Customers

NMI	MSATS DLF Code	2011/12 DLF	2011/12 DLF
2001000378	NBA1	<b>1.0000</b>	1.0000
2001000608	NAC2	<b>1.0110</b>	1.0135
2002112609	NKC4	<b>1.0050</b>	1.0057
2002133131	NGM2	<b>1.0100</b>	1.0115
2002213788	NHN1	<b>1.0020</b>	1.0020
2002213796	NHN2	<b>1.0020</b>	1.0020
2002216840	NDS1	<b>1.0070</b>	1.0120
2002217226	NDS2	<b>1.0070</b>	1.0120
SAAAAAA018	NPS1	<b>1.0000</b>	1.0000
SAAAAAA021	NPS3	<b>1.0070</b>	1.0069
SAAAAAA022	NGM1	<b>1.0120</b>	1.0107
SAAAAAA024	NAB1	<b>1.0060</b>	1.0077
SAAAAAA026	NAC1	<b>1.0210</b>	1.0218
SAAAAAA035	NGT1	<b>1.0040</b>	1.0048
SAAAAAA084	NOS1	<b>1.0000</b>	1.0000
SAAAAAA438	NIF1	<b>1.0100</b>	1.0091
SAAAAAB557	NOS2	<b>1.0000</b>	1.0000

Note that DLF Code NPS2 is no longer used (nor are NMM1 and NMM2).

### Site Specific DLF – Embedded Generators

NMI	MSATS DLF Code	2012/13 DLF	2011/12 DLF
2001000639	<b>NCL1</b>	<b>1.0090</b>	1.0060
2001000640	<b>NCL1</b>	<b>1.0090</b>	1.0060
2001000734	<b>NSHW</b>	<b>1.0090</b>	1.0092
2002220776	<b>NSP1</b>	<b>1.0040</b>	NA
2002221495	<b>NSP2</b>	<b>1.0040</b>	NA
2002108658	<b>NCDW</b>	<b>0.9730</b>	0.9721
2002108660	<b>NAS1</b>	<b>0.9970</b>	0.9900
2002108661	<b>NAS2</b>	<b>0.9970</b>	0.9900

If you have any queries on this subject, please call James Bennett on (08) 8404 5261.

Yours sincerely,

Sean Kelly  
**GENERAL MANAGER CORPORATE AFFAIRS**

#### Attachments

Locational DLF calculations (Confidential)  
 ETSA Utilities' Distribution Loss Factor Methodology, March 2010  
 Review of ETSA Utilities proposed Distribution Loss Factors for 2011-12