



**UNITED ENERGY
Distribution**

- Level 3
- 501 Blackburn Road
- Mt Waverley Vic 3149, Australia
- Telephone (03) 8540 7800
- Facsimile (03) 8540 7899

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

Dear Mr Pattas

Distribution Loss Factors 2009/2010

Clause 3.6.3 of the National Electricity Rules require 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. 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, United Energy Distribution (UED) submits its DLFs for 2009/2010 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	1.0062	1.0135	1.0212	1.0455	1.0609
Long sub transmission	1.0294	1.0367	1.0444	1.0687	1.0841

In order to calculate DLFs for the 2009/2010 financial year, UED has adopted the methodology published by the Essential Services Commission of Victoria in February 2007.

Full details of the forward-looking estimates are included in Attachment 1 together with MSATS codes in Attachment 2.

Clause 3.6.3(b) 2 of the National Electricity Rules sets out requirements for calculating site specific DLFs for certain large customers and embedded generators. The Rules specifically requires distributors to calculate a site specific DLF for embedded generating units with actual generation of more than 10MW and end-users with a load of more than 40GWh per annum or demand of greater than 10MW. The site specific DLFs submitted for approval for these customers and generators are as follows:

NMI	Proposed DLF for 2009/10	Current DLF for 2008/09
VEEE0PD8AD	1.0118	1.0128
VEEE0TF39Q	1.0138	1.0158
VEEE0BG4Q3	1.0229	1.0218
VEEE0NDNEX	1.0230	1.0220
VEEE08KH3V	1.0095	1.0154
VEEE0C8AW1	1.0070	1.0059
6407649172	1.0121	1.0113

For the 2009/2010 financial year, UED forecasts that the total network energy loss as a percentage of sales will be 5.22%, which is 0.22% higher than the actual top-down energy loss of 5.00% calculated for the 2007/2008 financial year. The forecast is based on:

- In previous years an allowance for theft has been included in the analysis however last year a change to the methodology has been introduced and any theft on the UED network is now treated as an energy loss. As a consequence the reported network losses are expected to increase by 0.17% of total sales in the 2009/2010 financial year compared with the actual losses in the 2007/2008 year.
- Increase in asset utilisation;
- Recent and impending network augmentations;
- The latest distribution loss trends and observation of the reconciliation of the 2007/2008 year losses.

Clause 3.6.3h (2) of the National Electricity Rules requires each distributor to do reconciliation between the total energy losses implied by the DLFs for the previous financial year against the actual energy loss for that period. It is not possible to do this reconciliation for the 2008/2009 year because the necessary metering data is not available until the end of the financial year. Therefore, reconciliation was undertaken for the 2007/2008 financial year.

The results of the 2007/2008 reconciliation are as follows:

$$\sum_{i=1}^{i=N} ME_i \times DLF_i = TAGE = 8,277,750MWh \quad \dots(1)$$

$$\sum_{i=1}^{i=N} ME_i + NEL = TNE = 8,298,853MWh \quad \dots(2)$$

Where:

ME_i - The Metered Energy flowing out of distribution network connection i over the 2007/2008 financial year.¹

¹ The National Electricity Rules define metered energy as a positive where flow is towards the transmission connection point however this definition results in negative values for metered energy supplying customer loads from distribution connection points. To simplify the analysis United Energy Distribution has defined metered energy out of a distribution connection point as positive.

DLF_i - Forward looking Distribution Loss Factor for distribution connection point *i*.

TAGE - Total Aadjusted Gross Energy.

NEL - Total Network Energy Loss calculated from a top down approach (ie. purchase minus sales).

TNE - Total Transmission Network Energy flowing into the distribution network.

N - The Number of distribution network connection points.

Equation (1) represents the total adjusted gross energy (TAGE) flowing out from distribution connection points. It is the metered energy plus distribution losses recovered through the application of the DLFs.

Equation (2) represents all energy flowing from distribution connection points plus total measured top down energy losses. It is in effect the total energy flowing from transmission connection points into the distribution network (TNE).

Subtracting the results of equation (1) from equation (2) equals +21,103MWh. This means the actual distribution network energy losses were 21,103MWh higher than the amount recovered through the application of the 2007/2008 DLFs.

In February 2007, the Essential Services Commission published a methodology for the determination of distribution loss factors in accordance with clause 3.6.3(g) of the National Electricity Rules. This methodology is based on the methodology jointly developed by the Victorian distribution businesses and is consistent with the methodology used for the calculation of DLFs in previous years. UED has used this methodology for the 2009/2010 DLFs and a copy is attached as a separate attachment (Attachment 3).

UED has obtained positive assurance that the DLFs calculated for the 2009/2010 financial year have been calculated in accordance with the methodology in Attachment 3 from the current Jurisdictional Regulator, the Essential Service Commission of Victoria. The positive assurance is attached as a separate attachment (Attachment 4).

Should you require further information or clarification on the matters discussed in this submission please contact Siva Moorthy, on (03) 8544 9442 or alternatively Pieng Truong, on (03) 8544 9322.

Yours sincerely

Andrew Schille
Regulatory Manager

Summary of UED Distribution Loss Factors and Supporting Information

2009-2010 DLF Submission to the AER

16 February 2009

Company Name	United Energy Distribution
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Energy Procured (MWh)

Total annual energy obtained from transmission connections at the boundary	8,625,042
Energy obtained from embedded generation plus energy obtained from other distributors into the UED network	107,900
Total Energy Procured per annum	8,598,418

Energy Supplied (MWh)

Total annual energy supplied to UED customers including theft	8,171,853
Total Energy Supplied per annum	8,171,853

Net Metered Energy Supplied (MWh)

	DLF A	DLF B	DLF C	DLF D	DLF E	Total
Short Sub transmission	32,470	0	944,118	2,404,823	4,472,466	7,853,877
Long Sub transmission	0	0	0	51,036	266,940	317,975

Top-Down Calculated Annual Losses (MWh) adjusted for theft

	DLF A	DLF B	DLF C	DLF D	DLF E	Total
Short Sub transmission	48,781	58,700	61,577	175,111	73,036	426,565
Long Sub transmission	9,360					

Forward-looking average DLF

	DLF A	DLF B	DLF C	DLF D	DLF E
Short Sub transmission	1.0062	1.0135	1.0212	1.0455	1.0609
Long Sub transmission	1.0294	1.0367	1.0444	1.0687	1.0841

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16 February 2009**

Site-specific Distribution Loss Factors (DLFs) for large customers/generators

NMI	Class	DLF
VEEE0PD8AD	C	1.0118
VEEE0TF39Q	C	1.0138
VEEE0BG4Q3	C	1.0229
VEEE0NDNEX	C	1.0230
VEEE08KH3V	C	1.0095
VEEE0C8AW1	A	1.0070
6407649172	C	1.0121

Attachment 2

UED Market Settlement and Transfer Solution (MSATS) DLF codes

Region	MSATS Code	DLF	NMI	Description
VIC	MC05	1.0118	VEEE0PD8AD	Site Specific – load
VIC	MC06	1.0138	VEEE0TF39Q	Site Specific – load
VIC	MC02	1.0229	VEEE0BG4Q3	Site Specific – load
VIC	MC04	1.0230	VEEE0NDNEX	Site Specific – load
VIC	MC01	1.0095	VEEE08KH3V	Site Specific – load
VIC	MC03	1.0070	VEEE0C8AW1	Site Specific – load
VIC	MG01	1.0121	6407649172	Site Specific – generation
VIC	MSAL	1.0294	N/A	Sub transmission line – long line
VIC	MSAS	1.0062	N/A	Sub transmission line – short line
VIC	MHBL	1.0367	N/A	Zone substation – long line
VIC	MHBS	1.0135	N/A	Zone substation – short line
VIC	MHCL	1.0444	N/A	HV feeder line – long line
VIC	MHCS	1.0212	N/A	HV feeder line – short line
VIC	MLDL	1.0687	N/A	LV distribution substation – long line
VIC	MLDS	1.0455	N/A	LV distribution substation – short line
VIC	MLEL	1.0841	N/A	LV line – long line
VIC	MLES	1.0609	N/A	LV line – short line