



9th March 2012

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By Email to AERInquiry@aer.gov.au and Post

CC to chris.rundell@aemo.com.au

Dear Mr Pattas

DISTRIBUTION LOSS FACTORS 2012/2013

Clause 3.6.3 of the National Electricity Rules requires Distribution Network Service Providers (DNSPs) to determine distribution loss factors (DLFs) to apply in the next financial year and to then provide these to AEMO for publication. Before submitting the information to AEMO, the DNSP is obliged to obtain the approval of the Australian Energy Regulator (AER) for the distribution loss factors. Accordingly, United Energy (UE) submits its DLFs for 2012/2013 for approval.

The average DLFs to apply in the financial year 2012/2013 are as follows:

Average DLFs	A	B	C	D	E
Short sub-transmission	1.0055	1.0120	1.0193	1.0403	1.0549
Long sub-transmission	1.0222	1.0287	1.0360	1.0570	1.0716

In order to calculate DLFs for the 2012/2013 financial year, UE 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 3.

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 require 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 2012/2013	Current DLF for 2011/2012
VEEE0PD8AD	1.0116	1.0124
VEEE0TF39Q	1.0135	1.0142
VEEE0BG4Q3	1.0195	1.0214
VEEE0NDNEX	1.0278	1.0254
VEEE08KH3V	1.0084	1.0091
VEEE0C8AW1	1.0066	1.0050
6407649172	1.0114	1.0114
VEEE0ATYTH	1.0218	-

For the 2012/2013 financial year, UE forecasts that the total network energy loss, expressed as a percentage of sales, will be 4.63%, which is 0.02% lower than the actual top-down energy loss of 4.65% calculated for the 2010/2011 financial year.

Clause 3.6.3h (2) of the National Electricity Rules requires a distributor to perform an *ex post* reconciliation between the total energy losses implied by the forward-looking DLFs for a financial year and the actual energy losses reported for the same period. As at the date of this correspondence, the reconciliation could not be undertaken for 2011/2012 because the necessary metering data was not available for the full financial year. Therefore, a reconciliation calculation was done for 2010/2011 as follows.

$$\sum_{i=1}^{i=N} ME_i \times DLF_i = TAGE = 8,354,171MWh \dots\dots\dots(1)$$

$$\sum_{i=1}^{i=N} ME_i + NEL = TNE = 8,353,169MWh \dots\dots\dots(2)$$

Where:

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

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

$TAGE$ - Total Aadjusted Gross Energy.

NEL - Total Network Energy Loss calculated using a top-down approach (i.e. purchases minus sales).

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

N - The Number of distribution network connection points.

Equation (1) calculates the total adjusted gross energy (TAGE) flowing out from distribution connection points. It is the metered energy plus implied distribution losses based on the DLFs.

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

The reconciliation process involves comparing the results of equation (1) with equation (2). Attachment 2 shows the results of 2010-2011 DLF reconciliation.

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 an approach developed jointly by the Victorian distribution businesses and is

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 has defined metered energy out of a distribution connection point as being positive.

consistent with the methodology used for the calculation of DLFs in previous years. UE has used this methodology for the 2012/2013 DLFs and a copy is enclosed separately (see Attachment 4).

UE has obtained third party advice to the effect that the DLFs calculated for the 2012/2013 financial year were worked out in accordance with the methodology described in Attachment 4. The certification of loss factors is provided as a separate attachment (Attachment 5).

Should you require further information or clarification on the matters discussed in this submission, please contact me on (03) 8846 9710 or alternatively Rodney Bray, Manager Network Planning on (03) 8846 9745.

Yours sincerely



Craig Savage
General Manager Network Asset Management



ATTACHMENT 1

Summary of UE Distribution Loss Factors and Supporting Information

2012-2013 DLF Submission to the AER

Company Name	United Energy Distribution
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Forecast Energy Procured (MWh) for 2012-2013

Total annual energy obtained from transmission connections at the boundary	8,365,778
Energy obtained from embedded generation	103,740
plus energy obtained from other distributors into the UE network	-62,476
Total Energy Procured per annum	8,407,042

Forecast Energy Supplied (MWh) for 2012-2013

Total annual energy supplied to UE customers	8,034,740
Total Energy Supplied per annum	8,034,740

Forecast Net Metered Energy Supplied (MWh) for 2012-2013

	DLF A	DLF B	DLF C	DLF D	DLF E	Total
Short Sub transmission	42,840	0	990,377	2,368,043	4,309,290	7,710,550
Long Sub transmission	0	0	0	51,609	272,582	324,191

Forecast Top-Down Calculated Annual Losses (MWh) for 2012-2013

	Sub-trans.	Zone subs	HV Line	Distr. subs	LV line	Total
Short Sub transmission	42,742	51,100	57,626	146,898	66,820	372,386
Long Sub transmission	7,200					

Forward-looking average DLF for 2012-2013

	DLF A	DLF B	DLF C	DLF D	DLF E
Short Sub transmission	1.0055	1.0120	1.0193	1.0403	1.0549
Long Sub transmission	1.0222	1.0287	1.0360	1.0570	1.0716

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

NMI	Class	DLF
VEEE0PD8AD	C	1.0116
VEEE0TF39Q	C	1.0135
VEEE0BG4Q3	C	1.0195
VEEE0NDNEX	C	1.0278
VEEE08KH3V	C	1.0084
VEEE0C8AW1	A	1.0066
6407649172	C	1.0114
VEEE0ATYTH	C	1.0218

ATTACHMENT 2

2010-2011 DLF Reconciliation

Reconciliation (MWh)

Net energy supplied	8,050,142
Calculated energy losses based on approved DLF	375,563
Actual energy losses	374,560
Reconciliation error	1,002
Reconciliation error (%)	0.01%

ATTACHMENT 3

UE Market Settlement and Transfer Solution (MSATS) DLF codes

Region	MSATS Code	DLF	NMI	Description
VIC	MC05	1.0116	VEEE0PD8AD	Site Specific – load
VIC	MC06	1.0135	VEEE0TF39Q	Site Specific – load
VIC	MC02	1.0195	VEEE0BG4Q3	Site Specific – load
VIC	MC04	1.0278	VEEE0NDNEX	Site Specific – load
VIC	MC01	1.0084	VEEE08KH3V	Site Specific – load
VIC	MC03	1.0066	VEEE0C8AW1	Site Specific – load
VIC	MG01	1.0114	6407649172	Site Specific – generation
VIC	MC07	1.0218	VEEE0ATYTH	Site Specific – load
VIC	MSAL	1.0222	N/A	Sub transmission line – long line
VIC	MSAS	1.0055	N/A	Sub transmission line – short line
VIC	MHBL	1.0287	N/A	Zone substation – long line
VIC	MHBS	1.0120	N/A	Zone substation – short line
VIC	MHCL	1.0360	N/A	HV feeder line – long line
VIC	MHCS	1.0193	N/A	HV feeder line – short line
VIC	MLDL	1.0570	N/A	LV distribution substation – long line
VIC	MLDS	1.0403	N/A	LV distribution substation – short line
VIC	MLEL	1.0716	N/A	LV line – long line
VIC	MLES	1.0549	N/A	LV line – short line



ATTACHMENT 4

Methodology



ATTACHMENT 5

Certification