2010/11 Loss Factor Report

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1 Introduction

This report details the loss factors calculated for the 2010/11 financial year as required by section 2.27 of the Market Rules.

To comply with the obligations under section 2.27 of the Market Rules Western Power has:

- Recalculated all transmission loss factors;
- Recalculated all average distribution loss factors;
- Recalculated all individual distribution loss factors for customers with a CMD greater than 7,000 kVA;
- Recalculated all individual distribution loss factors for customers with a CMD between 1,000 and 7,000 kVA located greater than 10 km from the electrically closest substation;
- Recalculated the individual distribution loss factors for customers with a CMD between 1,000 and 7,000 kVA located less than 10 km from the electrically closest substation, where an individual distribution loss factor has been elected by the associated retailer; and
- Recalculated all individual distribution loss factors for distribution connected generation customers.

2 Basis for calculation

The following sections detail the methodology used by Western Power in calculating loss factors.

2.1 Transmission loss factors

Western Power has calculated the transmission loss factors in accordance with section 1.5 of the *Market procedure for determining loss factors* using the industry standard software package Tprice.

2.2 Average distribution loss factors

Western Power has calculated the average distribution loss factors in accordance with section 1.5A of the *Market procedure for determining loss factors*.

Western Power has followed the detailed methodology historically used by Western Power to calculate the average distribution loss factors. The methodology includes:

- Determining losses within the zone substation transformers;
- Determining HV feeder losses;
- Determining distribution transformer losses; and
- Determining LV feeder losses (allowing separately for residential and commercial losses)

Western Power allocates the average distribution loss factors based on the usage of the various components of the network. An appropriate basis for this allocation is the reference service and in accordance with the *Market procedure for determining loss factors* Western Power has determined an average loss factor for each reference service.

2.3 Individual distribution loss factors

Western Power calculates the individual distribution loss factors in accordance with section 1.5A of the *Market procedure for determining loss factors*.

Specifically, Western Power has calculated the individual distribution loss factors using the formula and methodology detailed in Schedule 4 of the Electricity Distribution Regulations 1997. Schedule 4 of the Electricity Distribution Regulations 1997 is reproduced below:

1.	To calculate the loss factor for a distribution connection which is an exit point a corporation must follow the following steps:
(a)	the corporation must determine the line losses assuming the distribution connection was not there and assuming feeder maximum load;
(b)	the corporation must determine the line losses assuming only the distribution connection was there and assuming feeder maximum load;
(c)	the corporation must determine the total line losses assuming all the distribution connections are there (including the distribution connection for which the loss factor is being determined) and assuming feeder maximum load;
(d)	the corporation must allocate a share of the total line losses calculated under step (c) to the distribution connection for which the loss factor is

being determined based on the ratio of the result of step (b) and the sum of the results of steps (a) and (b);

(e) the corporation must calculate the loss factor for the distribution connection by applying the following formula:

$$LFExit = 1 + \frac{A}{B}$$

where —

A (in kW) is the share of the total line losses allocated to the distribution connection under step (d);

B (in kW) is the contract maximum demand for the distribution connection.

2. To calculate the loss factor for a distribution connection which is an entry point a corporation must follow the following steps:

(a) the corporation must determine the line losses assuming the distribution connection was not there and assuming feeder maximum load;

(b) the corporation must determine the total line losses assuming all the distribution connections are there (including the distribution connection for which the loss factor is being determined) and assuming feeder maximum load;

(c) the corporation must calculate the loss decrease or increase for the distribution connection for which the loss factor is being determined by subtracting the result of step (b) from the result of step (a);

(d) the corporation must calculate the loss factor for the distribution connection by applying the following formula:

$$LFEntry = 1 + \frac{A}{B}$$

where —

A (in kW) is the loss increase or decrease calculated for the distribution connection under step (c);

B (in kW) is the declared sent-out capacity for the distribution connection.

Note: For sites supplied from multiple feeders the distribution loss factor has been determined as if the load is evenly split across the feeders. The resultant distribution loss factor is the average of the calculated distribution loss factors.

3 Transmission Loss Factors

Western Power has calculated the following transmission loss factors for the 2010/11 financial year.

Table 1 - Transmission Loss Factors

Transmission Loss Factor			
TLF Code	Description	Applied in 2009/10	To apply in 2010/11
TSAV	Transmission SWIN Average	1.0439	1.0432
TUAV	Transmission Urban Average	1.0363	1.0401
TAPA	Alcoa Pinjarra (Alcoa)	1.0053	0.9977
TAPL	Alcoa Pinjarra (Alinta)	0.9931	0.9894
TBLS	Boulder (SCE	1.2139	1.2092
TLWA	Landweir (Alinta)	1.0039	1.0123
TMSK	Mason Road (KPP)	1.0165	1.0262
TOLA	Oakley (Alinta)	1.0129	1.0134
TWKG	West Kalgoorlie GTs	1.0798	1.1074
TWOJ	Worsley (Joint Venture)	0.991	0.9878
TWOW	Worsley (Worsley)	1.0066	0.9904
WAFM	Australian Fused Materials	1.0174	1.0312
WAKW	Kwinana Alcoa	1.0174	1.0249
WALB	Albany	1.0358	1.0423
WAMT	Amherst	1.0272	1.0344
WAPM	Australian Paper Mills	1.0299	1.0378
WARK	Arkana	1.0345	1.0365
WBCH	Beechboro	1.0343	1.0367
WBDE	Baandee (WC)	1.1316	1.1263
WBEC	Beckenham	1.0301	1.0301
WBEL	Belmont	1.0332	1.0380
WBGM	Boddingtom Gold Mine	0.9997	1.0064
WBHK	Broken Hill Kwinana	1.0134	1.0243
WBIB	Bibra Lake	1.0192	1.0284
WBKF	Black Flag	1.2326	1.2120
WBLD	Boulder	1.2171	1.2065
WBNP	Beenup	1.0314	1.0373
WBNY	Bounty	1.1095	1.1116
WBOD	Boddington	0.9997	1.0026
WBPM	British Petroleum	1.0132	1.0261
WBSI	Marriott Road Barrack Silicon Smelter	1.0186	1.0162
WBSN	Busselton	1.0555	1.0466
WBTN	Bridgetown	1.0137	1.0202
WBTY	Bentley	-	1.0401
WBUH	Bunbury Harbour	1.024	1.0195
TBLB	Bluewaters PWS	0.9968	0.9994
WBYF	Byford	1.0307	1.0402
WCAP	Capel	1.0459	1.0393

Transmission Loss Factor			
TLF Code	Description	Applied in 2009/10	To apply in 2010/11
WCAR	Carrabin	1.1551	1.1525
WCBP	Mason Road CSBP	1.0179	1.0265
WCCL	Cockburn Cement Ltd	1.0282	1.0323
WCCT	Cockburn Cement	1.0294	1.0348
WCLN	Clarence Street	1.0420	1.0420
WCKN	Clarkeson	1.0382	1.0348
WCKT	Cook Street	1.0367	1.0424
WCLP	Coolup	1.0694	1.0560
WCOE	Collie	1.0220	1.0227
WCOL	Collier	1.0407	1.0405
WCOT	Cottesloe	1.0426	1.0497
WCPN	Chapman	1.0530	1.0419
WCPS	Collie PWS	0.9968	0.9960
WCUN	Cunderdin	1.1147	1.1136
WCVE	Canning Vale	1.0289	1.0343
WDTN	Darlington	1.0326	1.0382
WDUR	Durlacher	1.0618	1.0386
WEDD	Edmund Street	1.0285	1.0361
WEDG	Edgewater	1.0409	1.0401
WEMD	Emu Downs	1.0108	1.0049
WENB	Eneabba	1.0447	1.0341
WFFD	Forrestfield	1.0385	1.0349
WFRT	Forrest Ave	1.0394	1.0445
WGGV	Golden Grove	1.0809	1.0750
WGNI	Glen Iris	1.0264	1.0299
WGNL	Gosnells	1.0294	1.0370
WGNN	NewGen Neerabup PWS	1.0186	1.0247
WGTN	Geraldton	1.0618	1.0386
WHAY	Hay Street	1.0371	1.0423
WHBK	Henley Brook	1.0362	1.0371
WHEP	Herdsman Parade	1.0420	1.0554
WHFS	Hadfields	1.0358	1.0381
WHIS	Mason Road Hismelt	1.0167	1.0247
WJTE	Joel Terrace	1.0383	1.0438
WKAT	Katanning	1.0315	1.0443
WKDA	Kalamunda	1.0343	1.0373
WKDL	Kewdale	-	1.0338
WKDN	Kondinin	1.0919	1.0893
WKDP	Kwinana Desalination Plant	1.0174	1.0248
WKEL	Kellerberrin	1.1305	1.1322
WKEM	Kemerton PWS	1.0066	1.0077
WKMC	Cataby Kerr McGee	1.0397	1.0306
WKMK	Kerr McGee Kwinana	1.0160	1.0245

Transmission Loss Factor			
TLF Code	Description	Applied in 2009/10	To apply in 2010/11
WKMM	Muchea Kerr McGee	1.0367	1.0328
WKOJ	Kojonup	1.0233	1.0251
WKPS	Kwinana PWS	1.0069	1.0143
WLDE	Landsdale	1.0361	1.0375
WMAG	Manning Street	1.0368	1.0385
WMBR	Mt Barker	1.0428	1.0453
WMCR	Medical Centre	1.0408	1.0481
WMED	Medina	1.0301	1.0359
WMER	Merredin 66kV	1.1337	1.1296
WMGA	Mungarra GTs	1.0283	1.0170
WMHA	Mandurah	1.0307	1.0312
WMIL	Milligan Street	1.0368	1.0389
WMJP	Manjimup	1.0217	1.0258
WMJX	Midland Junction	1.0298	1.0322
WMLG	Malaga	1.0326	1.0347
WMOR	Moora	1.0534	1.0487
WMOY	Morley	1.0361	1.0387
WMPS	Muja PWS	1.0000	1.0000
WMRR	Marriot Road	1.0177	1.0150
WMRV	Margaret River	1.0778	1.0688
WMSR	Mason Road	1.0162	1.0256
WMSS	Meadow Springs	1.0306	1.0312
WMUC	Muchea	1.0375	1.0346
WMUL	Mullaloo	1.0387	1.0376
WMUR	Murdoch	1.0245	1.0290
WMWR	Mundaring Weir	1.0652	1.0682
WMYR	Myaree	1.0348	1.0423
WNBH	North Beach	1.0373	1.0389
WNED	Nedlands	1.0417	1.0493
WNFL	North Fremantle	1.0283	1.0354
WNGK	Newgen Kwinana PWS	1.0186	1.0230
WNGN	Narrogin	1.0636	1.0626
WNOR	Northam	1.0697	1.0710
WNPH	North Perth	1.0362	1.0418
WOCN	O'Connor	1.0321	1.0400
WOPK	Osborne Park	1.0373	1.0392
WPBY	Padbury	1.0390	1.0392
WPCY	Piccadilly	1.2157	1.2072
WPIC	Picton 66kv	1.0254	1.0204
WPJR	Pinjar	1.0286	1.0293
WPKS	Parkeston	1.2155	1.2124
WPLD	Parklands	1.0300	1.0312
WPNJ	Pinjarra	1.0245	1.0160

Transmission Loss Factor			
TLF Code	Description	Applied in 2009/10	To apply in 2010/11
WRAN	Rangeway	1.0502	1.0440
WRBD	Boddington (Reynolds)	0.9996	0.9996
WRGN	Regans	1.0398	1.0326
WROH	Rockingham	1.0265	1.0346
WRTN	Riverton	1.0265	1.0305
WRVE	Rivervale	1.0321	1.0362
WSNR	Southern River	1.0280	1.0380
WSFT	South Fremantle 66kV	1.0246	1.0246
WSPA	Shenton Park	1.0397	1.0474
WSUM	Summer St	1.0368	1.0425
WSVL	Sawyers Valley	1.0786	1.0818
WTLN	Tomlinson Street	1.0344	1.0366
WTSG	Three Springs	1.0494	1.0427
WTTS	Tate Street	1.0352	1.0368
WUNI	University	1.0414	1.0486
WVPA	Victoria Park	1.0350	1.0350
WWAG	Wagin	1.0514	1.0531
WWAI	Waikiki	1.0289	1.0356
WWCL	Western Collieries	1.0001	0.9978
WWDN	Wembley Downs	1.0414	1.0514
WWEB	WEB Grating	-	1.0441
WWEL	Welshpool	1.0300	1.0339
WWGP	Wagerup	1.0007	0.9873
WWKT	West Kalgoorlie	1.2133	1.2019
WWMG	Western Mining	1.0208	1.0333
WWNO	Wanneroo	1.0383	1.0333
WWNT	Wellington Street	1.0393	1.0447
WWSD	Westralian Sands	1.0431	1.0358
WWUN	Wundowie	1.0866	1.0878
WWWF	Walkaway Windfarm	0.9683	0.9548
WYCP	Yanchep	1.0388	1.0333
WYER	Yerbillon	1.1562	1.1536
WYKE	Yokine	1.0358	1.0381
WYLN	Yilgarn	1.1599	1.1535

4 Average Distribution Loss Factors

Western Power has calculated the following average distribution loss factors for the 2010/11 financial year.

Table 2 - Average Distribution Loss Factors

Distribution Loss Factor			
DLF Code	Description	Applied in 2009/10	To apply in 2010/11
QRT1	A1 - Anytime Energy (Residential)	1.0802	1.0748
QRT2	A2 - Anytime Energy (Business)	1.0448	1.0451
QRT3	A3 - Time of Use Energy (Small)	1.0802	1.0748
QRT4	A4 - Time of Use Energy (Large)	1.0448	1.0451
QRT5	A5 - High Voltage Metered Demand	1.0191	1.0205
QRT6	A6 - Low Voltage Metered Demand	1.0326	1.0345
QRT9	A9 - Streetlighting	1.0802	1.0748
QR10	A10 - Un-metered Supplies	1.0802	1.0748
QR12	C1 - Time of Use Energy (Bidirectional Residential)	1.0808	1.0748
QR7Z	A7 - High Voltage Contract Maximum Demand (Zone Substation Connected)	1.0055	1.0055
QTHZ	Transition High Voltage Contract Maximum Demand (Zone Substation Connected)	1.0055	1.0055
QNLF	Transmission Connected (No DLF)	1.0000	1.0000
QAVG	Distribution System Wide Average Loss Factor	1.0547	1.0521

5 Individual Distribution Loss Factors

Western Power has calculated the following individual distribution loss factors for the 2010/11 financial year.

Table 3 - Individual Distribution Loss Factors

Distribution Loss Factor			
DLF Code	Description	Applied in 2009/10	To apply in 2010/11
QAAL	AIR LIQUIDE WA PTY LTD	1.0070	1.0088
QAAM	AMP CAPITAL INVESTORS LIMITED	1.0101	1.0100
QANP	WEST AUSTRALIAN NEWSPAPERS LTD	1.0117	1.0114
QBGM	BODDINGTON GOLD MINE	1.0536	1.0675
QBLB	AUSTRALBRICKS (WA) PTY LTD (BELLEVUE)	1.0070	1.0069
QBLC	AUSTRALBRICKS (WA) PTY LTD (CARDUP)	1.0116	1.0106
QBLM	AUSTRALBRICKS (WA) PTY LTD (MALAGA)	1.0061	1.0061
QBMA	ST BARBARA MINES (L1)	1.1115	1.0768
QBMB	ST BARBARA MINES (L1 B)	1.0368	1.0229
QBOC	BOC GASES (COMMONWEALTH INDUSTRIAL)	1.0082	1.0082
QBPA	BUNBURY PORT AUTHORITY	1.0063	1.0063
QBTF	INVESTA PROP & SAS TRUSTEE CORPORATION (QV1)	1.0057	1.0057
QBUR	BURSWOOD RESORT CASINO	1.0066	1.0065
QBWE	BANKWEST	1.0068	1.0071
QCBH	COOPERATIVE BULK HANDLING LTD	1.0560	1.0515
QCBK	COOPERATIVE BULK HANDLING LIMIT	1.0063	1.0063
QCPL	UPPSALA PTY LIMITED	1.0063	1.0064
QCSG	CABLE SANDS WA PTY LTD (GWINDIUP)	1.0705	1.1667
QCSW	CABLE SANDS WA PTY LTD	1.0088	1.0088
QCUR	CURTIN UNIVERSITY OF TECHNOLOGY	1.0197	1.0099
QDMS	DORAL MINERAL SANDS	1.0809	1.1336
QDOD	DEPT OF DEFENCE - HMAS STIRLING	1.0150	1.0154
QDPL	DONHAD PTY LTD	1.0157	1.0146
QFFM	WESTERN AREAS NL - FLYING FOX MINESITE	1.0568	1.0582
QFIE	FLETCHER INTERNATIONAL EXPORTS	1.0530	1.0544
QFPA	FREMANTLE PORT AUTHORITY	1.0057	1.0066
QGES	APF MANAGEMENT AND PERRON INVEST (CENTRAL PARK)	1.0074	1.0072
QGLD	GUNNS LIMITED (DEANMILL)	1.0317	1.0493
QGLM	GUNNS LIMITED (MANJIMUP)	1.0477	1.0629
QGWF	GEORGE WESTON FOODS (WATSONIA), SPEARWOOD	1.0135	1.0123
QHFM	HARVEY FRESH MILK	1.0303	1.0368
QHLG	HENDERSON LANDFILL GAS (WASTE GAS RESOURCES PTY LT	1.0063	1.0048
QHMP	HIGGINSVILLE MINING PTY LTD	1.0453	1.0466
QHRO	HR OPERATIONS PTY LTD	1.0082	1.0083
QIDH	ILUKA RESOURCES LTD	1.1249	1.1354
QJJM	JUBILEE JUBILEE MINE & TREATMENT FACILITY	1.0439	1.0075
QKBG	KANOWNA BELLE GOLD MINES LIMITED	1.0849	1.0854
QKWF	KALBARRI WIND FARM	1.1678	1.2317

Distribution Loss Factor			
DLF Code	Description	Applied in 2009/10	To apply in 2010/11
QLGA	LANDFILL GAS & POWER PTY LTD (RED HILL)	1.0429	1.0202
QLGB	LANDFILL GAS POWER PTY LTD (CANNING VALE)	1.0253	1.0194
QLGC	LANDFILL GAS POWER PTY LTD (KALAMUNDA)	1.0307	1.0254
QLGD	LANDFILL GAS POWER PTY LTD (TAMALA PARK)	1.0120	1.0161
QLJS	ARMSTRONG JONES MANAGEMENT PTY LIMITED (JOONDALUP SHOPPING CENTRE)	1.0143	1.0143
QMGS	MIDLAND GATE SHOPPING CENTRE	1.0059	1.0059
QMHE	MOUNT HERRON ENGINEERING	1.0469	1.0600
QMID	MIDLAND BRICK COMPANY PTY LTD(LOT 82 GREAT NORTHER	1.0305	1.0180
QMIE	MIDLAND BRICK COMPANY PTY LTD(LOT 2 BASSETT ROAD)	1.0368	1.0220
QNFM	NATIONAL FOODS MILK WA LIMITED	1.0081	1.0079
QPEA	LMS SOUTH CARDUP	0.9954	1.0005
QPEB	A G L ENERGY SERVICES (ROCKINGHAM)	1.0919	1.0246
QPEC	A G L ENERGY SERVICES (GOSNELLS)	1.0434	1.0455
QPED	LMS ATLAS	1.0106	1.0117
QPHG	PEMBERTON HYDRO	1.0837	1.0967
QPTC	AMP CAPITAL INVESTORS LIMITED (KARRINYUP SHOPPING CENTRE)	1.0250	1.0244
QRCS	ROCKINGHAM CITY SHOPPING CENTRE	1.0114	1.0101
QROC	RENDEZVOUS OBSERVATION CITY HOTEL	1.0116	1.0109
QRPH	ROYAL PERTH HOSPITAL	1.0084	1.0058
QRRA	DEPARTMENT OF DEFENCE	1.0873	1.1124
QSBC	THE SWAN BREWERY COMPANY PTY LTD	1.0122	1.0122
QSMP	ST MARTINS PROPERTIES PTY	1.0072	1.0071
QTCL	TELSTRA CORPORATION LIMITED	1.0070	1.0073
QTIF	TALISKA INVESTMENTS, FORRESTFIELD	1.0084	1.0086
QTMH	THREE MINE HILL	1.0797	1.0797
QVPL	VINIDEX PTY LTD	1.0096	1.0097
QWAC	WESTRALIA AIRPORTS CORPORATION P	1.0122	1.0122
QWCB	WATER CORP (BELMONT)	1.0075	1.0085
QWCC	WATER CORPORATION (CUNDERDIN)	1.0055	1.0055
QWCE	WATER CORP (BEENYUP WWTP)	1.0067	1.0067
QWCG	WATER CORPORATION (GHOOLI)	1.0097	1.0103
QWCS	WESTFIELD CAROUSEL SHOPPINGTOWN	1.0338	1.0330
QWCT	WATER CORPORATION SEWERAGE TREAT	1.0126	1.0123
QWCW	WATER CORP (WANNEROO GS)	1.0317	1.0309
QWES	WESFEEDS PTY LTD	1.0069	1.0069
QWGS	CPM (WA) PTY LTD (GALLERIA)	1.0154	1.0138
QWHS	WHITFORD CITY SHOPPING CENTRE	1.0141	1.0152
QWLP	BRADKEN RESOURCES PTY LTD	1.0168	1.0157
QWMD	THE LAMINEX GROUP	1.0276	1.0264
QWMP	WESFI MANUFACTURING PTY LTD	1.0201	1.0180
QWPL	WESPINE PTY LTD	1.0286	1.0323

6 Explanation for changes in loss factors

In accordance with section 1.3 (3) of the *Market procedure for determining loss factors* Western Power is required to provide an explanation for any changes of more than 0.025 in the loss factors when compared to the previous year.

6.1 Transmission Loss Factors

The following transmission loss factors have changed by more than 0.025 when compared to the previous year:

Table 4 - Transmission Loss Factors changed by more than 0.025

TLF Code	Description	Applied in 2009/10	To apply in 2010/11	Change
TWKG	West Kalgoorlie GTs	1.0798	1.1074	0.0276

It should be noted it is not possible to quantitatively verify a single transmission loss factor without reference to the whole system over the whole year, and any discussion on the reason for the transmission loss factor change is necessarily qualitative.

Generally, all changes to loss factors have been as a result of changes in either load or generation patterns at the node or at other nearby nodes. In particular, it can be noted that the GTs at West Kalgoorlie were not used at times of high system loading as much as they have been in the past resulting in an increased loss factor.

6.2 Average Distribution Loss Factors

No average distribution loss factors have changed by more than 0.025 when compared to the previous year.

6.3 Individual Distribution Loss Factors

The following individual distribution loss factors have changed by more than 0.025 when compared to the previous year:

Table 5 - Individual Distribution Loss Factors changed by more than 0.025

DLF Code	Description	Applied in 2009/10	To apply in 2010/11	Change
QBMA	ST BARBARA MINES (L1)	1.1115	1.0768	-0.0347
QCSG	CABLE SANDS WA PTY LTD (GWINDIUP)	1.0705	1.1667	0.0962
QDMS	DORAL MINERAL SANDS	1.0809	1.1336	0.0527
QJJM	JUBILEE JUBILEE MINE & TREATMENT FACILITY	1.0439	1.0075	-0.0364
QKWF	KALBARRI WIND FARM	1.1678	1.2317	0.0639
QPEB	A G L ENERGY SERVICES (ROCKINGHAM)	1.0919	1.0246	-0.0673
QRRA	DEPARTMENT OF DEFENCE	1.0873	1.1124	0.0251

The following table sets out the reasons for the changes in the individual distribution loss factors:

Table 6 – Reason for Individual Distribution Loss Factors change by more than 0.025

DLF Code	Reason for change in loss factor
QBMA	The customer's CMD and the peak load on the distribution feeder have changed since the 2009/10 loss factor was calculated.
QCSG	The network configuration and the peak load on the distribution feeder have changed since the 2009/10 loss factor was calculated.
QDMS	The peak load on the distribution feeder has changed since the 2009/10 loss factor was calculated.
QJJM	The network configuration and the peak load on the distribution feeder have changed since the 2009/10 loss factor was calculated.
QKWF	The peak load on the distribution feeder has changed since the 2009/10 loss factor was calculated.
QPEB	The network configuration and the peak load on the distribution feeder have changed since the 2009/10 loss factor was calculated.
QRRA	The peak load on the distribution feeder has changed since the 2009/10 loss factor was calculated.

Appendix A - Individual Distribution Loss Factors by NMI

The individual distribution loss factors calculated for the 2009/10 financial year are associated with the following NMIs.

Table 7 - Individual Distribution Loss Factors by NMI

NMI	DLF Code	Individual DLF Optional?
8001000107	QCSW	Optional
8001000110	QAAL	Optional
8001000122	QPEB	Required
8001000123	QPEC	Required
8001000124	QLGB	Required
8001000158	QLGA	Required
8001000234	QLGD	Required
8001000268	QBOC	Required
8001000269	QJJM	Required
8001000270	QMID	Optional
8001000271	QWES	Optional
8001000280	QWCB	Optional
8001000282	QWCE	Optional
8001000284	QWCW	Required
8001000286	QAAL	Optional
8001000287	QFFM	Required
8001000300	QNFM	Optional
8001000304	QVPL	Optional
8001000325	QWMD	Required
8001000329	QBPA	Optional
8001000333	QDOD	Required
8001000356	QTMH	Required
8001000359	QBMB	Required
8001000371	QWMP	Required
8001000420	QDPL	Optional
8001000432	QCBK	Optional
8001000449	QBLC	Optional
8001000451	QHMP	Required
8001000474	QWCC	Optional
8001000495	QWPL	Optional
8001000503	QCUR	Required
8001000504	QCUR	Required

NMI	DLF Code	Individual DLF Optional?
8001000505	QCUR	Required
8001000510	QPTC	Required
8001000511	QPTC	Required
8001000514	QMIE	Required
8001000515	QMIE	Required
8001000519	QSMP	Optional
8001000520	QSMP	Optional
8001000521	QSBC	Optional
8001000527	QWCT	Optional
8001000528	QWCT	Optional
8001000531	QGWF	Optional
8001000533	QWAC	Required
8001000534	QWAC	Required
8001000535	QCPL	Optional
8001000536	QCPL	Optional
8001000539	QFIE	Required
8001000541	QBWE	Optional
8001000542	QBWE	Optional
8001000546	QGES	Optional
8001000547	QGES	Optional
8001000612	QFPA	Optional
8001000613	QFPA	Optional
8001000652	QBUR	Required
8001000653	QBUR	Required
8001000665	QRPH	Optional
8001000666	QRPH	Optional
8001000667	QLJS	Optional
8001000668	QLJS	Optional
8001000673	QAAM	Required
8001000674	QAAM	Required
8001000677	QWGS	Required
8001000678	QWGS	Required
8001000681	QMGS	Required
8001000682	QMGS	Required
8001000687	QRCS	Required
8001000688	QRCS	Required
8001000691	QWHS	Required
8001000692	QWHS	Required
8001000693	QWCS	Required
8001000694	QWCS	Required
8001000703	QBTF	Optional
8001000704	QBTF	Optional
8001000738	QLGC	Required
8001000780	QCBH	Required
8001000790	QWCG	Required

NMI	DLF Code	Individual DLF Optional?
8001000791	QBLB	Optional
8001000804	QANP	Optional
8001000817	QIDH	Required
8001000824	QKBG	Required
8001000827	QWLP	Optional
8001000831	QTCL	Optional
8001000846	QBLM	Optional
8001000847	QROC	Optional
8001000863	QRRA	Required
8001000874	QPHG	Required
8001000916	QPEA	Required
8001001009	QBMA	Required
8001001110	QTIF	Optional
8001011455	QDMS	Required
8001011882	QGLM	Required
8001012555	QGLD	Required
8001014748	QHFM	Required
8001017256	QHRO	Optional
8001018080	QPED	Required
8001019433	QHLG	Required
8001019473	QCUR	Required
8001019602	QMHE	Required
8001019750	QFPA	Optional
8001020092	QBGM	Required
8002013336	QKWF	Required
8002027600	QCSG	Required

Note: Individual distribution loss factors have been assessed as either required or optional in accordance with section 1.8.2 of the *Market procedure for determining loss factors*.

The calculation of optional distribution loss factors is at the cost of the retailer.

Appendix B - Alternative Presentation of Average DLFs

The following table presents the average distribution loss factors based on network level and is included for information purposes only.

Table 8 - Average Distribution Loss Factors by Network Level – For Information Only

Network Level	Distribution Loss Factor	
	Applied in 2009/10	To apply in 2010/11
6.6kV/11kV/22kV/33kV Bus Connected	1.0055	1.0055
6.6kV/11kV/22kV/33kV Line Connected	1.0191	1.0205
LV Bus Connected	1.0326	1.0345
LV Line Connected (Commercial)	1.0448	1.0451
LV Line Connected (Streetlighting/UMS)	1.0802	1.0748
LV Line Connected (Residential)	1.0802	1.0748
Transmission Connected (No DLF)	1.0000	1.0000
Distribution System Wide Average Loss Factor	1.0547	1.0521

Note: Average distribution loss factors are presented in this format to enable comparison with distribution loss factors within the NEM. However, for purposes of the WA market the average distribution loss factors are as per section 4.

Appendix C - Redundant DLFs

The following table presents the optional individual distribution loss factors that existed in 2009/10 but are not required in 2010/11 and are therefore redundant.

Table 9 - Redundant Distribution Loss Factors

DLF Code	Description	Reason
QBFS	BELMONT FORUM SHOPPING CENTRE	Retailer elected average DLF
QBGC	BGC AUSTRALIA PTY LTD	Retailer elected average DLF
QBNB	BGC CEMENT, NAVAL BASE	Retailer elected average DLF
QBSB	BLACK SWAN NICKEL PTY LTD (BLACK	An average DLF is applicable to the customer
QBSN	BLACK SWAN NICKEL PTY LTD	An average DLF is applicable to the customer
QGPA	GERALDTON PORT AUTHORITY	Retailer elected average DLF