2009/10 Loss Factor Report

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1 Introduction

This report details the loss factors calculated for the 2009/10 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 2009/10 financial year.

Table 1 - Transmission Loss Factors

Transmission Loss Factor			
TLF Code	Description	Applied in 2008/09	To apply in 2009/10
TAPA	Alcoa Pinjarra (Alcoa)	0.9880	1.0053
TAPL	Alcoa Pinjarra (Alinta)	0.9848	0.9931
TBLB	Bluewaters (BWP)	0.9958	0.9968
TBLS	Boulder (SCE	1.1726	1.2139
TLWA	Landweir (Alinta)	1.0012	1.0039
TMSK	Mason Road (KPP)	1.0156	1.0165
TOLA	Oakley (Alinta)	1.0102	1.0129
TSAV	Transmission SWIN Average	1.0418	1.0439
TUAV	Transmission Urban Average	1.0372	1.0363
TWKG	West Kalgoorlie GTs	1.0602	1.0798
TWOJ	Worsley (Joint Venture)	0.9856	0.9910
TWOW	Worsley (Worsley)	0.9883	1.0066
WAFM	Australian Fused Materials	1.0194	1.0174
WAKW	Kwinana Alcoa	1.0146	1.0174
WALB	Albany	1.0421	1.0358
WAMT	Amherst	1.0251	1.0272
WAPM	Australian Paper Mills	1.0280	1.0299
WARK	Arkana	1.0429	1.0345
WBCH	Beechboro	1.0428	1.0343
WBDE	Baandee (WC)	1.1109	1.1316
WBEC	Beckenham	1.0273	1.0301
WBEL	Belmont	1.0313	1.0332
WBGM	Boddingtom Gold Mine	1.0163	0.9997
WBHK	Broken Hill Kwinana	1.0103	1.0134
WBIB	Bibra Lake	-	1.0192
WBKF	Black Flag	1.1878	1.2326
WBLD	Boulder	1.1733	1.2171
WBNP	Beenup	1.0281	1.0314
WBNY	Bounty	1.0896	1.1095
WBOD	Boddington	1.0163	0.9997
WBPM	British Petroleum	1.0104	1.0132
WBSI	Marriott Road Barrack Silicon Smelter	1.0139	1.0186
WBSN	Busselton	1.0461	1.0555
WBTN	Bridgetown	1.0122	1.0137
WBUH	Bunbury Harbour	1.0164	1.0240
WBYF	Byford	1.0297	1.0307
WCAP	Capel	1.0376	1.0459
WCAR	Carrabin	1.1327	1.1551

Transmission Loss Factor			
TLF Code	Description	Applied in 2008/09	To apply in 2009/10
WCBP	Mason Road CSBP	1.0170	1.0179
WCCL	Cockburn Cement Ltd	1.0243	1.0282
WCCT	Cockburn Cement	1.0257	1.0294
WCKN	Clarkeson	1.0475	1.0382
WCKT	Cook Street	1.0350	1.0367
WCLN	Clarence Street	1.0355	1.0420
WCLP	Coolup	1.0568	1.0694
WCOE	Collie	1.0206	1.0220
WCOL	Collier	1.0342	1.0407
WCOT	Cottesloe	1.0429	1.0426
WCPN	Chapman	1.0689	1.0530
WCPS	Collie PWS	0.9958	0.9968
WCUN	Cunderdin	1.1054	1.1147
WCVE	Canning Vale	1.0266	1.0289
WDTN	Darlington	1.0388	1.0326
WDUR	Durlacher	1.0662	1.0618
WEDD	Edmund Street	1.0256	1.0285
WEDG	Edgewater	1.0508	1.0409
WEMD	Emu Downs	1.0158	1.0108
WENB	Eneabba	1.0506	1.0447
WFFD	Forrestfield	1.0370	1.0385
WFRT	Forrest Ave	1.0372	1.0394
WGGV	Golden Grove	1.0887	1.0809
WGNI	Glen Iris	1.0016	1.0264
WGNL	Gosnells	1.0291	1.0294
WGTN	Geraldton	1.0662	1.0618
WHAY	Hay Street	1.0352	1.0371
WHBK	Henley Brook	-	1.0362
WHEP	Herdsman Parade	1.0424	1.0420
WHFS	Hadfields	1.0446	1.0358
WHIS	Mason Road Hismelt	1.0143	1.0167
WJTE	Joel Terrace	1.0362	1.0383
WKAT	Katanning	1.0489	1.0315
WKDA	Kalamunda	1.0399	1.0343
WKDN	Kondinin	1.0749	1.0919
WKDP	Kwinana Desalination Plant	1.0152	1.0174
WKEL	Kellerberrin	1.1134	1.1305
WKEM	Kemerton PWS	1.0051	1.0066
WKMC	Cataby Kerr McGee	1.0460	1.0397
WKMK	Kerr McGee Kwinana	1.0145	1.0160
WKMM	Muchea Kerr McGee	1.0434	1.0367
WKOJ	Kojonup	1.0244	1.0233
WKPS	Kwinana PWS	1.0016	1.0069

Transmission Loss Factor			
TLF Code	Description	Applied in 2008/09	To apply in 2009/10
WLDE	Landsdale	1.0451	1.0361
WMAG	Manning Street	1.0461	1.0368
WMBR	Mt Barker	1.0452	1.0428
WMCR	Medical Centre	1.0410	1.0408
WMED	Medina	1.0263	1.0301
WMER	Merredin 66kV	1.1097	1.1337
WMGA	Mungarra GTs	1.0355	1.0283
WMHA	Mandurah	1.0206	1.0307
WMIL	Milligan Street	1.0455	1.0368
WMJP	Manjimup	1.0192	1.0217
WMJX	Midland Junction	1.0347	1.0298
WMLG	Malaga	1.0411	1.0326
WMOR	Moora	1.0621	1.0534
WMOY	Morley	1.0451	1.0361
WMPS	Muja PWS	1.0000	1.0000
WMRR	Marriot Road	1.0130	1.0177
WMRV	Margaret River	1.0840	1.0778
WMSR	Mason Road	1.0158	1.0162
WMSS	Meadow Springs	1.0208	1.0306
WMUC	Muchea	1.0447	1.0375
WMUL	Mullaloo	1.0479	1.0387
WMUR	Murdoch	1.0214	1.0245
WMWR	Mundaring Weir	1.0520	1.0652
WMYR	Myaree	1.0313	1.0348
WNBH	North Beach	1.0468	1.0373
WNED	Nedlands	1.0420	1.0417
WNFL	North Fremantle	1.0257	1.0283
WNGK	Newgen Kwinana	1.0016	1.0186
WNGN	Narrogin	1.0549	1.0636
WNOR	Northam	1.0673	1.0697
WNPH	North Perth	1.0342	1.0362
WOCN	O'Connor	1.0293	1.0321
WOPK	Osborne Park	1.0462	1.0373
WPBY	Padbury	1.0483	1.0390
WPCY	Piccadilly	1.1739	1.2157
WPIC	Picton 66kv	1.0164	1.0254
WPJR	Pinjar	1.0397	1.0286
WPKS	Parkeston	1.1511	1.2155
WPLD	Parklands	1.0208	1.0300
WPNJ	Pinjarra	1.0104	1.0245
WRAN	Rangeway	1.0493	1.0502
WRBD	Boddington (Reynolds)	1.0162	0.9996
WRGN	Regans	1.0454	1.0398

Transmission Loss Factor			
TLF Code	Description	Applied in 2008/09	To apply in 2009/10
WROH	Rockingham	1.0232	1.0265
WRTN	Riverton	1.0237	1.0265
WRVE	Rivervale	1.0294	1.0321
WSFT	South Fremantle 66kV	1.0208	1.0246
WSNR	Southern River	1.0299	1.0280
WSPA	Shenton Park	1.0398	1.0397
WSUM	Summer St	1.0346	1.0368
WSVL	Sawyers Valley	1.0626	1.0786
WTLN	Tomlinson Street	1.0305	1.0344
WTSG	Three Springs	1.0662	1.0494
WTTS	Tate Street	1.0305	1.0352
WUNI	University	1.0416	1.0414
WVPA	Victoria Park	1.0321	1.0350
WWAG	Wagin	1.0476	1.0514
WWAI	Waikiki	1.0287	1.0289
WWCL	Western Collieries	0.9963	1.0001
WWDN	Wembley Downs	1.0419	1.0414
WWEL	Welshpool	1.0278	1.0300
WWGP	Wagerup	0.9851	1.0007
WWKT	West Kalgoorlie	1.1699	1.2133
WWMG	Western Mining	1.0187	1.0208
WWNO	Wanneroo	1.0478	1.0383
WWNT	Wellington Street	1.0369	1.0393
WWSD	Westralian Sands	1.0345	1.0431
WWUN	Wundowie	1.0488	1.0866
WWWF	Walkaway Windfarm	0.9702	0.9683
WYCP	Yanchep	1.0457	1.0388
WYER	Yerbillon	1.1338	1.1562
WYKE	Yokine	1.0450	1.0358
WYLN	Yilgarn	1.1299	1.1599

4 Average Distribution Loss Factors

Western Power has calculated the following average distribution loss factors for the 2009/10 financial year.

Table 2 - Average Distribution Loss Factors

Distribution Loss Factor			
DLF Code	Description	Applied in 2008/09	To apply in 2009/10
QRT1	A1 - Anytime Energy (Residential)	1.0817	1.0802
QRT2	A2 - Anytime Energy (Business)	1.0463	1.0448
QRT3	A3 - Time of Use Energy (Small)	1.0817	1.0802
QRT4	A4 - Time of Use Energy (Large)	1.0463	1.0448
QRT5	A5 - High Voltage Metered Demand	1.0217	1.0191
QRT6	A6 - Low Voltage Metered Demand	1.0345	1.0326
QRT9	A9 - Streetlighting	1.0817	1.0802
QR10	A10 - Un-metered Supplies	1.0817	1.0802
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	1.0532	1.0547

5 Individual Distribution Loss Factors

Western Power has calculated the following individual distribution loss factors for the 2009/10 financial year.

Table 3 - Individual Distribution Loss Factors

Distribution Loss Factor			
DLF Code	Description	Applied in 2008/09	To apply in 2009/10
QAAL	AIR LIQUIDE WA PTY LTD	1.0070	1.0070
QAAM	AMP CAPITAL INVESTORS LIMITED	1.0103	1.0101
QANP	WEST AUSTRALIAN NEWSPAPERS LTD	1.0281	1.0117
QBFS	BELMONT FORUM SHOPPING CENTRE	1.0307	1.0301
QBGC	BGC AUSTRALIA PTY LTD	1.0071	1.0073
QBGM	BODDINGTON GOLD MINE	1.0536	1.0536
QBLB	AUSTRALBRICKS (WA) PTY LTD (BELLEVUE)	1.0069	1.0070
QBLC	AUSTRALBRICKS (WA) PTY LTD (CARDUP)	1.0097	1.0116
QBLM	AUSTRALBRICKS (WA) PTY LTD (MALAGA)	1.0062	1.0061
QBMA	ST BARBARA MINES (L1)	1.1115	1.1115
QBMB	ST BARBARA MINES (L1 B)	1.0368	1.0368
QBNB	BGC CEMENT, NAVAL BASE	-	1.0206
QBOC	BOC GASES (COMMONWEALTH INDUSTRIAL)	1.0082	1.0082
QBPA	BUNBURY PORT AUTHORITY	1.0062	1.0063
QBSB	BLACK SWAN NICKEL PTY LTD (BLACK FLAG)	1.1548	1.1564
QBSN	BLACK SWAN NICKEL PTY LTD	1.1767	1.1785
QBTF	INVESTA PROP & SAS TRUSTEE CORPORATION (QV1)	1.0058	1.0057
QBUR	BURSWOOD RESORT CASINO	1.0064	1.0066
QBWE	BANKWEST	1.0076	1.0068
QCBH	COOPERATIVE BULK HANDLING LTD	1.0576	1.0560
QCBK	COOPERATIVE BULK HANDLING LIMIT	1.0064	1.0063
QCPL	UPPSALA PTY LIMITED	1.0065	1.0063
QCSG	CABLE SANDS WA PTY LTD (GWINDIUP)	-	1.0705
QCSW	CABLE SANDS WA PTY LTD	1.0096	1.0088
QCUR	CURTIN UNIVERSITY OF TECHNOLOGY	1.0201	1.0197
QDMS	DORAL MINERAL SANDS	1.0809	1.0809
QDOD	DEPT OF DEFENCE - HMAS STIRLING	1.0150	1.0150
QDPL	DONHAD PTY LTD	1.0186	1.0157
QFFM	WESTERN AREAS NL - FLYING FOX MINESITE	1.0300	1.0568
QFIE	FLETCHER INTERNATIONAL EXPORTS	1.0551	1.0530
QFPA	FREMANTLE PORT AUTHORITY	1.0057	1.0057
QGES	APF MANAGEMENT AND PERRON INVEST (CENTRAL PARK)	1.0074	1.0074
QGLD	GUNNS LIMITED (DEANMILL)	-	1.0317
QGLM	GUNNS LIMITED (MANJIMUP)	-	1.0477
QGPA	GERALDTON PORT AUTHORITY	1.0162	1.0665
QGWF	GEORGE WESTON FOODS (WATSONIA), SPEARWOOD	-	1.0135
QHLG	HENDERSON LANDFILL GAS (WASTE GAS RESOURCES PTY LT	1.0067	1.0063
QHMP	HIGGINSVILLE MINING PTY LTD	1.0404	1.0453

Distribution Loss Factor			
DLF Code	Description	Applied in 2008/09	To apply in 2009/10
QHRO	HR OPERATIONS PTY LTD	1.0083	1.0082
QIDH	ILUKA RESOURCES LTD	1.1101	1.1249
QJJM	JUBILEE JUBILEE MINE & TREATMENT FACILITY	1.0616	1.0439
QKBG	KANOWNA BELLE GOLD MINES LIMITED	1.0629	1.0849
QKWF	KALBARRI WIND FARM	1.1771	1.1678
QLGA	LANDFILL GAS & POWER PTY LTD (RED HILL)	1.0422	1.0429
QLGB	LANDFILL GAS POWER PTY LTD (CANNING VALE)	1.0240	1.0253
QLGC	LANDFILL GAS POWER PTY LTD (KALAMUNDA)	1.0221	1.0307
QLGD	LANDFILL GAS POWER PTY LTD (TAMALA PARK)	1.0453	1.0120
QLJS	ARMSTRONG JONES MANAGEMENT PTY LIMITED (JOONDALUP SHOPPING CENTRE)	1.0143	1.0143
QMGS	MIDLAND GATE SHOPPING CENTRE	1.0067	1.0059
QMHE	MOUNT HERRON ENGINEERING	1.0409	1.0469
QMID	MIDLAND BRICK COMPANY PTY LTD(LOT 82 GREAT NORTHER	1.0173	1.0305
QMIE	MIDLAND BRICK COMPANY PTY LTD(LOT 2 BASSETT ROAD)	1.0388	1.0368
QNFM	NATIONAL FOODS MILK WA LIMITED	1.0075	1.0081
QPEA	LMS SOUTH CARDUP	1.0058	0.9954
QPEB	A G L ENERGY SERVICES (ROCKINGHAM)	1.0656	1.0919
QPEC	A G L ENERGY SERVICES (GOSNELLS)	1.0501	1.0434
QPED	LMS ATLAS	1.0136	1.0106
QPTC	AMP CAPITAL INVESTORS LIMITED (KARRINYUP SHOPPING CENTRE)	1.0243	1.0250
QRCS	ROCKINGHAM CITY SHOPPING CENTRE	1.0160	1.0114
QROC	RENDEZVOUS OBSERVATION CITY HOTEL	1.0110	1.0116
QRPH	ROYAL PERTH HOSPITAL	1.0078	1.0084
QRRA	DEPARTMENT OF DEFENCE	1.0817	1.0873
QSBC	THE SWAN BREWERY COMPANY PTY LTD	1.0118	1.0122
QSMP	ST MARTINS PROPERTIES PTY	1.0072	1.0072
QTCL	TELSTRA CORPORATION LIMITED	1.0071	1.0070
QTIF	TALISKA INVESTMENTS, FORRESTFIELD	-	1.0084
QVPL	VINIDEX PTY LTD	1.0093	1.0096
QWAC	WESTRALIA AIRPORTS CORPORATION P	1.0118	1.0122
QWCB	WATER CORP (BELMONT)	1.0081	1.0075
QWCC	WATER CORPORATION (CUNDERDIN)	1.0055	1.0055
QWCE	WATER CORP (BEENYUP WWTP)	1.0067	1.0067
QWCG	WATER CORPORATION (GHOOLI)	1.0097	1.0097
QWCS	WESTFIELD CAROUSEL SHOPPINGTOWN	1.0360	1.0338
QWCT	WATER CORPORATION SEWERAGE TREAT	1.0122	1.0126
QWCW	WATER CORP (WANNEROO GS)	1.0326	1.0317
QWES	WESFEEDS PTY LTD	1.0071	1.0069
QWGS	CPM (WA) PTY LTD (GALLERIA)	1.0157	1.0154
QWHS	WHITFORD CITY SHOPPING CENTRE	1.0152	1.0141
QWLP	BRADKEN RESOURCES PTY LTD	1.0180	1.0168
QWMD	THE LAMINEX GROUP	1.0276	1.0276

Distribution Loss Factor			
DLF Code	Description	Applied in 2008/09	To apply in 2009/10
QWMP	WESFI MANUFACTURING PTY LTD	1.0218	1.0201
QWPL	WESPINE PTY LTD	1.0464	1.0286

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 2008/09	To apply in 2009/10	Change
TBLS	Boulder (SCE	1.1726	1.2139	0.0413
WBKF	Black Flag	1.1878	1.2326	0.0448
WBLD	Boulder	1.1733	1.2171	0.0438
WPCY	Piccadilly	1.1739	1.2157	0.0418
WPKS	Parkeston	1.1511	1.2155	0.0644
WWKT	West Kalgoorlie	1.1699	1.2133	0.0434
WWUN	Wundowie	1.0488	1.0866	0.0378
WYLN	Yilgarn	1.1299	1.1599	0.0300

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 the discussion below on the reason for the transmission loss factor change is necessarily somewhat qualitative.

Generally, all significant changes were due to changes in either load or generation patterns at the node or at nearby nodes.

In particular, it can be noted that the loading on the 220kV line from Muja to West Kalgoorlie has a significant effect on transmission loss factors at substations close to this line. Due to both increased load and decreased generation in the Goldfields region again this year, all transmission loss factors for exit points in the goldfields region have increased. The transmission loss factor at Yilgarn (connected to the 220kV line) also increased.

Also, it should be noted that for the 2008/09 transmission loss factor calculations no data was available for Wundowie substation and the loss factor calculated in 2007/08 was again used at that site. This year accurate load data is available and the transmission loss factor has increased.

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 2008/09	To apply in 2009/10	Change
QFFM	WESTERN AREAS NL - FLYING FOX MINESITE	1.0300	1.0568	0.0268
QLGD	LANDFILL GAS POWER PTY LTD (TAMALA PARK)	1.0453	1.0120	-0.0333
QGPA	GERALDTON PORT AUTHORITY	1.0162	1.0665	0.0503
QPEB	A G L ENERGY SERVICES (ROCKINGHAM)	1.0656	1.0919	0.0263

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
QFFM	The peak demand of the customer in the 2009/10 calculation was higher than in 2008/09.
QLGD	The distribution feeder for the customer has changed since the 2008/09 loss factor was calculated.
QGPA	The peak load on the distribution feeder has changed since the 2008/09 loss factor was calculated.
QPEB	The peak load on the distribution feeder has changed since the 2008/09 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
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
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
8001000505	QCUR	Required
8001000510	QPTC	Required

NMI	DLF Code	Individual DLF Optional?
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
8001000550	QGPA	Optional
8001000551	QGPA	Optional
8001000593	QBFS	Optional
8001000594	QBFS	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
8001000734	QBSN	Required

NMI	DLF Code	Individual DLF Optional?
8001000738	QLGC	Required
8001000780	QCBH	Required
8001000790	QWCG	Required
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
8001000864	QBGC	Optional
8001000916	QPEA	Required
8001001009	QBMA	Required
8001001110	QTIF	Optional
8001003787	QBNB	Optional
8001011455	QDMS	Required
8001011882	QGLM	Required
8001012555	QGLD	Required
8001017256	QHRO	Optional
8001017257	QHRO	Optional
8001018080	QPED	Required
8001019433	QHLG	Required
8001019473	QCUR	Required
8001019602	QMHE	Required
8001019750	QFPA	Optional
8001019994	QBSB	Required
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 2008/09	To apply in 2009/10
6.6kV/11kV/22kV/33kV Bus Connected	1.0055	1.0055
6.6kV/11kV/22kV/33kV Line Connected	1.0217	1.0191
LV Bus Connected	1.0345	1.0326
LV Line Connected (Commercial)	1.0463	1.0448
LV Line Connected (Streetlighting/UMS)	1.0817	1.0802
LV Line Connected (Residential)	1.0817	1.0802
Transmission Connected (No DLF)	1.0000	1.0000
Distribution System Wide Average Loss Factor	1.0532	1.0547

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.