2011/12 Loss Factor Report

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1 Introduction

This report details the loss factors calculated for the 2011/12 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 losses based on the usage of the various components of the network. An appropriate basis for this allocation is the reference services (offered in Western Power's access arrangement) 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 2011/12 financial year.

Table 1 - Transmission Loss Factors

Transmission Loss Factor			
TLF Code	**Description**	**Applied in 2010/11**	**To apply in 2011/12**
TAPA	Alcoa Pinjarra (Alcoa)	0.9977	0.9963
TAPL	Alcoa Pinjarra (Alinta)	0.9894	0.9920
TBLB	Bluewaters (BWP)	0.9994	0.9987
TBLS	Boulder (SCE)	1.2092	1.2552
TLWA	Landweir (Alinta)	1.0123	1.0124
TMSK	Mason Road (KPP)	1.0262	1.0273
TOLA	Oakley (Alinta)	1.0134	1.0138
TSAV	Transmission SWIN Average	1.0432	1.0467
TUAV	Transmission Urban Average	1.0401	1.0405
TWKG	West Kalgoorlie GTs	1.1074	1.2230
TWOJ	Worsley (Joint Venture)	0.9878	0.9887
TWOW	Worsley (Worsley)	0.9904	0.9919
WAFM	Australian Fused Materials	1.0312	1.0320
WAKW	Kwinana Alcoa	1.0249	1.0250
WALB	Albany	1.0423	1.0398
WAMT	Amherst	1.0344	1.0334
WAPM	Australian Paper Mills	1.0378	1.0375
WARK	Arkana	1.0365	1.0369
WBCH	Beechboro	1.0367	1.0375
WBDE	Baandee (WC)	1.1263	1.1527
WBDP	Binningup Desalination Plant		1.0154
WBEC	Beckenham	1.0301	1.0301
WBEL	Belmont	1.0380	1.0379
WBGM	Boddingtom Gold Mine	1.0064	1.0079
WBHK	Broken Hill Kwinana	1.0243	1.0236
WBIB	Bibra Lake	1.0284	1.0278
WBKF	Black Flag	1.2120	1.2619
WBLD	Boulder	1.2065	1.2587
WBNP	Beenup	1.0373	1.0269
WBNY	Bounty	1.1116	1.1382
WBOD	Boddington	1.0026	1.0065
WBPM	British Petroleum	1.0261	1.0239
WBSI	Marriott Road Barrack Silicon Smelter	1.0162	1.0165
WBSN	Busselton	1.0466	1.0478
WBTN	Bridgetown	1.0202	1.0140
WBTY	Bentley	1.0401	1.0364
WBUH	Bunbury Harbour	1.0195	1.0207
WBYF	Byford	1.0402	1.0413

Transmission Loss Factor			
TLF Code	**Description**	**Applied in 2010/11**	**To apply in 2011/12**
WCAP	Capel	1.0393	1.0408
WCAR	Carrabin	1.1525	1.2504
WCBP	Mason Road CSBP	1.0265	1.0270
WCCL	Cockburn Cement Ltd	1.0323	1.0332
WCCT	Cockburn Cement	1.0348	1.0363
WCKN	Clarkeson	1.0348	1.0358
WCKT	Cook Street	1.0424	1.0417
WCLN	Clarence Street	1.0420	1.0420
WCLP	Coolup	1.0560	1.0453
WCOE	Collie	1.0227	1.0259
WCOL	Collier	1.0405	1.0391
WCOT	Cottesloe	1.0497	1.0427
WCPN	Chapman	1.0419	1.0432
WCPS	Collie PWS	0.9960	0.9955
WCUN	Cunderdin	1.1136	1.1245
WCVE	Canning Vale	1.0343	1.0343
WCWG	Collgar Windfarm		1.1296
WDTN	Darlington	1.0382	1.0374
WDUR	Durlacher	1.0386	1.0386
WEDD	Edmund Street	1.0361	1.0356
WEDG	Edgewater	1.0401	1.0466
WEMD	Emu Downs	1.0049	0.9988
WENB	Eneabba	1.0341	1.0351
WFFD	Forrestfield	1.0349	1.0357
WFRT	Forrest Ave	1.0445	1.0441
WGGV	Golden Grove	1.0750	1.0856
WGNI	Glen Iris	1.0299	1.0302
WGNL	Gosnells	1.0370	1.0372
WGNN	Newgen Neerabup	1.0247	1.0383
WGTN	Geraldton	1.0386	1.0400
WHAY	Hay Street	1.0423	1.0415
WHBK	Henley Brook	1.0371	1.0375
WHEP	Herdsman Parade	1.0554	1.0469
WHFS	Hadfields	1.0381	1.0386
WHIS	Mason Road Hismelt	1.0247	1.0278
WHZM	Hazelmere		1.0320
WJDP	Joondalup		1.0426
WJTE	Joel Terrace	1.0438	1.0423
WKAT	Katanning	1.0443	1.0546
WKDA	Kalamunda	1.0373	1.0379
WKDL	Kewdale	1.0338	1.0367
WKDN	Kondinin	1.0893	1.1032
WKDP	Kwinana Desalination Plant	1.0248	1.0262

Transmission Loss Factor			
TLF Code	**Description**	**Applied in 2010/11**	**To apply in 2011/12**
WKEL	Kellerberrin	1.1322	1.1550
WKEM	Kemerton PWS	1.0077	1.0080
WKMC	Cataby Kerr McGee	1.0306	1.0273
WKMK	Kerr McGee Kwinana	1.0245	1.0260
WKMM	Muchea Kerr McGee	1.0328	1.0337
WKND	Kwinana Donaldson Road (Western Energy)		1.0252
WKOJ	Kojonup	1.0251	1.0241
WKPS	Kwinana PWS	1.0143	1.0141
WLDE	Landsdale	1.0375	1.0377
WMAG	Manning Street	1.0385	1.0398
WMBR	Mt Barker	1.0453	1.0433
WMCR	Medical Centre	1.0481	1.0450
WMED	Medina	1.0359	1.0382
WMER	Merredin 66kV	1.1296	1.1597
WMGA	Mungarra GTs	1.0170	1.0249
WMHA	Mandurah	1.0312	1.0342
WMIL	Milligan Street	1.0389	1.0396
WMJP	Manjimup	1.0258	1.0208
WMJX	Midland Junction	1.0322	1.0330
WMLG	Malaga	1.0347	1.0353
WMOR	Moora	1.0487	1.0460
WMOY	Morley	1.0387	1.0395
WMPS	Muja PWS	1.0000	1.0000
WMRR	Marriot Road	1.0150	1.0154
WMRV	Margaret River	1.0688	1.0727
WMSR	Mason Road	1.0256	1.0273
WMSS	Meadow Springs	1.0312	1.0349
WMUC	Muchea	1.0346	1.0349
WMUL	Mullaloo	1.0376	1.0378
WMUR	Murdoch	1.0290	1.0293
WMWR	Mundaring Weir	1.0682	1.0656
WMYR	Myaree	1.0423	1.0421
WNBH	North Beach	1.0389	1.0398
WNED	Nedlands	1.0493	1.0460
WNFL	North Fremantle	1.0354	1.0361
WNGK	NewGen Kwinana	1.0230	1.0230
WNGN	Narrogin	1.0626	1.0657
WNOR	Northam	1.0710	1.0754
WNPH	North Perth	1.0418	1.0413
WOCN	O'Connor	1.0400	1.0400
WOPK	Osborne Park	1.0392	1.0400
WPBY	Padbury	1.0392	1.0408
WPCY	Piccadilly	1.2072	1.2534

Transmission Loss Factor			
TLF Code	**Description**	**Applied in 2010/11**	**To apply in 2011/12**
WPIC	Picton 66kv	1.0204	1.0209
WPJR	Pinjar	1.0293	1.0305
WPKS	Parkeston	1.2124	1.2977
WPLD	Parklands	1.0312	1.0343
WPNJ	Pinjarra	1.0160	1.0204
WRAN	Rangeway	1.0440	1.0411
WRBD	Boddington (Reynolds)	0.9996	0.9996
WRGN	Regans	1.0326	1.0313
WROH	Rockingham	1.0346	1.0376
WRTN	Riverton	1.0305	1.0303
WRVE	Rivervale	1.0362	1.0354
WSNR	Southern River	1.0380	1.0381
WSPA	Shenton Park	1.0474	1.0440
WSUM	Summer St	1.0425	1.0418
WSVL	Sawyers Valley	1.0818	1.0786
WTLN	Tomlinson Street	1.0366	1.0341
WTSG	Three Springs	1.0427	1.0365
WTTS	Tate Street	1.0368	1.0357
WUNI	University	1.0486	1.0453
WVPA	Victoria Park	1.0350	1.0350
WWAG	Wagin	1.0531	1.0484
WWAI	Waikiki	1.0356	1.0393
WWCL	Western Collieries	0.9978	0.9982
WWDN	Wembley Downs	1.0514	1.0462
WWEB	WEB Grating	1.0441	1.0372
WWEL	Welshpool	1.0339	1.0336
WWGA	Wangara		1.0437
WWGP	Wagerup	0.9873	0.9910
WWKT	West Kalgoorlie	1.2019	1.2504
WWLN	Willeton		1.0394
WWMG	Western Mining	1.0333	1.0353
WWNO	Wanneroo	1.0333	1.0339
WWNT	Wellington Street	1.0447	1.0432
WWSD	Westralian Sands	1.0358	1.0382
WWUN	Wundowie	1.0878	1.0859
WWWF	Walkaway Windfarm	0.9548	0.9494
WYCP	Yanchep	1.0333	1.0339
WYER	Yerbillon	1.1536	1.2549
WYKE	Yokine	1.0381	1.0395
WYLN	Yilgarn	1.1535	1.1856

4 Average Distribution Loss Factors

Western Power has calculated the following average distribution loss factors for the 2011/12 financial year.

Table 2 - Average Distribution Loss Factors

Distribution Loss Factor			
DLF Code	**Description**	**Applied in 2010/11**	**To apply in 201/12**
QRT1	A1 - Anytime Energy (Residential)	1.0748	1.0771
QRT2	A2 - Anytime Energy (Business)	1.0451	1.0498
QRT3	A3 - Time of Use Energy (Small)	1.0748	1.0771
QRT4	A4 - Time of Use Energy (Large)	1.0451	1.0498
QRT5	A5 - High Voltage Metered Demand	1.0205	1.0196
QRT6	A6 - Low Voltage Metered Demand	1.0345	1.0404
QRT9	A9 - Streetlighting	1.0748	1.0771
QR10	A10 - Un-metered Supplies	1.0748	1.0771
QR12	C1 - Time of Use Energy (Bidirectional Residential)	1.0748	1.0771
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	1.0521	1.0560

5 Individual Distribution Loss Factors

Western Power has calculated the following individual distribution loss factors for the 2011/12 financial year.

Table 3 - Individual Distribution Loss Factors

Distribution Loss Factor			
DLF Code	**Description**	**Applied in 2010/11**	**To apply in 2011/12**
QAAL	AIR LIQUIDE WA PTY LTD	1.0088	1.0090
QAAM	AMP CAPITAL INVESTORS LIMITED (GARDEN CITY SHOPPING CENTRE)	1.0100	1.0103
QANP	WEST AUSTRALIAN NEWSPAPERS LTD	1.0114	1.0116
QAUS	AUSWEST PTY LTD		1.0578
QAWF	ALBANY WINFARM		0.9816
QBGB	BGC BRICKMAKERS (BRICKS)		1.0159
QBGC	BGC (AUSTRALIA) PTY LTD		1.0072
QBGM	BODDINGTON GOLD MINE	1.0675	1.0451
QBGP	BGC PLASTERBOARD		1.0057
QBLB	AUSTRALBRICKS (WA) PTY LTD (BELLEVUE)	1.0069	1.0071
QBLC	AUSTRALBRICKS (WA) PTY LTD (CARDUP)	1.0106	1.0097
QBLM	AUSTRALBRICKS (WA) PTY LTD (MALAGA)	1.0061	1.0061
QBLU	BLUELEAF CORPORATION PTY LTD		1.0339
QBMA	ST BARBARA MINES (L1)	1.0768	1.0786
QBMA	ST BARBARA MINES (L1)	1.0768	1.0786
QBMB	ST BARBARA MINES (L1 B)	1.0229	1.0220
QBMC	ST BARBARA LIMITED		1.0207
QBNB	BCG CEMENT		1.0086
QBOC	BOC GASES (COMMONWEALTH INDUSTRIAL)	1.0082	1.0082
QBPA	BUNBURY PORT AUTHORITY	1.0063	1.0064
QBTF	INVESTA PROP & SAS TRUSTEE CORPORATION (QV1)	1.0057	1.0058
QBUR	BURSWOOD RESORT CASINO	1.0065	1.0065
QBWE	BANKWEST	1.0071	1.0074
QCBC	COCKBURN CEMENT		1.1127
QCBH	COOPERATIVE BULK HANDLING LTD	1.0515	1.0392
QCBK	COOPERATIVE BULK HANDLING LIMIT	1.0063	1.0063
QCEM	COCKBURN CEMENT LIMITED		1.0064
QCPL	UPPSALA PTY LIMITED	1.0064	1.0064
QCSG	CABLE SANDS WA PTY LTD (GWINDIUP)	1.1667	1.0676
QCSW	CABLE SANDS WA PTY LTD	1.0088	1.0086
QCUR	CURTIN UNIVERSITY OF TECHNOLOGY	1.0099	1.0057
QDCS	DEPARTMENT OF CORRECTIVE SERVICES		1.0274
QDMS	DORAL MINERAL SANDS	1.1336	1.1220
QDOD	DEPT OF DEFENCE - HMAS STIRLING	1.0154	1.0143
QDPL	DONHAD PTY LTD	1.0146	1.0153
QFFM	WESTERN AREAS NL - FLYING FOX MINESITE	1.0582	1.0623
QFIE	FLETCHER INTERNATIONAL EXPORTS	1.0544	1.0522

Distribution Loss Factor			
DLF Code	**Description**	**Applied in 2010/11**	**To apply in 2011/12**
QFLM	LA MANCHA (FROGS LEGS MINE - COOLGARDIE)	1.0328	1.0497
QFPA	FREMANTLE PORT AUTHORITY	1.0066	1.0066
QGES	APF MANAGEMENT AND PERRON INVEST (CENTRAL PARK)	1.0072	1.0068
QGLD	GUNNS LIMITED (DEANMILL)	1.0493	1.0466
QGLM	GUNNS LIMITED (MANJIMUP)	1.0629	1.0389
QGRI	GRIFFIN COAL MINE		1.0517
QGWF	GEORGE WESTON FOODS (WATSONIA), SPEARWOOD	1.0123	1.0116
QHFM	HARVEY FRESH MILK	1.0368	1.1478
QHLG	HENDERSON LANDFILL GAS (WASTE GAS RESOURCES PTY LTD	1.0048	1.0049
QHMP	HIGGINSVILLE MINING PTY LTD	1.0466	1.0475
QHRO	HR OPERATIONS PTY LTD	1.0083	1.0083
QHVI	HARVEY INDUSTRIES (EG GREEN & SONS PTY LTD)	1.0986	1.1158
QIDH	ILUKA RESOURCES LTD	1.1354	1.0473
QIRG	ILUKA RESOURCES LIMITED		1.0269
QIRL	ILUKA RESOURCES LIMITED		1.1552
QIRW	ILUKA RESOURCES		1.0199
QJJM	JUBILEE MINE AND TREATMENT FACILITY	1.0075	1.0425
QKBG	KANOWNA BELLE GOLD MINES LIMITED	1.0854	1.1059
QKEM	KEMERTON SILICA SAND PTY LTD		1.0438
QKPS	KALBARRI PHOTOVOLTAIC SYSTEM		1.2448
QKUD	KUNDANA GOLD PTY LTD		1.0412
QKWF	KALBARRI WIND FARM	1.2317	1.2526
QLGA	LANDFILL GAS & POWER PTY LTD (RED HILL)	1.0202	1.0264
QLGB	LANDFILL GAS POWER PTY LTD (CANNING VALE)	1.0194	1.0250
QLGC	LANDFILL GAS POWER PTY LTD (KALAMUNDA)	1.0254	1.0222
QLGD	LANDFILL GAS POWER PTY LTD (TAMALA PARK)	1.0161	1.0167
QLJS	ARMSTRONG JONES MANAGEMENT PTY LIMITED (JOONDALUP SHOPPING CENTRE)	1.0143	1.0145
QMBW	MT BARKER POWER COMPANY		1.0272
QMGS	MIDLAND GATE SHOPPING CENTRE	1.0059	1.0060
QMHE	MOUNT HERRON ENGINEERING	1.0600	1.0630
QMIC	MILLENIUM INORGANIC CHEMICALS LTD		1.0364
QMID	MIDLAND BRICK COMPANY PTY LTD(LOT 82 GREAT NORTHER)	1.0180	1.0182
QMIE	MIDLAND BRICK COMPANY PTY LTD(LOT 2 BASSETT ROAD)	1.0220	1.0225
QNFM	NATIONAL FOODS MILK WA LIMITED	1.0079	1.0079
QPAD	PADDINGTON GOLD PTY LTD		1.0346
QPAG	PADDINGTON GOLD PTY LTD		1.0587
QPEA	LMS SOUTH CARDUP	1.0005	0.9977
QPEB	A G L ENERGY SERVICES (ROCKINGHAM)	1.0246	1.0100
QPEC	A G L ENERGY SERVICES (GOSNELLS)	1.0455	1.0453
QPED	LMS ATLAS	1.0117	1.0093
QPHG	PEMBERTON HYDRO	1.0967	1.1014
QPLA	PLANTATION ENERGY AUSTRALIA PTY LTD		1.0546

Distribution Loss Factor			
DLF Code	**Description**	**Applied in 2010/11**	**To apply in 2011/12**
QPTC	AMP CAPITAL INVESTORS LIMITED (KARRINYUP SHOPPING CENTRE)	1.0244	1.0218
QRCS	ROCKINGHAM CITY SHOPPING CENTRE	1.0101	1.0089
QRGP	INTEGRA MINING (RANDALLS GOLD PROJECT)	1.0799	1.0862
QROC	RENDEZVOUS OBSERVATION CITY HOTEL	1.0109	1.0109
QRPH	ROYAL PERTH HOSPITAL	1.0058	1.0058
QRRA	DEPARTMENT OF DEFENCE	1.1124	1.1023
QSBC	THE SWAN BREWERY COMPANY PTY LTD	1.0122	1.0118
QSIT	SITA AUSTRALIA PTY LTD		1.0101
QSMP	ST MARTINS PROPERTIES PTY	1.0071	1.0071
QTAL	TALISON MINERALS PTY LTD		1.0473
QTCL	TELSTRA CORPORATION LIMITED	1.0073	1.0070
QTMH	FOCUS OPERATIONS PTY LTD	1.0797	1.0785
QVEW	VERVE ENERGY - WOOD PROCESS CHARCOAL POWER STN		1.0060
QVPL	VINIDEX PTY LTD	1.0097	1.0091
QWAC	WESTRALIA AIRPORTS CORPORATION PTY LTD	1.0122	1.0131
QWAN	WESTERN AREAS NL (COSMIC BOY)		1.0659
QWCB	WATER CORP (BELMONT)	1.0085	1.0089
QWCD	WATER CORPORATION (FORRESTDALE)		1.0133
QWCE	WATER CORP (BEENYUP WWTP)	1.0067	1.0066
QWCF	WATER CORPORATION (MUNSTER)		1.0168
QWCG	WATER CORPORATION (GHOOLI)	1.0103	1.0102
QWCS	WESTFIELD CAROUSEL SHOPPINGTOWN	1.0330	1.0350
QWCT	WATER CORPORATION SEWERAGE TREAT	1.0123	1.0123
QWCW	WATER CORP (WANNEROO GS)	1.0309	1.0306
QWES	WESFEEDS PTY LTD	1.0069	1.0071
QWGS	CPM (WA) PTY LTD (GALLERIA)	1.0138	1.0136
QWHS	WHITFORD CITY SHOPPING CENTRE	1.0152	1.0140
QWLP	BRADKEN RESOURCES PTY LTD	1.0157	1.0155
QWMD	THE LAMINEX GROUP	1.0264	1.0257
QWMP	WESFI MANUFACTURING PTY LTD	1.0180	1.0222

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 2010/11	To apply in 2011/12	Change
TBLS	Boulder (SCE)	1.2092	1.2552	0.0460
TWKG	West Kalgoorlie GTs	1.1074	1.2230	0.1156
WBDE	Baandee (WC)	1.1263	1.1527	0.0264
WBKF	Black Flag	1.212	1.2619	0.0499
WBLD	Boulder	1.2065	1.2587	0.0522
WBNY	Bounty	1.1116	1.1382	0.0266
WCAR	Carrabin	1.1525	1.2504	0.0979
WMER	Merredin 66kV	1.1296	1.1597	0.0301
WPCY	Piccadilly	1.2072	1.2534	0.0462
WPKS	Parkeston	1.2124	1.2977	0.0853
WWKT	West Kalgoorlie	1.2019	1.2504	0.0485
WYER	Yerbillon	1.1536	1.2549	0.1013
WYLN	Yilgarn	1.1535	1.1856	0.0321

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. In general, loss factors increase with load at a node or any electrically nearby nodes and decrease with increasing generation at a node or any electrically nearby nodes.

Generally, all changes to loss factors for 2011/12 have been as a result of changes in either load or generation patterns at the node or at other nearby nodes during the preceding year. In particular, the loading of the 220kV radial line from Muja to West Kalgoorlie increased by approximately 20%, resulting in a general increase for loss factors at nodes electrically close to that line.

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 2010/11	To apply in 2011/12	Change
QCSG	CABLE SANDS WA PTY LTD (GWINDIUP)	1.1667	1.0676	-0.0991
QHFM	HARVEY FRESH MILK	1.0368	1.1478	0.1110
QIDH	ILUKA RESOURCES LTD	1.1354	1.0473	-0.0881
QJJM	JUBILEE MINE AND TREATMENT FACILITY	1.0075	1.0425	0.0350

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
QCSG	The result is likely due to network reconfigurations that have occurred since last year's study. It is worth noting that this year's result is in line with the 2009/10 result.
QHFM	This change is due to a new HV load on the feeder that was not included in last year's modeling.
QIDH	The customer has reduced its CMD significantly.
QJJM	A review indicates that there were data errors last year that led to a significantly different result from 2009/10. This year's result corrects those errors and returns the DLF to around its 2009/10 value of 1.0439.

Appendix A - Individual Distribution Loss Factors by NMI

The individual distribution loss factors calculated for the 2011/12 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
8001000121	QTAL	Required
8001000122	QPEB	Required
8001000123	QPEC	Required
8001000124	QLGB	Required
8001000125	QKEM	Required
8001000130	QCEM	Optional
8001000158	QLGA	Required
8001000234	QLGD	Required
8001000268	QBOC	Required
8001000269	QJJM	Required
8001000270	QMID	Optional
8001000271	QWES	Optional
8001000274	QBGP	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
8001000345	QHVI	Required
8001000356	QTMH	Required
8001000359	QBMB	Required
8001000371	QWMP	Required
8001000420	QDPL	Optional
8001000428	QCBC	Required

NMI	DLF Code	Individual DLF Optional?
8001000432	QCBK	Optional
8001000449	QBLC	Optional
8001000451	QHMP	Required
8001000493	QPAD	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
8001000529	QWCF	Required
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
8001000660	QKUD	Required
8001000661	QIRG	Required
8001000662	QIRG	Required
8001000665	QRPH	Optional
8001000666	QRPH	Optional
8001000667	QLJS	Optional
8001000668	QLJS	Optional
8001000669	QKUD	Required
8001000670	QKUD	Required
8001000673	QAAM	Required
8001000674	QAAM	Required
8001000677	QWGS	Required
8001000678	QWGS	Required
8001000681	QMGS	Required
8001000682	QMGS	Required
8001000687	QRCS	Required

NMI	DLF Code	Individual DLF Optional?
8001000688	QRCS	Required
8001000691	QWHS	Required
8001000692	QWHS	Required
8001000693	QWCS	Required
8001000694	QWCS	Required
8001000703	QBTF	Optional
8001000704	QBTF	Optional
8001000707	QAWF	Required
8001000708	QAWF	Required
8001000710	QMIC	Required
8001000716	QBMA	Required
8001000717	QBMA	Required
8001000738	QLGC	Required
8001000745	QPAG	Required
8001000780	QCBH	Required
8001000790	QWCG	Required
8001000791	QBLB	Optional
8001000804	QANP	Optional
8001000804	QANP	Optional
8001000817	QIDH	Required
8001000824	QKBG	Required
8001000827	QWLP	Optional
8001000830	QBMC	Required
8001000831	QTCL	Optional
8001000837	QIDH	Required
8001000846	QBLM	Optional
8001000847	QROC	Optional
8001000863	QRRA	Required
8001000864	QBGC	Optional
8001000874	QPHG	Required
8001000878	QWAN	Required
8001000916	QPEA	Required
8001001009	QBMA	Required
8001001210	QIRL	Required
8001002378	QVEW	Required
8001002460	QAUS	Required
8001003787	QBNB	Optional
8001008631	QDCS	Required
8001011455	QDMS	Required
8001011882	QGLM	Required
8001012555	QGLD	Required
8001014748	QHFM	Required
8001015658	QBLU	Required
8001016701	QKPS	Required

NMI	DLF Code	Individual DLF Optional?
8001017256	QHRO	Optional
8001017284	QGRI	Required
8001018080	QPED	Required
8001019433	QHLG	Required
8001019602	QMHE	Required
8001019750	QFPA	Optional
8001020053	QWCD	Required
8001020092	QBGM	Required
8001994589	QIRW	Required
8002013336	QKWF	Required
8002013376	QCUR	Required
8002013377	QCUR	Required
8002013378	QCUR	Required
8002016408	QMBW	Required
8002019353	QBGB	Optional
8002027600	QCSG	Required
8002034918	QFLM	Required
8002051925	QCUR	Required
8002055189	QSIT	Required
8002057792	QPLA	Required
8002098108	QRGP	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 2010/11	To apply in 2011/12
6.6kV/11kV/22kV/33kV Bus Connected	1.0055	1.0055
6.6kV/11kV/22kV/33kV Line Connected	1.0205	1.0196
LV Bus Connected	1.0345	1.0404
LV Line Connected (Commercial)	1.0451	1.0498
LV Line Connected (Streetlighting/UMS)	1.0748	1.0771
LV Line Connected (Residential)	1.0748	1.0771
Transmission Connected (No DLF)	1.0000	1.0000
Distribution System Wide Average Loss Factor	1.0521	1.0560

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 2010/11 but are not required in 2011/12 and are therefore redundant.

Table 9 - Redundant Distribution Loss Factors

DLF Code	Description	Reason
QWPL	WESPINE PTY LTD	No longer required by retailer.
QWCC	WATER CORPORATION (CUNDERDIN)	No longer required by retailer.
QTIF	TALISKA INVESTMENTS, FORRESTFIELD	No longer required by retailer.