2012/13 Loss Factor Report

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1 Introduction

This report details the loss factors calculated for the 2012/13 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 T-price.

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 2012/13 financial year.

Table 1 - Transmission Loss Factors

Transmission Loss Factor			
TLF Code	**Description**	**Applied in 2011/12**	**To apply in 2012/13**
TAPA	Alcoa Pinjarra (Alcoa)	0.9963	0.9964
TAPL	Alcoa Pinjarra (Alinta)	0.992	0.9898
TBLB	Bluewaters (BWP)	0.9987	0.9987
TBLS	Boulder (SCE)	1.2552	1.2253
TLWA	Landweir (Alinta)	1.0124	1.0065
TMSK	Mason Road (KPP)	1.0273	1.0199
TOLA	Oakley (Alinta)	1.0138	1.012
TSAV	Transmission SWIN Average	1.0467	1.0443
TUAV	Transmission Urban Average	1.0405	1.0383
TWKG	West Kalgoorlie GTs	1.223	1.0782
TWOJ	Worsley (Joint Venture)	0.9887	0.9836
TWOW	Worsley (Worsley)	0.9919	0.9983
WAFM	Australian Fused Materials	1.032	1.0217
WAKW	Kwinana Alcoa	1.025	1.0199
WALB	Albany	1.0398	1.072
WAMT	Amherst	1.0334	1.034
WAPM	Australian Paper Mills	1.0375	1.0388
WARK	Arkana	1.0369	1.0383
WBCH	Beechboro	1.0375	1.0385
WBDE	Baandee (WC)	1.1527	1.1196
WBDP	Binningup Desalinatin Plant	1.0154	1.0097
WBEC	Beckenham	1.0301	1.0301
WBEL	Belmont	1.0379	1.0343
WBGM	Boddingtom Gold Mine	1.0079	1.0076
WBHK	Broken Hill Kwinana	1.0236	1.0296
WBIB	Bibra Lake	1.0278	1.0289
WBKF	Black Flag	1.2619	1.2362
WBLD	Boulder	1.2587	1.2325
WBNP	Beenup	1.0269	1.0302
WBNY	Bounty	1.1382	1.1084
WBOD	Boddington	1.0065	1.0062
WBPM	British Petroleum	1.0239	1.0228
WBSI	Marriott Road Barrack Silicon Smelter	1.0165	1.0096
WBSN	Busselton	1.0478	1.0497
WBTN	Bridgetown	1.014	1.0135
WBTY	Bentley	1.0364	1.0314
WBUH	Bunbury Harbour	1.0207	1.0169
WBYF	Byford	1.0413	1.0299

Transmission Loss Factor			
TLF Code	**Description**	**Applied in 2011/12**	**To apply in 2012/13**
WCAP	Capel	1.0408	1.0381
WCAR	Carrabin	1.2504	1.2132
WCBP	Mason Road CSBP	1.027	1.0238
WCCL	Cockburn Cement Ltd	1.0332	1.0239
WCCT	Cockburn Cement	1.0363	1.0255
WCGW	Collgar Windfarm	1.1296	1.0393
WCKN	Clarkeson	1.0358	1.0367
WCKT	Cook Street	1.0417	1.0408
WCLN	Clarence Street	1.042	1.0393
WCLP	Coolup	1.0453	1.0489
WCOE	Collie	1.0259	1.0247
WCOL	Collier	1.0391	1.0396
WCPN	Chapman	1.0432	1.0398
WCPS	Collie PWS	0.9955	0.9949
WCTE	Cottesloe		1.0377
WCUN	Cunderdin	1.1245	1.1076
WCVE	Canning Vale	1.0343	1.0284
WDTN	Darlington	1.0374	1.0367
WDUR	Durlacher	1.0386	1.037
WEDD	Edmund Street	1.0356	1.0375
WEDG	Edgewater	1.0466	1.0424
WEMD	Emu Downs	0.9988	0.9945
WENB	Eneabba	1.0351	1.027
WFFD	Forrestfield	1.0357	1.0359
WFRT	Forrest Ave	1.0441	1.0422
WGGV	Golden Grove	1.0856	1.0812
WGNI	Glen Iris	1.0302	1.0249
WGNL	Gosnells	1.0372	1.0291
WGNN	Newgen Neerabup	1.0383	1.0265
WGTN	Geraldton	1.04	1.037
WHAY	Hay Street	1.0415	1.0406
WHBK	Henley Brook	1.0375	1.0382
WHEP	Herdsman Parade	1.0469	1.0438
WHFS	Hadfields	1.0386	1.0399
WHIS	Mason Road Hismelt	1.0278	1.0196
WHZM	Hazelmere	1.032	1.0326
WJDP	Joondalup	1.0426	1.0396
WJTE	Joel Terrace	1.0423	1.0403
WKAT	Katanning	1.0546	1.03
WKDA	Kalamunda	1.0379	1.0376
WKDL	Kewdale	1.0367	1.0335
WKDN	Kondinin	1.1032	1.079
WKDP	Kwinana Desalination Plant	1.0262	1.02

Transmission Loss Factor			
TLF Code	**Description**	**Applied in 2011/12**	**To apply in 2012/13**
WKEL	Kellerberrin	1.155	1.1638
WKEM	Kemerton PWS	1.008	1.0057
WKMC	Cataby Kerr McGee	1.0273	1.0244
WKMK	Kerr McGee Kwinana	1.026	1.0177
WKMM	Muchea Kerr McGee	1.0337	1.0335
WKND	Kwinana Donaldson Road (Western Energy)	1.0252	1.0152
WKOJ	Kojonup	1.0241	1.031
WKPS	Kwinana PWS	1.0141	1.0164
WLDE	Landsdale	1.0377	1.0405
WMAG	Manning Street	1.0398	1.041
WMBR	Mt Barker	1.0433	1.0699
WMCR	Medical Centre	1.045	1.0423
WMDN	Maddington		1.0309
WMED	Medina	1.0382	1.0246
WMER	Merredin 66kV	1.1597	1.1229
WMGA	Mungarra GTs	1.0249	1.0181
WMHA	Mandurah	1.0342	1.027
WMIL	Milligan Street	1.0396	1.0412
WMJP	Manjimup	1.0208	1.02
WMJX	Midland Junction	1.033	1.0335
WMLG	Malaga	1.0353	1.0363
WMOR	Moora	1.046	1.0477
WMOY	Morley	1.0395	1.0406
WMPS	Muja PWS	1	1
WMRR	Marriot Road	1.0154	1.0084
WMRV	Margaret River	1.0727	1.0916
WMSR	Mason Road	1.0273	1.0193
WMSS	Meadow Springs	1.0349	1.0256
WMUC	Muchea	1.0349	1.0352
WMUL	Mullaloo	1.0378	1.0405
WMUR	Murdoch	1.0293	1.0264
WMWR	Mundaring Weir	1.0656	1.0532
WMYR	Myaree	1.0421	1.043
WNBH	North Beach	1.0398	1.0414
WNED	Nedlands	1.046	1.0427
WNFL	North Fremantle	1.0361	1.0371
WNGK	NewGen Kwinana	1.023	1.0209
WNGN	Narrogin	1.0657	1.0575
WNOR	Northam	1.0754	1.0662
WNPH	North Perth	1.0413	1.0403
WOCN	O'Connor	1.04	1.0412
WOPK	Osborne Park	1.04	1.0415
WPBY	Padbury	1.0408	1.0418

Transmission Loss Factor			
TLF Code	**Description**	**Applied in 2011/12**	**To apply in 2012/13**
WPCY	Piccadilly	1.2534	1.2362
WPIC	Picton 66kv	1.0209	1.0167
WPJR	Pinjar	1.0305	1.0295
WPKS	Parkeston	1.2977	1.2429
WPLD	Parklands	1.0343	1.0259
WPNJ	Pinjarra	1.0204	1.0179
WRAN	Rangeway	1.0411	1.0387
WRBD	Boddington (Reynolds)	0.9996	1.0062
WRGN	Regans	1.0313	1.0304
WROH	Rockingham	1.0376	1.0255
WRTN	Riverton	1.0303	1.028
WRVE	Rivervale	1.0354	1.0341
WSNR	Southern River	1.0381	1.0276
WSFT	South Fremantle 66kV	1.0246	1.0246
WSPA	Shenton Park	1.044	1.0414
WSUM	Summer St	1.0418	1.0414
WSVL	Sawyers Valley	1.0786	1.0772
WTLN	Tomlinson Street	1.0341	1.0345
WTSG	Three Springs	1.0365	1.0384
WTTS	Tate Street	1.0357	1.0337
WUNI	University	1.0453	1.0426
WVPA	Victoria Park	1.035	1.0352
WWAG	Wagin	1.0484	1.0485
WWAI	Waikiki	1.0393	1.0274
WWCL	Western Collieries	0.9982	0.9973
WWDN	Wembley Downs	1.0462	1.0433
WWEB	WEB Grating	1.0372	1.0352
WWEL	Welshpool	1.0336	1.0327
WWGA	Wangara	1.0437	1.0402
WWGP	Wagerup	0.991	0.9898
WWKT	West Kalgoorlie	1.2504	1.2245
WWLN	Willeton	1.0394	1.027
WWMG	Western Mining	1.0353	1.0221
WWNO	Wanneroo	1.0339	1.0356
WWNT	Wellington Street	1.0432	1.0428
WWSD	Westralian Sands	1.0382	1.032
WWUN	Wundowie	1.0859	1.0703
WWWF	Walkaway Windfarm	0.9494	0.9444
WYCP	Yanchep	1.0339	1.0348
WYER	Yerbillon	1.2549	1.2084
WYKE	Yokine	1.0395	1.0404
WYLN	Yilgarn	1.1856	1.1446

4 Average Distribution Loss Factors

Western Power has calculated the following average distribution loss factors for the 2012/13 financial year.

Table 2 - Average Distribution Loss Factors

Distribution Loss Factor			
DLF Code	**Description**	**Applied in 2011/12**	**To apply in 2012/13**
QRT1	A1 - Anytime Energy (Residential)	1.0771	1.0750
QRT2	A2 - Anytime Energy (Business)	1.0498	1.0443
QRT3	A3 - Time of Use Energy (Small)	1.0771	1.0750
QRT4	A4 - Time of Use Energy (Large)	1.0498	1.0443
QRT5	A5 - High Voltage Metered Demand	1.0196	1.0192
QRT6	A6 - Low Voltage Metered Demand	1.0404	1.0337
QRT9	A9 - Streetlighting	1.0771	1.0750
QR10	A10 - Un-metered Supplies	1.0771	1.0750
QR12	C1 - Time of Use Energy (Bidirectional Residential)	1.0771	1.0750
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
QZSC	Zone Substation Connections	1.0055	1.0055
QNLF	Transmission Connected (No DLF)	1.0000	1.0000
QAVG	Distribution System Wide Average Loss Factor	1.0560	1.0522

Notes:

- QZSC was created during the 2011/12 financial year to cater for customers who connect directly at the zone substation but are not on reference tariff RT7.
- QTHZ is a redundant loss factor code.

- # Individual Distribution Loss Factors

  Western Power has calculated the following individual distribution loss factors for the 2012/13 financial year.

Table 3 - Individual Distribution Loss Factors

Distribution Loss Factor			
DLF Code	**Description**	**Applied in 2011/12**	**To apply in 2012/13**
QAAL	AIR LIQUIDE WA PTY LTD	1.0090	1.0090
QAAM	AMP CAPITAL INVESTORS LIMITED (GARDEN CITY SHOPPING CENTRE)	1.0103	1.0100
QANP	WEST AUSTRALIAN NEWSPAPERS LTD	1.0116	1.0121
QAUS	AUSWEST PTY LTD	1.0578	1.0544
QAWF	ALBANY WINFARM	0.9816	0.9816
QBGB	BGC BRICKMAKERS (BRICKS)	1.0159	1.0117
QBGC	BGC (AUSTRALIA) PTY LTD	1.0072	1.0071
QBGM	BODDINGTON GOLD MINE	1.0451	1.0454
QBGP	BGC PLASTERBOARD	1.0057	1.0057
QBGQ	BGC QUARRY		1.0192
QBLB	AUSTRALBRICKS (WA) PTY LTD (BELLEVUE)	1.0071	1.0072
QBLC	AUSTRALBRICKS (WA) PTY LTD (CARDUP)	1.0097	1.0114
QBLM	AUSTRALBRICKS (WA) PTY LTD (MALAGA)	1.0061	1.0061
QBMA	ST BARBARA MINES (L1)	1.0786	1.0773
QBMB	ST BARBARA MINES (L1 B)	1.0220	1.0215
QBMC	ST BARBARA LIMITED	1.0207	1.0213
QBNB	BCG CEMENT	1.0086	1.0095
QBOC	BOC GASES (COMMONWEALTH INDUSTRIAL)	1.0082	1.0082
QBPA	BUNBURY PORT AUTHORITY	1.0064	1.0062
QBTF	INVESTA PROP & SAS TRUSTEE CORPORATION (QV1)	1.0058	1.0057
QBUR	BURSWOOD RESORT CASINO	1.0065	1.0064
QBWE	BANKWEST	1.0074	1.0071
QCBC	COCKBURN CEMENT	1.1127	1.1245
QCBH	COOPERATIVE BULK HANDLING LTD	1.0392	1.0454
QCBK	COOPERATIVE BULK HANDLING LIMIT	1.0063	1.0062
QCEM	COCKBURN CEMENT LIMITED	1.0064	1.0063
QCPL	UPPSALA PTY LIMITED	1.0064	1.0065
QCSG	CABLE SANDS WA PTY LTD (GWINDIUP)	1.0676	1.0604
QCSW	CABLE SANDS WA PTY LTD	1.0086	1.0087
QCUR	CURTIN UNIVERSITY OF TECHNOLOGY	1.0057	1.0057
QDCS	DEPARTMENT OF CORRECTIVE SERVICES	1.0274	1.0266
QDMS	DORAL MINERAL SANDS	1.1220	1.1468
QDOD	DEPT OF DEFENCE - HMAS STIRLING	1.0143	1.0148
QDPL	DONHAD PTY LTD	1.0153	1.0173
QFFM	WESTERN AREAS NL - FLYING FOX MINESITE	1.0623	1.1015
QFIE	FLETCHER INTERNATIONAL EXPORTS	1.0522	1.0610
QFLM	LA MANCHA (FROGS LEGS MINE - COOLGARDIE)	1.0497	1.0347

Distribution Loss Factor			
DLF Code	**Description**	**Applied in 2011/12**	**To apply in 2012/13**
QFPA	FREMANTLE PORT AUTHORITY	1.0066	1.0060
QGES	APF MANAGEMENT AND PERRON INVEST (CENTRAL PARK)	1.0068	1.0069
QGLM	GUNNS LIMITED (MANJIMUP)	1.0389	1.0391
QGRI	GRIFFIN COAL MINE	1.0517	1.0529
QHFM	HARVEY FRESH MILK	1.1478	1.1467
QHLG	HENDERSON LANDFILL GAS (WASTE GAS RESOURCES PTY LTD	1.0049	1.0057
QHMP	HIGGINSVILLE MINING PTY LTD	1.0475	1.0468
QHRO	HR OPERATIONS PTY LTD	1.0083	1.0077
QHVI	HARVEY INDUSTRIES (EG GREEN & SONS PTY LTD)	1.1158	1.1278
QIDH	ILUKA RESOURCES LTD	1.0473	1.0442
QIRG	ILUKA RESOURCES LIMITED	1.0269	1.0274
QJJM	JUBILEE MINE AND TREATMENT FACILITY	1.0425	1.0424
QKBG	KANOWNA BELLE GOLD MINES LIMITED	1.1059	1.1057
QKEM	KEMERTON SILICA SAND PTY LTD	1.0438	1.0411
QKPS	KALBARRI PHOTOVOLTAIC SYSTEM	1.2448	1.2201
QKUD	KUNDANA GOLD PTY LTD	1.0412	1.0422
QKWF	KALBARRI WIND FARM	1.2526	1.2292
QLGA	LANDFILL GAS & POWER PTY LTD (RED HILL)	1.0264	1.0256
QLGB	LANDFILL GAS POWER PTY LTD (CANNING VALE)	1.0250	1.0259
QLGC	LANDFILL GAS POWER PTY LTD (KALAMUNDA)	1.0222	1.0216
QLGD	LANDFILL GAS POWER PTY LTD (TAMALA PARK)	1.0167	1.0173
QLJS	ARMSTRONG JONES MANAGEMENT PTY LIMITED (JOONDALUP SHOPPING CENTRE)	1.0145	1.0095
QMBW	MT BARKER POWER COMPANY	1.0272	1.0323
QMGS	MIDLAND GATE SHOPPING CENTRE	1.0060	1.0059
QMHE	MOUNT HERRON ENGINEERING	1.0630	1.0716
QMIA	MILLENIUM INORGANIC CHEMICALS LTD - Australind		1.0192
QMIC	MILLENIUM INORGANIC CHEMICALS LTD - Kemerton	1.0364	1.0384
QMID	MIDLAND BRICK COMPANY PTY LTD(LOT 82 GREAT NORTHER)	1.0182	1.0171
QMIE	MIDLAND BRICK COMPANY PTY LTD(LOT 2 BASSETT ROAD)	1.0225	1.0226
QNFM	NATIONAL FOODS MILK WA LIMITED	1.0079	1.0089
QPAD	PADDINGTON GOLD PTY LTD	1.0346	1.0192
QPAG	PADDINGTON GOLD PTY LTD	1.0587	1.0661
QPEA	LMS SOUTH CARDUP	0.9977	1.0130
QPEB	A G L ENERGY SERVICES (ROCKINGHAM)	1.0100	1.0104
QPEC	A G L ENERGY SERVICES (GOSNELLS)	1.0453	1.0571
QPED	LMS ATLAS	1.0093	1.0116
QPHG	PEMBERTON HYDRO	1.1014	1.0950
QPLA	PLANTATION ENERGY AUSTRALIA PTY LTD	1.0546	1.0614
QPTC	AMP CAPITAL INVESTORS LIMITED (KARRINYUP SHOPPING CENTRE)	1.0218	1.0230
QRCS	ROCKINGHAM CITY SHOPPING CENTRE	1.0089	1.0091
QRGP	INTEGRA MINING (RANDALLS GOLD PROJECT)	1.0862	1.1130
QROC	RENDEZVOUS OBSERVATION CITY HOTEL	1.0109	1.0107

Distribution Loss Factor			
DLF Code	**Description**	**Applied in 2011/12**	**To apply in 2012/13**
QRPH	ROYAL PERTH HOSPITAL	1.0058	1.0058
QRRA	DEPARTMENT OF DEFENCE	1.1023	1.1017
QSBC	THE SWAN BREWERY COMPANY PTY LTD	1.0118	1.0119
QSIT	SITA AUSTRALIA PTY LTD	1.0101	1.0102
QSMP	ST MARTINS PROPERTIES PTY	1.0071	1.0070
QTAL	TALISON MINERALS PTY LTD	1.0473	1.0479
QTCL	TELSTRA CORPORATION LIMITED	1.0070	1.0067
QTES	TESLA CORPORATION PICTON G1		1.0074
QTMH	FOCUS OPERATIONS PTY LTD	1.0785	1.0792
QVEW	VERVE ENERGY - WOOD PROCESS CHARCOAL POWER STN	1.0060	1.0059
QVPL	VINIDEX PTY LTD	1.0091	1.0095
QWAC	WESTRALIA AIRPORTS CORPORATION PTY LTD	1.0131	1.0148
QWAN	WESTERN AREAS NL (COSMIC BOY)	1.0659	1.0920
QWCB	WATER CORP (BELMONT)	1.0089	1.0081
QWCD	WATER CORPORATION (FORRESTDALE)	1.0133	1.0132
QWCE	WATER CORP (BEENYUP WWTP)	1.0066	1.0066
QWCF	WATER CORPORATION (MUNSTER)	1.0168	1.0169
QWCG	WATER CORPORATION (GHOOLI)	1.0102	1.0102
QWCS	WESTFIELD CAROUSEL SHOPPINGTOWN	1.0350	1.0336
QWCT	WATER CORPORATION SEWERAGE TREAT	1.0123	1.0127
QWCW	WATER CORP (WANNEROO GS)	1.0306	1.0303
QWES	WESFEEDS PTY LTD	1.0071	1.0067
QWGS	CPM (WA) PTY LTD (GALLERIA)	1.0136	1.0140
QWHS	WHITFORD CITY SHOPPING CENTRE	1.0140	1.0138
QWLP	BRADKEN RESOURCES PTY LTD	1.0155	1.0168
QWMD	THE LAMINEX GROUP	1.0257	1.0241

5 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.

5.1 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 2011/12	To apply in 2012/13	Change
TBLS	Boulder (SCE)	1.2552	1.2253	-0.0299
TWKG	West Kalgoorlie GTs	1.223	1.0782	-0.1448
WALB	Albany	1.0398	1.072	0.0322
WBDE	Baandee (WC)	1.1527	1.1196	-0.0331
WBKF	Black Flag	1.2619	1.2362	-0.0257
WBLD	Boulder	1.2587	1.2325	-0.0262
WBNY	Bounty	1.1382	1.1084	-0.0298
WCAR	Carrabin	1.2504	1.2132	-0.0372
WCGW	Collgar Windfarm	1.1296	1.0393	-0.0903
WMBR	Mt Barker	1.0433	1.0699	0.0266
WMER	Merredin 66kV	1.1597	1.1229	-0.0368
WPKS	Parkeston	1.2977	1.2429	-0.0548
WWKT	West Kalgoorlie	1.2504	1.2245	-0.0259
WYER	Yerbillon	1.2549	1.2084	-0.0465
WYLN	Yilgarn	1.1856	1.1446	-0.0410

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 2012/13 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, it is interesting to note that while for 2011/12 the average loading on the 220kV radial line from Muja to West Kalgoorlie increased significantly from the preceding year generally resulting in increases for loss factors at nodes electrically close to that line, this year the opposite effect has occurred.

5.2 Average Distribution Loss Factors

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

5.3 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 2011/12	To apply in 2012/13	Change
QFFM	WESTERN AREAS NL - FLYING FOX MINESITE	1.0623	1.1015	0.0392
QRGP	INTEGRA MINING (RANDALLS GOLD PROJECT)	1.0862	1.1130	0.0268
QWAN	WESTERN AREAS NL (COSMIC BOY)	1.0659	1.0920	0.0261

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 customer's CMD increased from 2526kVA last year to 5789kVA this year. In addition, the load value for feeder BNY 602.0 has increased significantly to 141.45A from 90.24A the previous year. The CMD for Western Areas NL (Cosmic Boy) (on the same feeder) also increased from 2400kVA to 2842kVA this year.
QRGP	The customer's CMD increased from 4500kVA last year to 5500kVA this year. In addition, the load value for feeder BLD 619.0 has increased significantly to 214.92A from 186.06A the previous year. Moreover, the size of a Capacitor Bank has been reduced from 1.2MVAr last year to 0.4MVAr this year after investigations found the incorrect value was used last year.
QWAN	The reasons are the same as for QFFM as they are on the same feeder.

Appendix A - Individual Distribution Loss Factors by NMI

The individual distribution loss factors calculated for the 2012/13 financial year are associated with the following NMIs.

Table 7 - Individual Distribution Loss Factors by NMI

NMI	DLF Code	Required or Optional
8001000107	QCSW	Optional
8001000110	QAAL	Required
8001000121	QTAL	Required
8001000122	QPEB	Required
8001000123	QPEC	Required
8001000124	QLGB	Required
8001000125	QKEM	Required
8001000130	QCEM	Required
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	Required
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
8001000420	QDPL	Optional
8001000428	QCBC	Required
8001000432	QCBK	Optional

NMI	DLF Code	Required or Optional
8001000449	QBLC	Optional
8001000451	QHMP	Required
8001000493	QPAD	Optional
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
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	Required
8001000613	QFPA	Required
8001000652	QBUR	Required
8001000653	QBUR	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
8001000688	QRCS	Required
8001000691	QWHS	Required
8001000692	QWHS	Required

NMI	DLF Code	Required or Optional
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
8001000739	QMIA	Optional
8001000740	QMIA	Optional
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
8001002378	QVEW	Required
8001002460	QAUS	Required
8001003787	QBNB	Optional
8001008631	QDCS	Required
8001011455	QDMS	Required
8001011882	QGLM	Required
8001014748	QHFM	Required
8001016701	QKPS	Required
8001017256	QHRO	Optional
8001017284	QGRI	Required
8001018080	QPED	Required
8001019433	QHLG	Required

NMI	DLF Code	Required or Optional
8001019602	QMHE	Required
8001019750	QFPA	Required
8001020053	QWCD	Required
8001020092	QBGM	Required
8002013336	QKWF	Required
8002013376	QCUR	Required
8002013377	QCUR	Required
8002013378	QCUR	Required
8002016408	QMBW	Required
8002016420	QTES	Required
8002016507	QTCG	Required
8002016508	QTCK	Required
8002016509	QTCN	Required
8002019353	QBGB	Optional
8002027600	QCSG	Required
8002034918	QFLM	Required
8002051925	QCUR	Required
8002055189	QSIT	Required
8002057792	QPLA	Required
8002067264	QBGQ	Optional
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 2011/12	To apply in 2012/13
6.6kV/11kV/22kV/33kV Bus Connected	1.0055	1.0055
6.6kV/11kV/22kV/33kV Line Connected	1.0196	1.0192
LV Bus Connected	1.0404	1.0337
LV Line Connected (Commercial)	1.0498	1.0443
LV Line Connected (Streetlighting/UMS)	1.0771	1.075
LV Line Connected (Residential)	1.0771	1.075
Transmission Connected (No DLF)	1.0000	1.0000
Distribution System Wide Average Loss Factor	1.0560	1.0522

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 2011/12 but are not required in 2012/13 and are therefore redundant.

Table 9 - Redundant Distribution Loss Factors

DLF Code	Description	Reason
QBLU	BLUELEAF CORPORATION PTY LTD	Changed to lower tariff (with an average loss factor)
QGLD	GUNNS LIMITED (DEANMILL)	Changed to lower tariff (with an average loss factor)
QGWF	GEORGE WESTON FOODS (WATSONIA)	Changed to lower tariff (with an average loss factor)
QIRL	ILUKA RESOURCES LIMITED	Changed to lower tariff (with an average loss factor)
QIRW	ILUKA RESOURCES	Changed to lower tariff (with an average loss factor)
QWMP	WESFI MANUFACTURING PTY LTD	Changed to lower tariff (with an average loss factor)