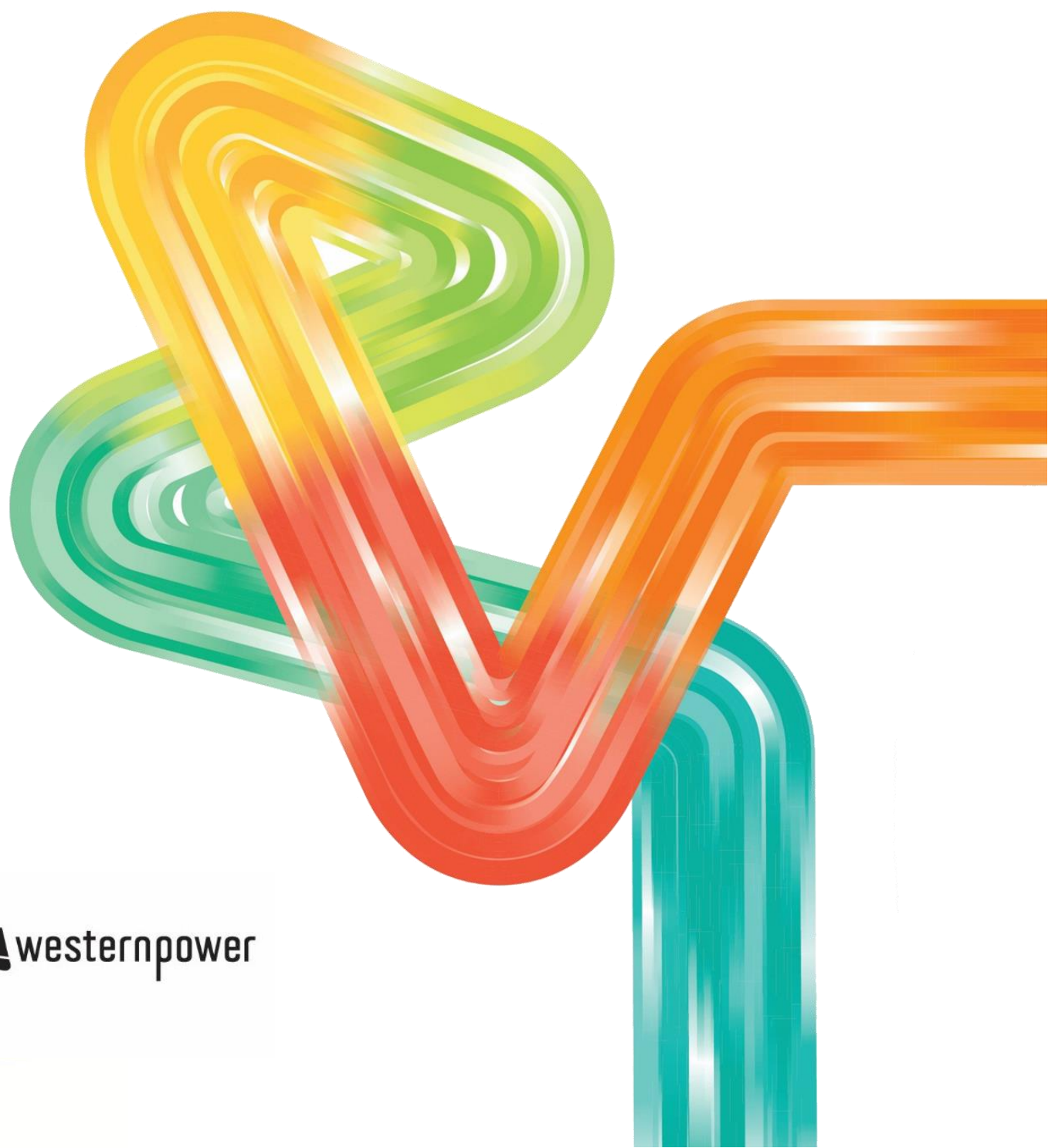


2019/20 Loss Factor Report

Public

8 July 2019



Contents

| | |
|---|-----------|
| 1. Introduction | 1 |
| 2. Basis for Calculation | 2 |
| 2.1 Transmission loss factors | 2 |
| 2.2 Average distribution loss factors | 2 |
| 2.3 Individual distribution loss factors | 2 |
| 3. New Reference Services and Market Procedure | 4 |
| 4. Transmission Loss Factors | 6 |
| 5. Average Distribution Loss Factors | 12 |
| 6. Individual Distribution Loss Factors | 14 |
| 7. Explanation for Changes in Loss Factors | 23 |
| 7.1 Transmission loss factors | 23 |
| 7.2 Individual distribution loss factors | 24 |
| Appendix A Individual Transmission Loss Factors by NMI | 20 |
| Appendix B Individual Distribution Loss Factors by NMI | 24 |
| Appendix C Extinct Loss Factor Codes | 33 |

1. Introduction

This report details the loss factors calculated for the 2019/20 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.
- Recalculated all individual distribution loss factors for distribution connected generation customers.

2. Basis for Calculation

Western Power calculates loss factors in accordance with the Market Procedure for Determining Loss Factors (the Market Procedure). The following sections provide further detail on 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 4.1 of the Market Procedure using the software package T-price.

2.2 Average distribution loss factors

The methodology calculates the average distribution loss factors by:

- Determining losses within the zone substation transformers.
- Determining HV feeder losses.
- Determining distribution transformer losses.
- 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 Western Power has determined an average loss factor for relevant reference services.

2.3 Individual distribution loss factors

Western Power calculates the individual distribution loss factors in accordance with section 4.2 of the Market Procedure.

The methodology used to calculate the individual distribution loss factors uses the formulae and methodology detailed in Schedule 4 of the Electricity Distribution Regulations 1997.¹ 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;

¹ 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.

- (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:

$$LF_{Exit} = 1 + \frac{A}{B}$$

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:

$$LF_{Entry} = 1 + \frac{A}{B}$$

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.

3. New Reference Services and Market Procedure

At the time of this report a new Market Procedure is being developed. The new Market Procedure is expected to come into effect from 1 July 2019. At the same time, new reference services were introduced with the new Access Arrangement 4 which are effective from 1 July 2019². In order to address this timing issue and avoid resubmitting a new loss factor report on 1 July 2019, this report represents loss factors based on both the current and new Market Procedure and includes the new Access Arrangement 4 reference services.

The new Market Procedure requires Western Power to define a subset of reference services as ‘Applicable Reference Services’ which will be included in the Transmission SWIN Average TLF Class. The following table details the reference services that will be allocated to ‘applicable reference services’ from 1 July 2019.

3.1 Applicable Reference Services

| AA4 Reference services that are ‘Applicable Reference Services’ |
|--|
| A1 – Anytime Energy (Residential) Exit Service |
| A2 – Anytime Energy (Business) Exit Service |
| A3 – Time of Use Energy (Residential) Exit Service |
| A4 – Time of Use Energy (Business) Exit Service |
| A5 – High Voltage Metered Demand Exit Service |
| C5 – High Voltage Metered Demand Bi-directional Service |
| A6 – Low Voltage Metered Demand Exit Service |
| C6 – Low Voltage Metered Demand Bi-directional Service |
| C1 – Anytime Energy (Residential) Bi-directional Service |
| C2 – Anytime Energy (Business) Bi-directional Service |
| C3 – Time of Use (Residential) Bi-directional Service |
| C4 – Time of Use (Business) Bi-directional Service |
| A12 – 3 Part Time of Use Energy (Residential) Exit Service |
| C9 – 3 Part Time of Use Energy (Residential) Bi-directional Service |
| A13 – 3 Part Time of Use Energy (Business) Exit Service |
| C10 – 3 Part Time of Use Energy (Business) Bi-directional Service |
| A14 – 3 Part Time of Use Demand (Residential) Exit Service |
| C11 – 3 Part Time of Use Demand (Residential) Bi-directional Service |
| A15 – 3 Part Time of Use Demand (Business) Exit Service |
| C12 – 3 Part Time of Use Demand (Business) Bi-directional Service |
| A16 – Multi Part Time of Use Energy (Residential) Exit Service |
| C13 – Multi Part Time of Use Energy (Residential) Bi-directional Service |

² Access Arrangement 4 on ERA website: <https://www.erawa.com.au/electricity/electricity-access/western-power-network/western-powers-network-access-arrangements/western-power-access-arrangement-period-2017-2022>

AA4 Reference services that are 'Applicable Reference Services'

A17 – Multi Part Time of Use Energy (Business) Exit Service

C14 – Multi Part Time of Use Energy (Business) Bi-directional Service

4. Transmission Loss Factors

Western Power has calculated the following transmission loss factors for the 2019/20 financial year.

Table 4.1 - Transmission Loss Factors

| TLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|------------------------------|--------------------|---------------------|
| TAPA | Alcoa Pinjarra (Alcoa) | 0.9736 | 0.9771 |
| TAPL | Alcoa Pinjarra (Alinta) | 0.9747 | 0.9767 |
| TBLB | Bluewaters | 1.0004 | 0.9992 |
| TBLS | Boulder (SCE) | 1.1679 | 1.1689 |
| TKRA | Karara Three Springs | 1.0479 | 1.0431 |
| TLWA | Lanwehr (Alinta) | 1.0135 | 1.0113 |
| TMBA | Mumbida Wind Farm | 0.9573 | 0.9528 |
| TMDP | Merredin Power Station | 0.9997 | 0.9654 |
| TMGS | Greenough River Solar Farm | 1.0031 | 0.9946 |
| TMSK | Mason Road (KPP) | 1.0343 | 1.0307 |
| TOLA | Oakley (Alinta) | 1.0164 | 1.0144 |
| TSAV | Transmission SWIN Average | 1.0346 | 1.0339 |
| TUAV | Transmission Urban Average | 1.0429 | 1.0409 |
| TWKG | West Kalgoorlie GTs | 1.1172 | 1.0970 |
| TWOJ | Worsley (Joint Venture) | 0.9721 | 0.9980 |
| TWOW | Worsley (Worsley) | 0.9725 | 0.9984 |
| WAFM | Australian Fused Materials | 1.0355 | 1.0319 |
| WAKW | Kwinana Alcoa | 1.0350 | 1.0316 |
| WALB | Albany | 1.0535 | 1.0589 |
| WAMT | Amherst | 1.0461 | 1.0436 |
| WAPM | Australian Paper Mills | 1.0496 | 1.0467 |
| WARK | Arkana | 1.0441 | 1.0420 |
| WBCH | Beechboro | 1.0447 | 1.0434 |
| WBCT | Balcatta | 1.0457 | 1.0444 |
| WBDE | Baandee | 1.0676 | 1.0691 |
| WBDP | Binningup Desalination Plant | 1.0173 | 1.0151 |
| WBEC | Beckenham | 1.0327 | 1.0276 |
| WBEL | Belmont | 1.0336 | 1.0308 |

| TLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---------------------------------------|--------------------|---------------------|
| WBGGM | Boddington Gold Mine | 1.0106 | 1.0092 |
| WBWF | Badgingarra Wind Farm | 1.0001 | 0.9917 |
| WBHK | Broken Hill Kwinana | 1.0397 | 1.0356 |
| WBIB | Bibra Lake | 1.0431 | 1.0403 |
| WBKF | Black Flag | 1.1849 | 1.1867 |
| WBLD | Boulder | 1.1692 | 1.1710 |
| WBNP | Beenup | 1.0277 | 1.0312 |
| WBNY | Bounty | 1.0850 | 1.0921 |
| WBOD | Boddington | 1.0097 | 1.0082 |
| WBPM | British Petroleum | 1.0423 | 1.0393 |
| WBSI | Marriott Road Barrack Silicon Smelter | 1.0152 | 1.0145 |
| WBSN | Busselton | 1.0509 | 1.0524 |
| WBTN | Bridgetown | 1.0116 | 1.0139 |
| WBTY | Bentley | 1.0373 | 1.0346 |
| WBUH | Bunbury Harbour | 1.0080 | 1.0173 |
| WBYF | Byford | 1.0360 | 1.0339 |
| WCAP | Capel | 1.0289 | 1.0388 |
| WCAR | Carrabin | 1.1144 | 1.1207 |
| WCBP | Mason Road CSBP | 1.0351 | 1.0304 |
| WCCL | Cockburn Cement Ltd | 1.0342 | 1.0307 |
| WCCT | Cockburn Cement | 1.0351 | 1.0325 |
| WCGW | Collgar Windfarm | 1.0060 | 1.0063 |
| WCKN | Clarkson | 1.0467 | 1.0493 |
| WCKT | Cook Street | 1.046 | 1.0433 |
| WCLN | Clarence Street | 1.0385 | 1.0361 |
| WCLP | Coolup | 1.0184 | 1.0591 |
| WCOE | Collie | 1.0187 | 1.0204 |
| WCOL | Collier | 1.0390 | 1.0367 |
| WCPN | Chapman | 1.0151 | 1.0166 |
| WCPS | Collie PWS | 0.9974 | 0.9958 |
| WCTE | Cottesloe | 1.0474 | 1.0450 |
| WCUN | Cunderdin | 1.1041 | 1.0939 |

| TLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|----------------------------|--------------------|---------------------|
| WCVE | Canning Vale | 1.0311 | 1.0286 |
| WDTN | Darlington | 1.0452 | 1.0427 |
| WDUR | Durlacher | 1.0104 | 1.0106 |
| WEDD | Edmund Street | 1.0474 | 1.0443 |
| WEDG | Edgewater | 1.0495 | 1.0485 |
| WEMD | Emu Downs | 1.0270 | 1.0205 |
| WENB | Eneabba | 1.0384 | 1.0321 |
| WFFD | Forrestfield | 1.0442 | 1.0409 |
| WFRT | Forrest Ave | 1.0477 | 1.0448 |
| WGGV | Golden Grove | 1.0661 | 1.0616 |
| WGNI | Glen Iris | 1.0301 | 1.0260 |
| WGNL | Gosnells | 1.0317 | 1.0294 |
| WGNN | Newgen Neerabup | 1.0372 | 1.0336 |
| WGTN | Geraldton | 1.0104 | 1.0106 |
| WHAY | Hay Street | 1.0456 | 1.0425 |
| WHBK | Henley Brook | 1.0474 | 1.0456 |
| WHEP | Herdsmen Parade | 1.0754 | |
| WHFS | Hadfields | 1.0459 | 1.0436 |
| WHIS | Tianqi Lithium | 1.034 | 1.0313 |
| WHZM | Hazelmere | 1.0395 | 1.0368 |
| WJDP | Joondalup | 1.0467 | 1.0490 |
| WJTE | Joel Terrace | 1.0457 | 1.0431 |
| WKAT | Katanning | 1.0520 | 1.0690 |
| WKDA | Kalamunda | 1.0460 | 1.0435 |
| WKDL | Kewdale | 1.0327 | 1.0298 |
| WKDN | Kondinin | 1.0445 | 1.0457 |
| WKDP | Kwinana Desalination Plant | 1.035 | 1.0334 |
| WKEL | Kellerberrin | 1.0794 | 1.0706 |
| WKEM | Kemerton PWS | 1.0108 | 1.0105 |
| WKMC | Cataby Kerr McGee | 1.0413 | 1.0357 |
| WKMK | Kerr McGee Kwinana | 1.0320 | 1.0284 |
| WKMM | Muchea Kerr McGee | 1.0454 | 1.0432 |

| TLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| WKND | Kwinana Donaldson Road (Western Energy) | 1.0323 | 1.0280 |
| WKOJ | Kojonup | 1.0281 | 1.0340 |
| WKPS | Kwinana PWS | 1.0301 | 1.0292 |
| WLDE | Landsdale | 1.0467 | 1.0455 |
| WMAG | Manning Street | 1.0472 | 1.0454 |
| WMBR | Mt Barker | 1.0597 | 1.0636 |
| WMCR | Medical Centre | 1.0521 | 1.0488 |
| WMDN | Maddington | 1.0313 | 1.0287 |
| WMDY | Munday | 1.0434 | 1.0402 |
| WMED | Medina | 1.0385 | 1.0361 |
| WMER | Merredin | 1.0612 | 1.0620 |
| WMGA | Mungarra GTs | 0.9957 | 1.0107 |
| WMHA | Mandurah | 1.0243 | 1.0242 |
| WMIL | Milligan Street | 1.0459 | 1.0428 |
| WMJP | Manjimup | 1.0183 | 1.0209 |
| WMJX | Midland Junction | 1.0402 | 1.0371 |
| WMLG | Malaga | 1.0419 | 1.0393 |
| WMOR | Moora | 1.055 | 1.0519 |
| WMOY | Morley | 1.0463 | 1.0440 |
| WMPS | Muja PWS | 1 | 1 |
| WMRR | Marriot Road | 1.0131 | 1.0126 |
| WMRV | Margaret River | 1.0996 | 1.1086 |
| WMSR | Mason Road | 1.0340 | 1.0306 |
| WMSS | Meadow Springs | 1.0241 | 1.0230 |
| WMUC | Muchea | 1.0470 | 1.0452 |
| WMUL | Mullaloo | 1.0476 | 1.0485 |
| WMUR | Murdoch | 1.0291 | 1.0263 |
| WMWR | Mundaring Weir | 1.0572 | 1.0572 |
| WMYR | Myaree | 1.0543 | 1.0513 |
| WNBH | North Beach | 1.0475 | 1.0469 |
| WNED | Nedlands | 1.0501 | 1.0460 |
| WNFL | North Fremantle | 1.0759 | |

| TLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|------------------------|--------------------|---------------------|
| WNGK | NewGen Kwinana | 1.0247 | 1.0226 |
| WNGN | Narrogin | 1.0272 | 1.0289 |
| WNOR | Northam | 1.0643 | 1.0621 |
| WNOW | Nowgerup | 1.0449 | 1.0454 |
| WNPH | North Perth | 1.0462 | 1.0437 |
| WOCN | O'Connor | 1.0526 | 1.0499 |
| WOPK | Osborne Park | 1.0462 | 1.0450 |
| WPBY | Padbury | 1.0485 | 1.0493 |
| WPCY | Piccadilly | 1.1691 | 1.1692 |
| WPIC | Picton 66kv | 1.0065 | 1.0171 |
| WPJR | Pinjar | 1.0322 | 1.0369 |
| WPKS | Parkeston | 1.1686 | 1.1633 |
| WPLD | Parklands | 1.0222 | 1.0200 |
| WPNJ | Pinjarra | 1.0100 | 1.0100 |
| WRAN | Rangeway | 1.0137 | 1.014 |
| WRGN | Regans | 1.0431 | 1.0381 |
| WROH | Rockingham | 1.0385 | 1.0357 |
| WRTN | Riverton | 1.0307 | 1.0283 |
| WRVE | Rivervale | 1.0335 | 1.0306 |
| WSFT | South Fremantle 66kV | 1.0246 | 1.0419 |
| WSNR | Southern River | 1.0305 | 1.0290 |
| WSPK | Shenton Park | 1.0512 | 1.0473 |
| WSRD | Sutherland | 1.0475 | 1.0432 |
| WSUM | Summer St | 1.0465 | 1.0425 |
| WSVY | Sawyers Valley | 1.0499 | 1.0472 |
| WTLN | Tomlinson Street | 1.0352 | 1.0352 |
| WTSG | Three Springs | 1.0418 | 1.0366 |
| WTST | Three Springs Terminal | 1.0499 | 1.0499 |
| WTTS | Tate Street | 1.0326 | 1.0298 |
| WUNI | University | 1.0747 | |
| WVPA | Victoria Park | 1.0352 | 1.0352 |
| WWAG | Wagin | 1.0575 | 1.0749 |

| TLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|--------------------|--------------------|---------------------|
| WWAI | Waikiki | 1.0387 | 1.0373 |
| WWCL | Western Collieries | 0.9900 | 0.9977 |
| WWDN | Wembley Downs | 1.0514 | 1.0496 |
| WWEL | Welshpool | 1.0328 | 1.0301 |
| WWGA | Wangara | 1.0469 | 1.0460 |
| WWGP | Wagerup | 0.9701 | 0.9849 |
| WWKT | West Kalgoorlie | 1.1654 | 1.1674 |
| WWLN | Willetton | 1.0317 | 1.0284 |
| WWMG | Western Mining | 1.0354 | 1.0326 |
| WWNO | Wanneroo | 1.0447 | 1.0497 |
| WWNT | Wellington Street | 1.0467 | 1.0437 |
| WWSD | Westralian Sands | 1.0234 | 1.0336 |
| WWUN | Wundowie | 1.0846 | 1.0670 |
| WWWF | Walkaway Windfarm | 0.9475 | 0.9447 |
| WYCP | Yanchep | 1.0467 | 1.0496 |
| WYER | Yerbillon | 1.1138 | 1.1201 |
| WYKE | Yokine | 1.0461 | 1.0439 |
| WYLN | Yilgarn | 1.0948 | 1.0967 |

5. Average Distribution Loss Factors

Western Power has calculated the following average distribution loss factors for the 2019/20 financial year based on the Market Procedure in place before 1 July 2019:

Table 5.1 - Average Distribution Loss Factors (in format required before 1 July 2019)

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| QRT1 | A1 - Anytime Energy (Residential) | 1.0646 | 1.0616 |
| QRT2 | A2 - Anytime Energy (Business) | 1.0498 | 1.0488 |
| QRT3 | A3 - Time of Use Energy (Residential) | 1.0646 | 1.0616 |
| QRT4 | A4 - Time of Use Energy (Business) | 1.0498 | 1.0488 |
| QRT5 | A5 - High Voltage Metered Demand | 1.0203 | 1.0194 |
| QRT6 | A6 - Low Voltage Metered Demand | 1.0437 | 1.0435 |
| QR7Z | A7 - 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 |
| QNWM | Notional Wholesale Meter | 1.0574 | 1.0552 |
| QAVG | Distribution System Wide Average Loss Factor | 1.0472 | 1.0465 |
| QR13 | C1 – Anytime Energy (Residential) Bi-directional | 1.0646 | 1.0616 |
| QR14 | C2 – Anytime Energy (Business) Bi-directional | 1.0498 | 1.0488 |
| QR15 | C3 – Time of Use Energy (Residential) Bi-directional | 1.0646 | 1.0616 |
| QR16 | C4 – Time of Use Energy (Business) Bi-directional | 1.0498 | 1.0488 |

The following table shows the average distribution loss factors for the 2019/20 financial year based on the new Market Procedure effective from 1 July 2019:

Table 5.2 - Average Distribution Loss Factors (in format required after 1 July 2019)

| Customer Segment | Applicable Reference Services | DLF Code | Applied in 2018/19 | To apply in 2019/20 |
|------------------|---|----------|--------------------|---------------------|
| Residential | A1 - Anytime Energy (Residential) | QRT1 | 1.0646 | 1.0616 |
| | A3 - Time of Use Energy (Residential) | | | |
| | C1 – Anytime Energy (Residential) Bi-directional | | | |
| | C3 – Time of Use Energy (Residential) Bi-directional | | | |
| | A12 - 3 Part Time of Use Energy (Residential) | | | |
| | A14 - 3 Part Time of Use Demand (Residential) | | | |
| | A16 - Multi Use Part Time of Use Energy (Residential) | | | |

| | | | | |
|--|---|------|--------|--------|
| | C9 - 3 Part Time of Use Energy (Residential) Bi-Directional | | | |
| | C11 - 3 Part Time of Use Demand (Residential) Bi-Directional | | | |
| | C13 - Multi Use Part Time of Use Energy (Residential) Bi-Directional | | | |
| Small Business | A2 - Anytime Energy (Business) | QRT2 | 1.0498 | 1.0488 |
| | A4 - Time of Use Energy (Business) | | | |
| | C2 – Anytime Energy (Business) Bi-directional | | | |
| | C4 – Time of Use Energy (Business) Bi-directional | | | |
| | A13 - 3 Part Time of Use Energy (Business) | | | |
| | A15 - 3 Part Time of Use Demand (Business) | | | |
| | A17 - Multi Use Part Time of Use Energy (Business) | | | |
| | C10 - 3 Part Time of Use Energy (Business) Bi-directional | | | |
| | C12 - 3 Part Time of Use Demand (Business) Bi-directional | | | |
| | C14 - Multi Use Part Time of Use Energy (Business) Bi-directional | | | |
| Medium Business High Voltage | A5 - High Voltage Metered Demand | QRT5 | 1.0203 | 1.0194 |
| | C5 - High Voltage Metered Demand Bi-Directional | | | |
| Medium Business High Voltage | A6 - Low Voltage Metered Demand | QRT6 | 1.0437 | 1.0435 |
| | C6 - Low Voltage Metered Demand Bi-Directional | | | |
| Zone Substation Connected | A7 - High Voltage Contract Maximum Demand (Zone Substation Connected) | QR7Z | 1.0055 | 1.0055 |
| | Zone Substation Connections | QZSC | 1.0055 | 1.0055 |
| Transmission Connected (No DLF) | | QNLF | 1.0000 | 1.0000 |
| Notional Wholesale Meter | | QNWM | 1.0574 | 1.0552 |
| Distribution System Wide Average Loss Factor | | QAVG | 1.0472 | 1.0465 |

6. Individual Distribution Loss Factors

Western Power has calculated the following individual distribution loss factors for the 2019/20 financial year.

Table 6.1 - Individual Distribution Loss Factors

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| QAAL | AIR LIQUIDE AUSTRALIA LIMITED | 1.0090 | 1.0083 |
| QAHU | OAHU MANAGEMENT PTY LTD C/- HAWAIIAN PTY LTD | 1.0067 | 1.0106 |
| QAMP | AMP CAPITAL INVESTORS LIMITED | 1.0099 | 1.0155 |
| QANF | ANDERSON WIND FARM | 1.0238 | 1.0050 |
| QAPI | AUSTRALASIAN PROPERTY INVESTMENTS LTD T/AS FLOREAT FORUM SYNDICATE UT | 1.0147 | 1.0248 |
| QARG | PADDINGTON GOLD MINE | 1.0359 | 1.0290 |
| QAWF | ALBANY WIND FARM | 0.9857 | 0.9844 |
| QBBW | BREMER BAY WINDFARM | 1.3544 | 1.3752 |
| QBCB | BUNBURY CENTREPOINT SHOPPING CENTRE INVESTMENT TRUST | - | 1.0078 |
| QBFO | BROOKFIELD (CITY SQUARE LOT 1 TO 7) PTY LTD | 1.0092 | 1.0058 |
| QBGB | BGC (AUSTRALIA) PTY LTD | 1.0109 | 1.0176 |
| QBGC | BGC (AUSTRALIA) PTY LTD | 1.0070 | 1.0084 |
| QBGM | BGM MANAGEMENT COMPANY PTY LTD | 1.0542 | 1.0346 |
| QBGP | BGC (AUSTRALIA) PTY LTD | 1.0057 | 1.0057 |
| QBGQ | BGC (AUSTRALIA) PTY LTD | 1.0264 | 1.0327 |
| QBKS | DOD - CAMPBELL BKS | - | 1.0052 |
| QBLB | BRICKWORKS BUILDING PRODUCTS PTY LTD (BELLEVUE) | 1.0072 | 1.0084 |
| QBMA | TIANYE SXO GOLD MINING PTY LTD | 1.0739 | 1.0732 |
| QBMB | HANKING GOLD MINING PTY LTD | 1.0108 | 1.0195 |

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| QBNB | BGC (AUSTRALIA) PTY LTD | 1.0118 | 1.0167 |
| QBOC | BOC LIMITED | 1.0061 | 1.0062 |
| QBPA | SOUTHERN PORTS AUTHORITY PORT OF BUNBURY | 1.0062 | 1.0085 |
| QSPP | BOOKITJA PTY LTD & IBA NORTHAM SOLAR PTY LTD & NORTHAM SOLAR FARM A PTY LTD | 0.9937 | 0.9742 |
| QBTF | INVESTA NOMINEES (2) PTY LTD AND COMMONWEALTH SUPERANNUATION CORPORATION | 1.0057 | 1.0092 |
| QBUL | CO OPERATIVE BULK HANDLING LTD | 1.0158 | 1.0358 |
| QBUR | BURSWOOD NOMINEES LIMITED AS TRUSTEE FOR THE BURSWOOD PROPERTY TRUST | 1.0063 | 1.0064 |
| QBUS | BURSWOOD NOMINEES LIMITED AS TRUSTEE FOR THE BURSWOOD PROPERTY TRUST | 1.0062 | 1.0051 |
| QBWE | BROOKFIELD COMMERCIAL OPERATIONS PTY LTD | 1.0070 | 1.0106 |
| QCAS | CASTELLI NOMINEES PTY LTD | 1.0074 | 1.0050 |
| QCBC | COCKBURN CEMENT LIMITED | 1.0789 | 1.0915 |
| QCBH | CO OPERATIVE BULK HANDLING LTD | 1.0502 | 1.0618 |
| QCBK | CO OPERATIVE BULK HANDLING LTD | 1.0064 | 1.0113 |
| QCEM | COCKBURN CEMENT LIMITED | 1.0062 | 1.0055 |
| QCEN | SCENTRE SHOPPING CENTRE MANAGEMENT (WA) PTY LTD AS AGENT FOR & ON BEHALF OF ENTITIES IN SCHED 1 | 1.0077 | 1.0050 |
| QCMA | CRISTAL MINING AUSTRALIA LIMITED | 1.0573 | 1.0377 |
| QCMT | COCKBURN CEMENT LIMITED | 1.0125 | 1.0153 |
| QCPC | CALARDU PERTH CITY WEST & G HARVEY | 1.0072 | 1.0081 |
| QCPU | CBUS PROPERTY PTY LTD | 1.0066 | 1.0082 |
| QCSW | CRISTAL MINING AUSTRALIA LIMITED | 1.0087 | 1.0111 |
| QCTE | A RICHARDS PTY LTD | 1.0084 | 1.0072 |

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---------------------------------------|--------------------|---------------------|
| QDCS | DEPARTMENT OF CORRECTIVE SERVICES | 1.0245 | 1.0085 |
| QDER | DEPT OF ENVIRONMENT REGULATION | 1.0081 | 1.0206 |
| QDFM | DEXUS FUNDS MANAGEMENT LIMITED | - | 1.0078 |
| QDOF | DEPARTMENT OF FINANCE | - | 1.0128 |
| QDPL | DONHAD PTY LTD | 1.0170 | 1.0207 |
| QDSX | DEXUS FUNDS MANAGEMENT LIMITED | 1.0080 | 1.0050 |
| QDTO | DATO HOLDINGS PTY LTD | 1.0071 | 1.0064 |
| QDVC | DAVID JONES PTY LTD | 1.0064 | 1.0091 |
| QDWF | DENMARK COMMUNITY WINDFARM LTD | 1.3616 | 1.3682 |
| QDWL | DARWILL PTY LTD | 1.0088 | 1.0118 |
| QDXE | DEXUS FUNDS MANAGEMENT LIMITED | 1.0077 | 1.0050 |
| QEAP | EQUINIX AUSTRALIA PTY LTD | - | 1.0069 |
| QECU | EDITH COWAN UNIVERSITY | - | 1.0265 |
| QERD | EVERGREEN REALTY PTY LTD | 1.0061 | 1.0074 |
| QESJ | THE TRUSTEE FOR ESJAY NO 2 UNIT TRUST | 1.0156 | 1.0195 |
| QFER | FAR EAST RIVERSIDE PERTH PTY LTD | - | 1.0075 |
| QFFM | WESTERN AREAS LTD | 1.1214 | 1.1313 |
| QFIE | BENALE PTY. LIMITED | 1.0524 | 1.0721 |
| QFLM | LA MANCHA RESOURCES AUST PTY LTD | 1.0384 | 1.0143 |
| QFPA | FREMANTLE PORT AUTHORITY | 1.0111 | 1.0295 |
| QFUJ | FUJITSU AUSTRALIA LIMITED | 1.0065 | 1.0058 |
| QFUR | FURMANITE AUSTRALIA PTY LTD | 1.0056 | 1.0050 |
| QGDI | GDI NO.44 PTY LTD AFT GDI NO.44 TRUST | 1.0101 | 1.0159 |

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| QGLG | DEPARTMENT OF LOCAL GOVERNMENT SPORT AND CULTURAL INDUSTRIES | - | 1.0058 |
| QGMC | CRAIG MOSTYN & CO PTY LTD | - | 1.0071 |
| QGRA | GRAND HOTEL MANAGEMENT PTY LTD AS THE TRUSTEE FOR GRAND HOTEL TRUST | - | 1.0090 |
| QGRI | GRIFFIN COAL (THE GRIFFIN COAL MINING COMPANY PTY LTD) | 1.0344 | 1.0147 |
| QGTS | VICINITY CUSTODIAN PTY LTD ATF VCX PROPERTY MGNT TRUST | 1.0085 | 1.0105 |
| QGWF | GEORGE WESTON FOODS LIMITED | - | 1.0065 |
| QHEL | HEALTH SCOPE PTY LTD | 1.0112 | 1.0057 |
| QHFM | HARVEY FRESH (1994) Ltd | - | 1.0140 |
| QHLG | WASTE GAS RESOURCES PTY LTD | 0.9996 | 1.0098 |
| QHMP | FMR INVESTMENTS PTY LTD | 1.0595 | 1.0605 |
| QHRO | HR OPERATION PTY LTD | - | 1.0106 |
| QHVI | HARVEY INDUSTRIES GROUP | 1.1207 | 1.1358 |
| QIPW | INTEGRATED PACKAGING WA PTY LTD | 1.0088 | 1.0105 |
| QIRL | ILUKA RESOURCES LIMITED | 1.0684 | 1.0713 |
| QIRN | IMAGE RESOURCES NL | - | 1.0485 |
| QISP | ISPT PTY LTD | 1.0088 | 1.0155 |
| QISU | ISPT PTY LTD | 1.0062 | 1.0097 |
| QJAN | JANDAKOT AIRPORT HOLDINGS | 1.0101 | 1.0220 |
| QJOE | JOE WHITE MALTINGS PTY LTD | 1.0069 | 1.0180 |
| QKBG | NORTHERN STAR (KANOWNA) LIMITED | 1.0853 | 1.0963 |
| QKEM | KEMERTON SILICA SAND PTY LTD | 1.1461 | 1.1541 |
| QKEY | KEYSBROOK LEUCOXENE PTD LTD | 1.0264 | 1.0217 |

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| QKUD | NORTHERN STAR (KANOWNNA) LIMITED | 1.0444 | 1.0417 |
| QKWF | VERVE ENERGY | 1.0769 | 1.1069 |
| QLES | THE TRUSTEE FOR JOONDALUP TRUST | 1.0083 | 1.0062 |
| QLGA | LANDFILL GAS & POWER PTY LTD | 1.0119 | 1.0073 |
| QLGC | LANDFILL GAS & POWER PTY LTD | 1.0091 | 1.0050 |
| QLGD | LANDFILL GAS & POWER PTY LTD | 1.0121 | 1.0074 |
| QLGE | LEGION ENERGY PTY LTD | 1.0070 | 1.0082 |
| QLHT | HAWAIIAN INVESTMENTS PTY LTD C/- HAWAIIAN PTY LTD | 1.0060 | 1.0069 |
| QLJS | THE TRUSTEE FOR JOONDALUP TRUST | 1.0095 | 1.0177 |
| QLMR | EVOLUTION MINING (MUNGARRI) PTY LTD | 1.0743 | 1.0668 |
| QLNL | THE TRUSTEE FOR LEND LEASE SUB REGIONAL RETAIL FUND | 1.0086 | 1.0181 |
| QLPG | FAR EAST HARBOUR TOWN PTY LTD | 1.0099 | 1.0129 |
| QLPM | THE TRUSTEE FOR LEND LEASE SUB REGIONAL RETAIL FUND | 1.0088 | 1.0093 |
| QLSP | THE TRUSTEE FOR LEND LEASE SUB REGIONAL RETAIL FUND | 1.0151 | 1.0059 |
| QMBW | MT BARKER POWER COMPANY | 1.0224 | 1.0409 |
| QMEE | AMP CAPITAL INVESTORS LIMITED | 1.0100 | 1.0075 |
| QMGS | VICINITY CENTRES PM PTY LTD (MIDLAND GATE SHP CNTR) | 1.0059 | 1.0066 |
| QMHP | MIDPOINT HOLDINGS PTY TD | 0.0000 | 1.0073 |
| QMIC | CRISTAL PIGMENT AUSTRALIA LTD | 1.0278 | 1.0184 |
| QMIE | BORAL BRICKS WESTERN AUSTRALIA PTY LTD | - | 1.0268 |
| QMIJ | BORAL SHARED BUSINESS SERVICES PTY LTD | - | 1.0261 |

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| QMID | BORAL BRICKS WESTERN AUSTRALIA PTY LTD | - | 1.0399 |
| QMIL | MILNE AGRIGROUP PTY LTD | 1.0077 | 1.0050 |
| QMIR | MIRVAC REAL ESTATE PTY LTD | 1.0072 | 1.0068 |
| QMPM | Metro Power Company Pty Ltd | - | 1.0129 |
| QMRY | MURDOCH UNIVERSITY | 1.0061 | 1.0088 |
| QMTC | METCASH TRADING LIMITED | 1.0079 | 1.0102 |
| QNaN | EDITH COWAN UNIVERSITY | - | 1.9451 |
| QNEW | NEWMONT POWER PTY LTD | 1.0551 | 1.0368 |
| QPAG | PADDINGTON GOLD PTY LIMITED | 1.0565 | 1.0577 |
| QPAN | THE TRUSTEE FOR SUCCESS VENTURE WA UNIT TRUST | 1.0080 | 1.0119 |
| QPEA | LANDFILL MANAGEMENT SYSTEMS | 1.0021 | 1.0061 |
| QPEB | ASSET MANAGER AGL NATIONAL ASSETS | 0.9928 | 1.0103 |
| QPED | LANDFILL MANAGEMENT SYSTEMS | 1.0037 | 1.0050 |
| QPER | PRIMEWEST MANAGEMENT LTD | 1.0073 | 1.0077 |
| QPLA | PLANTATION ENERGY AUSTRALIA PTY LTD | 1.0366 | 1.0244 |
| QPMP | PMP LIMITED | 1.0088 | 1.0112 |
| QPTA | PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA | - | 1.0086 |
| QPTC | AMP CAPITAL INVESTORS LIMITED | 1.0197 | 1.0208 |
| QPWA | PRIMEWEST (AUSTRALIA PLACE) PTY LTD | - | 1.0067 |
| QPWQ | PWQ PTY LTD ATF QUADRANT SUB TRUST | 1.0066 | 1.0072 |
| QRCS | VICINITY CENTRES PM PTY LTD (ROCKINGHAM SHP CNTR) | 1.0095 | 1.0097 |
| QROC | RENDEZVOUS HOTELS PTY LTD | 1.0103 | 1.0223 |

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| QRPH | EAST METROPOLITAN HEALTH SERVICE | 1.0058 | 1.0083 |
| QRRRA | DOD - RAAF PEARCE | 1.1347 | 1.1494 |
| QSAD | SCENTRE SHOPPING CENTRE MANAGEMENT (WA) PTY LTD AS AGENT FOR & ON BEHALF OF ENTITIES IN SCHED 1 | 1.0083 | 1.0109 |
| QSAP | W A SPECIALTY ALLOYS PTY LTD | - | 1.0068 |
| QSER | SERCO AUSTRALIA PTY LTD | 1.0235 | 1.0433 |
| QSGJ | ST JOHN OF GOD HEALTH CARE - MIDLAND | 1.0064 | 1.0298 |
| QSIT | SUEZ RECYCLING & RECOVERY PTY LTD | 1.0102 | 1.0140 |
| QSJG | ST JOHN OF GOD HEALTH CARE INCORPORATED | 1.0120 | 1.0186 |
| QSJM | ST JOHN OF GOD HEALTH CARE INCORPORATED | 1.0091 | 1.0081 |
| QSJO | ST JOHN OF GOD HEALTH CARE INCORPORATED | 1.0081 | 1.0093 |
| QSMH | SOUTH METROPOLITAN HEALTH SERVICES | 1.0083 | 1.0181 |
| QSMP | ST MARTINS PROPERTIES AUSTRALIA | 1.0069 | 1.0064 |
| QSMR | SOUTHERN METROPOLITAN REGIONAL COUNCIL | 1.0177 | 1.0102 |
| QSPM | STOCKLAND PROPERTY MANAGEMENT PTY LTD | 1.0184 | 1.0210 |
| QSPO | SPOTLESS FACILITY SERVICES PTY LTD | 1.0068 | 1.0102 |
| QSPT | SPOTLESS FACILITY SERVICES PTY LTD | 1.0059 | 1.0064 |
| QTAL | TALISON LITHIUM AUSTRALIA PTY LTD | 1.0912 | 1.0734 |
| QTCG | TESLA GERALDTON PTY LTD | 0.9922 | 1.0115 |
| QTCK | TESLA KEMERTON PTY LTD | 1.0001 | 1.0050 |
| QTCL | TELSTRA CORPORATION LIMITED | 1.0071 | 1.0197 |
| QTCN | TESLA NORTHAM PTY LTD | 0.9943 | 1.0158 |
| QTES | TESLA CORPORATION MANAGEMENT PTY LTD | 0.9982 | 1.0050 |

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|--|--------------------|---------------------|
| QTIF | LEGION ENERGY PTY LTD | 1.0092 | 1.0115 |
| QTMH | FOCUS OPERATIONS PTY LTD | 1.0139 | 1.0187 |
| QUWA | UNIVERSITY OF WESTERN AUSTRALIA | - | 1.0056 |
| QVIC | VICINITY CUSTODIAN PTY LTD ATF VCX PROPERTY MGNT TRUST | 1.0072 | 1.0066 |
| QVID | VICINITY CUSTODIAN PTY LTD ATF VCX PROPERTY MGNT TRUST | 1.0183 | 1.0186 |
| QVPL | VINIDEX PTY LTD | 1.0090 | 1.0093 |
| QVVM | V&V WALSH MEAT PROCESSORS & EXPORTERS | 1.0134 | 1.0144 |
| QWAC | PERTH AIRPORT PTY LTD | 1.0088 | 1.0096 |
| QWAN | WESTERN AREAS LTD | 1.1089 | 1.1160 |
| QWBE | WESBEAM PTY LTD | 1.0138 | 1.0142 |
| QWCB | WATER CORPORATION | 1.0083 | 1.0086 |
| QWDE | WATER CORPORATION | - | 1.0051 |
| QWDB | WATER CORPORATION | - | 1.0071 |
| QWDK | WATER CORPORATION | - | 1.0274 |
| QWCD | WATER CORPORATION | 1.0146 | 1.0131 |
| QWCE | WATER CORPORATION | 1.0059 | 1.0241 |
| QWCF | WATER CORPORATION | 1.0169 | 1.0400 |
| QWCI | WATER CORPORATION | 1.0071 | 1.0131 |
| QWCJ | WATER CORPORATION | 1.0070 | 1.0111 |
| QWCK | WATER CORPORATION | 1.0122 | 1.0086 |
| QWCL | WATER CORPORATION | 1.0072 | 1.0180 |
| QWCM | WATER CORPORATION | 1.0122 | 1.0115 |

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 |
|----------|---|--------------------|---------------------|
| QWCN | WATER CORPORATION | 1.1166 | 1.1345 |
| QWCO | WATER CORPORATION | 1.0345 | 1.0147 |
| QWCW | WATER CORPORATION | 1.0231 | 1.0369 |
| QWFL | WESFARMERS LPG PTY LTD | 1.0069 | 1.0064 |
| QWGS | VICINITY CENTRES PM PTY LTD | 1.0115 | 1.0121 |
| QWHF | WEST HILLS FARM P/L | 1.0244 | 1.0489 |
| QWHS | SCENTRE SHOPPING CENTRE MANAGEMENT (WA) PTY LTD AS AGENT FOR & ON BEHALF OF ENTITIES IN SCHED 1 | 1.0140 | 1.0262 |
| QWMD | FLETCHER BUILDING (AUSTRALIA) PTY LTD - LAMINEX GROUP PTY LTD | 1.0241 | 1.0132 |
| QWMI | GOLD CORPORATION | 1.0131 | 1.0073 |
| QWPL | WESPINE INDUSTRIES PTY LTD | - | 1.1264 |
| QWSI | VICINITY CUSTODIAN PTY LTD ATF VCX PROPERTY MGNT TRUST | 1.0373 | 1.0196 |
| QYTE | YT INTERNATIONAL PTY LTD | 1.0098 | 1.0110 |

7. Explanation for Changes in Loss Factors

In accordance with clause 2.21(b)ii of the Market Procedure Western Power is required to provide an explanation for any changes of more than 0.025 in any transmission or distribution loss factors when compared to the previous year.

In general, loss factors increase with demand at a node and decrease with increasing generation at a node. Loss factors can also be affected by changes in network configuration.

7.1 Transmission loss factors

Loss factors for the transmission network are calculated based on half hour data for the whole system over the whole year. Individual transmission loss factors are not only affected by the quantity of usage at a node but also the time the usage occurs, and being a meshed network they are also affected by usage at other nearby nodes.

Table 7.1 is a list of the transmission loss factors that moved by more than 0.025 in 2018/19. Exact reasons for the movements are difficult to determine. The loss factor for Merredin Power Station can be volatile due to low generation output.

The changes to Coolup and both Worsley sites are a return to long term average following a corresponding reduction last year.

Table 7.1 - Transmission Loss Factors changed by more than 0.025

| TLF Code | Description | Applied in 2018/19 | To apply in 2019/20 | Change |
|----------|-------------------------|--------------------|---------------------|---------|
| TMDP | Merredin Power Station | 0.9997 | 0.9510 | -0.0487 |
| WCLP | Coolup | 1.0184 | 1.0470 | 0.0286 |
| TWOJ | Worsley (Joint Venture) | 0.9721 | 0.9980 | 0.0259 |
| TWOW | Worsley (Worsley) | 0.9725 | 0.9984 | 0.0259 |

7.2 Individual distribution loss factors

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

Table 7.2 - Individual Distribution Loss Factors changed by more than 0.025

| DLF Code | Description | Applied in 2018/19 | To apply in 2019/20 | Change |
|----------|--------------|--------------------|---------------------|--------|
| QKWF | VERVE ENERGY | 1.0769 | 1.1069 | 0.0300 |

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

Table 7.3 – Reason for Individual Distribution Loss Factors change by more than 0.025

| DLF Code | Reason for Change in Loss Factor |
|----------|---|
| QKWF | Significantly higher feeder peak, with a considerably higher generation by HV customer. |

Appendix A

Individual Transmission Loss Factors by NMI

A.1 Individual Transmission Loss Factors by NMI

The following NMIs are for customers connected directly to the transmission system along with the transmission loss factor code Western Power has assigned.

Table 7.4 - Transmission Loss Factors by NMI

| NMI | TLF Code |
|------------|----------|
| 8001000109 | WHIS |
| 8001000116 | WBHK |
| 8001000118 | WKMK |
| 8001000126 | WWMG |
| 8001000127 | WWMG |
| 8001000128 | WWMG |
| 8001000129 | WCCL |
| 8001000279 | WPKS |
| 8001000291 | WAFM |
| 8001000347 | WEDG |
| 8001000499 | TMSK |
| 8001000500 | TMSK |
| 8001000616 | WKMM |
| 8001000640 | WWCL |
| 8001000641 | WWCL |
| 8001000646 | WGGV |
| 8001000659 | WKMC |
| 8001000732 | TAPA |
| 8001000733 | WAKW |
| 8001000736 | WCBP |
| 8001000741 | TBLS |
| 8001000743 | TWOW |
| 8001000744 | TWOJ |
| 8001000764 | WSUM |
| 8001000776 | WWSD |
| 8001000954 | TAPA |
| 8001001007 | WWGP |

| NMI | TLF Code |
|------------|----------|
| 8001001211 | WWWF |
| 8001001212 | WWWF |
| 8001016070 | WBEC |
| 8001018020 | WKEM |
| 8001018021 | WKEM |
| 8001018932 | TAPL |
| 8001019478 | TWOW |
| 8001019484 | WEMD |
| 8001019485 | WEMD |
| 8001019487 | WKDP |
| 8001019590 | TOLA |
| 8001019784 | TLWA |
| 8001019785 | TLWA |
| 8001019790 | WPLD |
| 8001019791 | WGNI |
| 8002013337 | TBLB |
| 8002013343 | WNGK |
| 8002013364 | WMPS |
| 8002013365 | WKPS |
| 8002013366 | WCPS |
| 8002013368 | WPJR |
| 8002013369 | WKPS |
| 8002013370 | WGTN |
| 8002013371 | TWKG |
| 8002013372 | WMGA |
| 8002013375 | WBGM |
| 8002013379 | WKMK |
| 8002013796 | TBLB |
| 8002014313 | WPKS |
| 8002015326 | WGNN |
| 8002016124 | WKND |
| 8002016403 | WCGW |

| NMI | TLF Code |
|------------|----------|
| 8002016404 | WCGW |
| 8002016407 | TWOW |
| 8002016415 | WBSI |
| 8002016416 | WBSI |
| 8002016417 | WBSI |
| 8002016491 | TKRA |
| 8002016504 | WKPS |
| 8002016505 | WKPS |
| 8002016506 | TMGS |
| 8002016510 | TMDP |
| 8002016519 | TMBA |
| 8002016571 | WNOW |
| 8002016585 | WSRD |
| 8002112635 | WBDP |
| 8002016652 | WBWF |

Appendix B

Individual Distribution Loss Factors by NMI

B.1 Individual Distribution loss factors by NMI

The individual distribution loss factors calculated for the 2019/20 financial year are associated with the following NMIs.

Table 7.5 - Individual Distribution Loss Factors by NMI

| NMI | DLF Code | _Required or Optional ³ |
|------------|----------|------------------------------------|
| 8001000286 | QAAL | Optional |
| 8002227231 | QAAL | Optional |
| 8002227231 | QAAL | Optional |
| 8002227767 | QAAL | Required |
| 8001002905 | QAHU | Optional |
| 8001000549 | QAMP | Optional |
| 8001000548 | QAMP | Optional |
| 8002188795 | QAMP | Optional |
| 8002188797 | QAMP | Optional |
| 8002148204 | QANF | Required |
| 8001000713 | QAPI | Optional |
| 8001000714 | QAPI | Optional |
| 8001000493 | QARG | Required |
| 8001000708 | QAWF | Required |
| 8001000707 | QAWF | Required |
| 8001000679 | QBCB | Optional |
| 8001000680 | QBCB | Optional |
| 8002095398 | QBFO | Optional |
| 8002050443 | QBFO | Optional |
| 8002019353 | QBGB | Optional |
| 8001000864 | QBGC | Optional |
| 8001020092 | QBGM | Required |
| 8001000274 | QBGP | Optional |
| 8002067264 | QBGQ | Required |
| 8001000819 | QBKS | Optional |

³ Individual distribution loss factors have been assessed as either required or optional in accordance with section 3.2.5 of the Market Procedure .
The calculation of optional distribution loss factors is at the cost of the retailer.

| | | |
|------------|------|----------|
| 8001000791 | QBLB | Optional |
| 8001001009 | QBMA | Required |
| 8001000359 | QBMB | Required |
| 8001003787 | QBNB | Required |
| 8002206185 | QBOC | Required |
| 8001000329 | QBPA | Required |
| 8001000703 | QBTF | Optional |
| 8001000704 | QBTF | Optional |
| 8001009577 | QBUL | Required |
| 8001000653 | QBUR | Optional |
| 8001000652 | QBUR | Optional |
| 8002250698 | QBUS | Optional |
| 8002250697 | QBUS | Optional |
| 8001000542 | QBWE | Optional |
| 8001000541 | QBWE | Optional |
| 8001790061 | QCAS | Required |
| 8001000428 | QCBC | Required |
| 8001000780 | QCBH | Required |
| 8001000432 | QCBK | Optional |
| 8001000130 | QCEM | Required |
| 8001003155 | QCEN | Optional |
| 8002166160 | QCMA | Required |
| 8001000117 | QCMT | Optional |
| 8001000421 | QCMT | Optional |
| 8001000598 | QCPC | Optional |
| 8001000599 | QCPC | Optional |
| 8002073940 | QCPU | Optional |
| 8002016087 | QCPU | Optional |
| 8001000107 | QCSW | Optional |
| 8001012464 | QCTE | Required |
| 8001008631 | QDCS | Required |
| 8002049183 | QDER | Required |
| 8001000590 | QDFM | Optional |

| | | |
|------------|------|----------|
| 8001000589 | QDFM | Optional |
| 8001009720 | QDOF | Optional |
| 8001002482 | QDOF | Optional |
| 8001000391 | QDOF | Optional |
| 8001000420 | QDPL | Optional |
| 8001011671 | QDSX | Optional |
| 8001010862 | QDTO | Optional |
| 8001000561 | QDVC | Optional |
| 8001000562 | QDVC | Optional |
| 8002016529 | QDWF | Required |
| 8001000366 | QDWL | Optional |
| 8001013234 | QDXE | Optional |
| 8002182945 | QEAP | Optional |
| 8001000632 | QECU | Required |
| 8001000775 | QECU | Optional |
| 8001000580 | QERD | Optional |
| 8001000579 | QERD | Optional |
| 8002006139 | QESJ | Optional |
| 8001000563 | QFER | Optional |
| 8001000564 | QFER | Optional |
| 8001000287 | QFFM | Required |
| 8001000539 | QFIE | Required |
| 8002034918 | QFLM | Required |
| 8001019750 | QFPA | Optional |
| 8001000612 | QFPA | Optional |
| 8001000613 | QFPA | Optional |
| 8002081338 | QFUJ | Optional |
| 8002221497 | QFUR | Required |
| 8001000578 | QGDI | Optional |
| 8001000577 | QGDI | Optional |
| 8001003397 | QGLG | Optional |
| 8001000766 | QGMC | Optional |
| 8001017256 | QGRA | Optional |

| | | |
|------------|------|----------|
| 8001017284 | QGRI | Required |
| 8001000756 | QGTS | Optional |
| 8001000271 | QGWF | Optional |
| 8001000265 | QGWF | Optional |
| 8001014469 | QHEL | Optional |
| 8002016580 | QHFM | Required |
| 8001019433 | QHLG | Required |
| 8001000451 | QHMP | Required |
| 8001015838 | QHRO | Optional |
| 8001000345 | QHVI | Required |
| 8001000637 | QIPW | Optional |
| 8001000636 | QIPW | Optional |
| 8002319360 | QIRL | Required |
| 8002114136 | QIRL | Required |
| 8002316600 | QIRN | Required |
| 8002027039 | QISP | Optional |
| 8002027040 | QISP | Optional |
| 8001008755 | QISU | Optional |
| 8002035499 | QJAN | Optional |
| 8002141398 | QJAN | Optional |
| 8001000792 | QJOE | Optional |
| 8001000824 | QKBG | Required |
| 8001000125 | QKEM | Required |
| 8002247735 | QKEY | Required |
| 8001000669 | QKUD | Required |
| 8001000670 | QKUD | Required |
| 8001000269 | QKUD | Required |
| 8002013336 | QKWF | Required |
| 8002183852 | QLES | Optional |
| 8002008582 | QLES | Optional |
| 8001000158 | QLGA | Required |
| 8001000738 | QLGC | Required |
| 8001000234 | QLGD | Required |

| | | |
|------------|-------|----------|
| 8001002178 | QLGE | Optional |
| 8001002551 | QLHT | Optional |
| 8001000667 | QLJS | Optional |
| 8001000668 | QLJS | Optional |
| 8002191360 | QLMR | Required |
| 8001000781 | QLNL | Optional |
| 8001005378 | QLPG | Optional |
| 8001020102 | QLPM | Optional |
| 8001011208 | QLSP | Optional |
| 8002016408 | QMBW | Required |
| 8001000673 | QMEE | Optional |
| 8001000674 | QMEE | Optional |
| 8002315825 | QMGS | Optional |
| 8001000681 | QMGS | Optional |
| 8001000682 | QMGS | Optional |
| 8001019556 | QMHP | Optional |
| 8001000706 | QMIC | Required |
| 8001000514 | QMIE | Optional |
| 8001002437 | QMIJ | Optional |
| 8001000515 | QMIE | Optional |
| 8001000270 | QMID | Optional |
| 8001014755 | QMIL | Optional |
| 8001000566 | QMIR | Optional |
| 8001000565 | QMIR | Optional |
| 8002016650 | QMPPM | Required |
| 8001000516 | QMRY | Optional |
| 8001000517 | QMRY | Optional |
| 8001000698 | QMTC | Optional |
| 8001000697 | QMTC | Optional |
| 8002163927 | QNAN | Optional |
| 8001000998 | QNEW | Required |
| 8001000458 | QPAG | Optional |
| 8001000745 | QPAG | Required |

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|------------|------|----------|
| 8001000689 | QPAN | Optional |
| 8001000690 | QPAN | Optional |
| 8001000916 | QPEA | Required |
| 8001000122 | QPEB | Required |
| 8001018080 | QPED | Required |
| 8001000574 | QPER | Optional |
| 8001000573 | QPER | Optional |
| 8002057792 | QPLA | Required |
| 8001000875 | QPMP | Optional |
| 8001010090 | QPTA | Optional |
| 8001000511 | QPTC | Optional |
| 8001000510 | QPTC | Optional |
| 8001000557 | QPWA | Optional |
| 8001000558 | QPWA | Optional |
| 8001000560 | QPWQ | Optional |
| 8001000559 | QPWQ | Optional |
| 8001000688 | QRCS | Optional |
| 8001000687 | QRCS | Optional |
| 8001000847 | QROC | Optional |
| 8001000666 | QRPH | Optional |
| 8001000665 | QRPH | Optional |
| 8001000863 | QRRR | Required |
| 8001000696 | QSAD | Optional |
| 8001000695 | QSAD | Optional |
| 8001000298 | QSAP | Optional |
| 8001006864 | QSER | Required |
| 8002214497 | QSGJ | Optional |
| 8002055189 | QSIT | Required |
| 8001001128 | QSJG | Optional |
| 8001000860 | QSJG | Optional |
| 8001000394 | QSJM | Optional |
| 8002174244 | QSJM | Optional |
| 8001000789 | QSJO | Optional |

| | | |
|------------|------|----------|
| 8001000507 | QSMH | Optional |
| 8001000506 | QSMH | Optional |
| 8001000519 | QSMP | Optional |
| 8001000520 | QSMP | Optional |
| 8001014850 | QSMR | Optional |
| 8001014079 | QSPM | Optional |
| 8001000591 | QSPO | Optional |
| 8001000592 | QSPO | Optional |
| 8002016649 | QSPP | Required |
| 8001017512 | QSPT | Optional |
| 8002016651 | QTAL | Required |
| 8001000121 | QTAL | Required |
| 8002016507 | QTCG | Required |
| 8002016508 | QTCK | Required |
| 8001000642 | QTCL | Required |
| 8002016509 | QTCN | Required |
| 8002016420 | QTES | Required |
| 8001001110 | QTIF | Optional |
| 8001000356 | QTMH | Required |
| 8002280541 | QUWA | Optional |
| 8002280543 | QUWA | Optional |
| 8002280539 | QUWA | Optional |
| 8001000536 | QVIC | Optional |
| 8001006380 | QVIC | Optional |
| 8001000535 | QVIC | Optional |
| 8001000675 | QVID | Optional |
| 8001000676 | QVID | Optional |
| 8001000304 | QVPL | Optional |
| 8002119358 | QVVM | Optional |
| 8001000533 | QWAC | Optional |
| 8001000534 | QWAC | Optional |
| 8001000878 | QWAN | Required |
| 8001000650 | QWBE | Optional |

| | | |
|------------|------|----------|
| 8001000651 | QWBE | Optional |
| 8002324711 | QWDE | Optional |
| 8001000259 | QWDB | Optional |
| 8001000280 | QWCB | Optional |
| 8001000281 | QWDK | Required |
| 8001020053 | QWCD | Optional |
| 8001000282 | QWCE | Optional |
| 8001000529 | QWCF | Optional |
| 8001000530 | QWCF | Optional |
| 8001008047 | QWCI | Optional |
| 8002016648 | QWCJ | Optional |
| 8002109233 | QWCJ | Optional |
| 8001000624 | QWCK | Optional |
| 8001000623 | QWCK | Optional |
| 8002256973 | QWCL | Optional |
| 8001006363 | QWCM | Optional |
| 8001000615 | QWCN | Optional |
| 8001000614 | QWCN | Optional |
| 8001000357 | QWCO | Required |
| 8001000284 | QWCW | Required |
| 8001000829 | QWFL | Optional |
| 8001000678 | QWGS | Optional |
| 8001000677 | QWGS | Optional |
| 8002016499 | QWHF | Required |
| 8001000692 | QWHS | Optional |
| 8001000691 | QWHS | Optional |
| 8001000693 | QWHS | Optional |
| 8001000325 | QWMD | Required |
| 8001010802 | QWMI | Optional |
| 8001000495 | QWPL | Optional |
| 8001017152 | QWSI | Optional |
| 8001000576 | QYTE | Optional |
| 8001000575 | QYTE | Optional |

Appendix C

Extinct Loss Factor Codes

C.1 Extinct Loss Factor Codes

The following loss factor codes have not been recalculated for the 2018/19 financial year.

Table 7.6 - Individual Distribution Loss Factors

| Loss Factor Code | Reason not calculated |
|------------------|------------------------------------|
| QAMC | Not requested by retailer |
| QBMC | Associated MNI is no longer active |
| QCEB | Not requested by retailer |
| QDOD | Not requested by retailer |
| QMMP | Not requested by retailer |
| QMYR | Associated MNI is no longer active |
| QSIM | Not requested by retailer |
| QWCT | Not requested by retailer |

Table 7.7: Individual Transmission Loss Factors

| Loss Factor Code | Reason not calculated |
|------------------|------------------------------------|
| WHEP | Substation has been decommissioned |
| WNFL | Substation has been decommissioned |
| WUNI | Substation has been decommissioned |