

2021/22 Loss Factor Report

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1. Introduction

This report details the loss factors calculated for the 2021/22 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. Applicable Reference Services

The Market Procedure requires Western Power to define a subset of reference services as ‘Applicable Reference Services’. The following table details the reference services that will be allocated to ‘applicable reference services’ from 1 July 2021.

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 |
| 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 2021/22 financial year.

Table 4.1 - Transmission Loss Factors

| TLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|------------------------------|--------------------|---------------------|
| TAPA | Alcoa Pinjarra (Alcoa) | 1.0093 | 1.0109 |
| TAPL | Alcoa Pinjarra (Alinta) | 1.0074 | 1.0101 |
| TBLB | Bluewaters | 1.0000 | 1.0004 |
| TBLS | Boulder (SCE) | 1.1330 | 1.1396 |
| TKRA | Karara Three Springs | 1.0380 | 1.0251 |
| TLWA | Landwehr (Alinta) | 1.0117 | 1.0107 |
| TMBA | Mumbida Wind Farm | 0.9388 | 0.9310 |
| TMDP | Merredin Power Station | 1.0002 | 0.8965 |
| TMGS | Greenough River Solar Farm | 0.9906 | 0.9483 |
| TMSK | Mason Road (KPP) | 1.0279 | 1.0333 |
| TOLA | Oakley (Alinta) | 1.0152 | 1.0147 |
| TSAV | Transmission SWIN Average | 1.0333 | 1.0312 |
| TUAV | Transmission Urban Average | 1.0400 | 1.0377 |
| TWKG | West Kalgoorlie GTs | 1.0724 | 1.0758 |
| TWOJ | Worsley (Joint Venture) | 0.9760 | 0.9752 |
| TWOW | Worsley (Worsley) | 0.9764 | 0.9752 |
| WAFM | Australian Fused Materials | 1.0314 | 1.0339 |
| WAKW | Kwinana Alcoa | 1.0300 | 1.0336 |
| WALB | Albany | 1.0628 | 1.0622 |
| WAMT | Amherst | 1.0428 | 1.0428 |
| WAPM | Australian Paper Mills | 1.0453 | 1.0467 |
| WARK | Arkana | 1.0399 | 1.0346 |
| WBCH | Beechboro | 1.0413 | 1.0364 |
| WBCT | Balcatta | 1.0407 | 1.0351 |
| WBDE | Baandee | 1.0540 | 1.0447 |
| WBDP | Binningup Desalination Plant | 1.0158 | 1.0159 |
| WBEC | Beckenham | 1.0298 | 1.0273 |
| WBEL | Belmont | 1.0338 | 1.0312 |

| TLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|---------------------------------------|--------------------|---------------------|
| WBG M | Boddington Gold Mine | 1.0109 | 1.0115 |
| WBWF | Badgingarra Wind Farm | 0.9752 | 0.9744 |
| WBHK | Broken Hill Kwinana | 1.0338 | 1.0359 |
| WBIB | Bibra Lake | 1.0396 | 1.0418 |
| WBKF | Black Flag | 1.1549 | 1.1604 |
| WBLD | Boulder | 1.1373 | 1.1451 |
| WBNP | Beenup | 1.0316 | 1.0297 |
| WBNY | Bounty | 1.0781 | 1.0730 |
| WBOD | Boddington | 1.0098 | 1.0105 |
| WBPM | British Petroleum | 1.0372 | 1.0430 |
| WBSI | Marriott Road Barrack Silicon Smelter | 1.0145 | 1.0138 |
| WBSN | Busselton | 1.0579 | 1.0525 |
| WBTN | Bridgetown | 1.0143 | 1.0131 |
| WBTY | Bentley | 1.0348 | 1.0318 |
| WBUH | Bunbury Harbour | 1.0091 | 1.0073 |
| WBYF | Byford | 1.0372 | 1.0372 |
| WCAP | Capel | 1.0487 | 1.0424 |
| WCAR | Carrabin | 1.1005 | 1.0904 |
| WCBP | Mason Road CSBP | 1.0290 | 1.0313 |
| WCCL | Cockburn Cement Ltd | 1.0303 | 1.0295 |
| WCCT | Cockburn Cement | 1.0328 | 1.0324 |
| WCGW | Collgar Windfarm | 0.9920 | 0.9761 |
| WCKN | Clarkson | 1.0382 | 1.0327 |
| WCKT | Cook Street | 1.0421 | 1.0380 |
| WCLN | Clarence Street | 1.0395 | 1.0375 |
| WCLP | Coolup | 1.0178 | 1.0174 |
| WCOE | Collie | 1.0160 | 1.0142 |
| WCOL | Collier | 1.0402 | 1.0388 |
| WCPN | Chapman | 1.0158 | 1.0004 |
| WCPS | Collie PWS | 0.9959 | 0.9937 |
| WCTE | Cottesloe | 1.0441 | 1.0425 |

| TLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|----------------------------|--------------------|---------------------|
| WCUN | Cunderdin | 1.0883 | 1.0798 |
| WCVE | Canning Vale | 1.0312 | 1.0289 |
| WDTN | Darlington | 1.0404 | 1.0360 |
| WDUR | Durlacher | 1.0088 | 0.9939 |
| WEDD | Edmund Street | 1.0426 | 1.0433 |
| WEDG | Edgewater | 1.0405 | 1.0338 |
| WEMD | Emu Downs | 0.9881 | 0.9848 |
| WENB | Eneabba | 1.0248 | 1.0502 |
| WFFD | Forrestfield | 1.0390 | 1.0332 |
| WFRT | Forrest Ave | 1.0433 | 1.0392 |
| WGGV | Golden Grove | 1.0556 | 1.0412 |
| WGNI | Glen Iris | 1.0270 | 1.0247 |
| WGNL | Gosnells | 1.0331 | 1.0319 |
| WGNN | Newgen Neerabup | 1.0350 | 1.0314 |
| WGTN | Geraldton | 1.0088 | 0.9939 |
| WHAY | Hay Street | 1.0411 | 1.0362 |
| WHBK | Henley Brook | 1.0428 | 1.0393 |
| WHFS | Hadfields | 1.0418 | 1.0359 |
| WHZM | Hazelmere | 1.0355 | 1.0305 |
| WJDP | Joondalup | 1.0394 | 1.0334 |
| WJTE | Joel Terrace | 1.0422 | 1.0388 |
| WKAT | Katanning | 1.0554 | 1.0551 |
| WKDA | Kalamunda | 1.0416 | 1.0368 |
| WKDL | Kewdale | 1.0325 | 1.0300 |
| WKDN | Kondinin | 1.0317 | 1.0280 |
| WKDP | Kwinana Desalination Plant | 1.0303 | 1.0320 |
| WKEL | Kellerberrin | 1.0640 | 1.0489 |
| WKEM | Kemerton PWS | 1.0108 | 1.0099 |
| WKMC | Catby Kerr McGee | 1.0150 | 1.0079 |
| WKMK | Kerr McGee Kwinana | 1.0264 | 1.0312 |
| WKMM | Muchea Kerr McGee | 1.0322 | 1.0253 |

| TLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|---|--------------------|---------------------|
| WKND | Kwinana Donaldson Road (Western Energy) | 1.0266 | 1.0350 |
| WKOJ | Kojonup | 1.0306 | 1.0297 |
| WKPS | Kwinana PWS | 1.0255 | 1.0333 |
| WLDE | Landsdale | 1.0421 | 1.0372 |
| WMAG | Manning Street | 1.0428 | 1.0372 |
| WMBR | Mt Barker | 1.0711 | 1.0693 |
| WMCR | Medical Centre | 1.0458 | 1.0425 |
| WMDN | Maddington | 1.0323 | 1.0302 |
| WMDY | Munday | 1.0379 | 1.0324 |
| WMED | Medina | 1.0356 | 1.0377 |
| WMER | Merredin | 1.0424 | 1.0364 |
| WMGA | Mungarra GTs | 1.0097 | 1.0011 |
| WMHA | Mandurah | 1.0383 | 1.0407 |
| WMIL | Milligan Street | 1.0407 | 1.0345 |
| WMJP | Manjimup | 1.0206 | 1.0193 |
| WMJX | Midland Junction | 1.0365 | 1.0311 |
| WMLG | Malaga | 1.0378 | 1.0322 |
| WMOR | Moora | 1.0425 | 1.0321 |
| WMOY | Morley | 1.0423 | 1.0362 |
| WMPS | Muja PWS | 1.0000 | 1.0000 |
| WMRR | Marriot Road | 1.0126 | 1.0119 |
| WMRV | Margaret River | 1.1131 | 1.1172 |
| WMSF | Merredin Solar Farm | 1.0435 | 0.9897 |
| WMSR | Mason Road | 1.0290 | 1.0314 |
| WMSS | Meadow Springs | 1.0374 | 1.0400 |
| WMUC | Muchea | 1.0350 | 1.0288 |
| WMUL | Mullaloo | 1.0409 | 1.0399 |
| WMUR | Murdoch | 1.0280 | 1.0255 |
| WMYR | Myaree | 1.0485 | 1.0514 |
| WNBH | North Beach | 1.0430 | 1.0378 |
| WNGK | NewGen Kwinana | 1.0220 | 1.0223 |

| TLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|--------------------|--------------------|---------------------|
| WNGN | Narrogin | 1.0214 | 1.0193 |
| WNOR | Northam | 1.0587 | 1.0542 |
| WNOW | Nowgerup | 1.0336 | 1.0268 |
| WNPB | North Perth | 1.0430 | 1.0393 |
| WOCN | O'Connor | 1.0479 | 1.0496 |
| WOPK | Osborne Park | 1.0412 | 1.0349 |
| WPBY | Padbury | 1.0433 | 1.0379 |
| WPCY | Piccadilly | 1.1348 | 1.141 |
| WPIC | Picton | 1.0075 | 1.0054 |
| WPJR | Pinjar | 1.0274 | 1.0229 |
| WPKS | Parkeston | 1.1234 | 1.1322 |
| WPLD | Parklands | 1.0330 | 1.0335 |
| WPNJ | Pinjarra | 1.0266 | 1.0276 |
| WRAN | Rangeway | 1.0142 | 0.9938 |
| WRGN | Regans | 1.0245 | 1.0168 |
| WROH | Rockingham | 1.0357 | 1.0386 |
| WRTN | Riverton | 1.0310 | 1.0286 |
| WRVE | Rivervale | 1.0335 | 1.0312 |
| WSFT | South Fremantle | 1.0393 | 1.0313 |
| WSNR | Southern River | 1.0341 | 1.0331 |
| WSNX | Southern Cross | 1.0843 | 1.0875 |
| WSPK | Shenton Park | 1.0431 | 1.0402 |
| WSRD | Sutherland | 1.0418 | 1.0385 |
| WSUM | Summer St | 1.0409 | 1.0372 |
| WSVY | Sawyers Valley | 1.0449 | 1.0394 |
| WTLA | Tianqi Lithium | 1.0278 | 1.0326 |
| WTSG | Three Springs | 1.0288 | 1.0157 |
| WTTS | Tate Street | 1.0330 | 1.0308 |
| WWAG | Wagin | 1.0610 | 1.0600 |
| WWAI | Waikiki | 1.0402 | 1.0436 |
| WWCL | Western Collieries | 0.9918 | 0.9913 |

| TLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|----------------------|--------------------|---------------------|
| WWDN | Wembley Downs | 1.0475 | 1.0453 |
| WWDW | Warradarge Wind Farm | 1.0288 | 0.9952 |
| WWEL | Welshpool | 1.0331 | 1.0305 |
| WWGA | Wangara | 1.0407 | 1.0351 |
| WWGP | Wagerup | 0.9919 | 0.9935 |
| WWKT | West Kalgoorlie | 1.1393 | 1.1430 |
| WWLN | Willetton | 1.0309 | 1.0291 |
| WWMG | Western Mining | 1.0317 | 1.0330 |
| WWNO | Wanneroo | 1.0364 | 1.0293 |
| WWNT | Wellington Street | 1.0426 | 1.0384 |
| WWSD | Westralian Sands | 1.0143 | 1.0189 |
| WWUN | Wundowie | 1.0637 | 1.0587 |
| WWWF | Walkaway Windfarm | 0.9355 | 0.9258 |
| WYCP | Yanchep | 1.0362 | 1.0308 |
| WYDW | Yandin Wind Farm | 1.0288 | 1.0070 |
| WYER | Yerbillon | 1.0957 | 1.0959 |
| WYKE | Yokine | 1.0422 | 1.0365 |
| WYLN | Yilgarn | 1.0724 | 1.0711 |

5. Average Distribution Loss Factors

Western Power has calculated the following average distribution loss factors for the 2021/22 financial year based on the Market Procedure:

Table 5.1 - Average Distribution Loss Factors

| Customer Segment | Applicable Reference Services | DLF Code | Applied in 2020/21 | To apply in 2021/22 |
|------------------------------|--|----------|--------------------|---------------------|
| Residential | A1 - Anytime Energy (Residential) | QRT1 | 1.0672 | 1.0491 |
| | 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 | 1.0519 | 1.0435 |
| | 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 | 1.0210 | 1.0184 |
| | C5 - High Voltage Metered Demand Bi-Directional | | | |
| | A6 - Low Voltage Metered Demand | QRT6 | 1.0456 | 1.0417 |

| | | | | |
|--|---|------|--------|--------|
| Medium Business Low Voltage | 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 | 1.0600 | 1.0488 |
| Distribution System Wide Average Loss Factor | | QAVG | 1.0492 | 1.0437 |

6. Individual Distribution Loss Factors

Western Power has calculated the following individual distribution loss factors for the 2021/22 financial year.

DLF code QHGM was previously QBMB, the DLF code change was requested due to the change in business name. The DLF value for 2020/21 is as reported for the previous QBMB code.

Table 6.1 - Individual Distribution Loss Factors

| DLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|--|--------------------|---------------------|
| QAAL | AIR LIQUIDE AUSTRALIA LIMITED | 1.0104 | 1.0102 |
| QAHU | OAHU MANAGEMENT PTY LTD | 1.0093 | 1.0091 |
| QALL | ALBEMARLE LITHIUM PTY LTD | | 1.0129 |
| QALM | ALBEMARLE LITHIUM PTY LTD | | 1.0127 |
| QALP | ALBEMARLE LITHIUM PTY LTD | | 1.0126 |
| QANF | ANDERSON WIND FARM | 1.0244 | 0.9985 |
| QAPI | AUSTRALASIAN PROPERTY INVESTMENTS LTD | | 1.0089 |
| QARG | PADDINGTON GOLD MINE | 1.007 | 1.0224 |
| QASA | ALLOY STEEL AUSTRALIA (INT) PTY LTD | 1.0078 | 1.0097 |
| QAWF | ALBANY WIND FARM | 0.9757 | 0.9908 |
| QBBP | BRICKWORKS BUILDING PRODUCTS PTY LTD (GREENBUSHES) | | 1.0271 |
| QBBW | BREMER BAY WIND FARM | 1.3643 | 1.2833 |
| QBCB | BUNBURY CENTREPOINT SHOPPING CENTRE INVESTMENT TRUST | 1.0082 | 1.0081 |
| QBFB | BLAIR FOX PTY LTD | 1.0071 | 1.0031 |
| QBGC | BGC (AUSTRALIA) PTY LTD | 1.0082 | 1.0107 |
| QBGM | BGM MANAGEMENT COMPANY PTY LTD | 1.0184 | 1.059 |
| QBGP | BGC (AUSTRALIA) PTY LTD | 1.0062 | 1.0063 |
| QBGQ | BGC (AUSTRALIA) PTY LTD | 1.0303 | 1.064 |
| QBKR | BRADKEN RESOURCES PTY LTD | 1.0072 | 1.0055 |
| QBKS | DOD - CAMPBELL BKS | | 1.0184 |
| QBMA | TIANYE SXO GOLD MINING PTY LTD | 1.0917 | 1.1153 |
| QBNB | BGC (AUSTRALIA) PTY LTD | 1.0162 | 1.0177 |
| QBOC | BOC LIMITED | 1.0072 | 1.0095 |

| DLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|--|--------------------|---------------------|
| QBPA | SOUTHERN PORTS AUTHORITY PORT OF BUNBURY | 1.0087 | 1.0077 |
| QBTF | INVESTA NOMINEES (2) PTY LTD AND COMMONWEALTH SUPERANNUATION CORPORATION | 1.0079 | 1.0113 |
| QBUL | CO OPERATIVE BULK HANDLING LTD | 1.0351 | 1.0359 |
| QBUR | BURSWOOD NOMINEES LIMITED | 1.0064 | 1.0079 |
| QBUS | BURSWOOD NOMINEES LIMITED | 1.0073 | 1.0062 |
| QCAS | CASTELLI NOMINEES PTY LTD | 1.0188 | 1.0380 |
| QCBC | COCKBURN CEMENT LIMITED | 1.1125 | 1.0666 |
| QCBH | CO OPERATIVE BULK HANDLING LTD | 1.0507 | 1.0689 |
| QCEB | IKEA PTY LTD | | 1.0091 |
| QCEM | COCKBURN CEMENT LIMITED | | 1.0081 |
| QCEN | SCENTRE SHOPPING CENTRE MANAGEMENT (WA) PTY LTD | 1.0075 | 1.0111 |
| QCMA | TRONOX MINING AUSTRALIA LIMITED | 1.053 | 1.0369 |
| QCMT | COCKBURN CEMENT LIMITED | 1.0172 | 1.0184 |
| QCPC | CALARDU PERTH CITY WEST & GERALD HARVEY | 1.0073 | 1.0083 |
| QCPU | CBUS PROPERTY PTY LTD | 1.0082 | 1.0061 |
| QCSW | TRONOX MINING AUSTRALIA LIMITED | 1.0113 | 1.0111 |
| QCTE | A RICHARDS PTY LTD | 1.0206 | 1.0153 |
| QCUT | THE TRUSTEE FOR COSTA UNIT TRUST | | 1.0087 |
| QDCS | CASUARINA PRISON | 1.0089 | 1.0089 |
| QDER | DEPT OF ENVIRONMENT REGULATION | 1.0135 | 1.0199 |
| QDFM | DEXUS FUNDS MANAGEMENT LIMITED | 1.0085 | 1.0081 |
| QDOD | DOD - HMAS STIRLING | 1.0111 | 1.0151 |
| QDOF | DEPARTMENT OF FINANCE | | 1.0149 |
| QDSX | DEXUS FUNDS MANAGEMENT LIMITED | 1.0097 | 1.0093 |
| QDTO | DATO HOLDINGS PTY LTD | 1.0076 | 1.0085 |
| QDVC | DAVID JONES PTY LTD | 1.009 | 1.0091 |
| QDWF | DENMARK COMMUNITY WINDFARM LTD | 1.3433 | 1.3155 |
| QDWL | DARWILL PTY LTD | 1.0125 | 1.0124 |
| QDXE | DEXUS FUNDS MANAGEMENT LIMITED | 1.0116 | 1.0114 |

| DLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|--|--------------------|---------------------|
| QEAP | EQUINIX AUSTRALIA PTY LTD | 1.0076 | 1.0077 |
| QEMO | EDNA MAY OPERATIONS PTY LTD EDNA MAY GOLD MINE | | 1.0679 |
| QEPF | ENVIRO PIPES PTY LTD | 1.0059 | 1.0128 |
| QEPH | ENVIRO PIPES PTY LTD | 1.0056 | 1.0056 |
| QERD | EVERGREEN REALTY PTY LTD | 1.008 | 1.0074 |
| QESC | VICINITY CENTRES PM PTY LTD ELLENBROOK SHOPPING CENTRE | | 1.0097 |
| QFER | FAR EAST RIVERSIDE (PERTH) PTY LTD | 1.008 | 1.0091 |
| QFFM | WESTERN AREAS LTD | 1.1409 | 1.1612 |
| QFIE | BENALE PTY LIMITED | | 1.0667 |
| QFLM | LA MANCHA RESOURCES AUST PTY LTD | 1.0059 | 1.0556 |
| QFUJ | FUJITSU AUSTRALIA LIMITED | 1.0075 | 1.0051 |
| QFUR | FURMANITE AUSTRALIA PTY LTD | 1.0163 | 1.0203 |
| QGDI | GDI NO.44 PTY LTD AFT GDI NO.44 TRUST | 1.0084 | 1.0107 |
| QGLG | DEPARTMENT OF LOCAL GOVERNMENT SPORT AND CULTURAL INDUSTRIES | 1.0149 | 1.016 |
| QGMC | CRAIG MOSTYN & CO PTY LTD | 1.0055 | 1.0055 |
| QGMM | GOLDEN MILE MILLING PTY LTD | 1.012 | 1.0135 |
| QGRI | GRIFFIN COAL (THE GRIFFIN COAL MINING COMPANY PTY LTD) | 1.0394 | 1.0519 |
| QGTS | VICINITY CENTRES PM PTY LTD | | 1.0109 |
| QGWF | GEORGE WESTON FOODS LIMITED | 1.0069 | 1.0072 |
| QGWL | GEORGE WESTON FOODS LIMITED | | 1.0145 |
| QHEL | HEALTH SCOPE PTY LTD | 1.0265 | 1.0265 |
| QHFM | LACTALIS AUSTRALIA PTY LTD | 1.0371 | 1.058 |
| QHGM | HANKING GOLD MINING PTY LTD | 1.0398 | 1.0248 |
| QHHC | VICINITY CENTRES PM PTY LTD HALLS HEAD CENTRAL | | 1.0068 |
| QHLG | WASTE GAS RESOURCES PTY LTD | 1.0042 | 1.0054 |
| QHMP | FMR INVESTMENTS PTY LTD | 1.0731 | 1.0725 |
| QHVI | HARVEY BEED | 1.1397 | 1.1823 |
| QIEW | INGHAMS ENTERPRISES PTY LTD | 1.0091 | 1.0101 |

| DLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|---|--------------------|---------------------|
| QIRL | ILUKA RESOURCES LTD | 1.0655 | 1.0467 |
| QIRN | IMAGE RESOURCES NL | 1.0672 | 1.1044 |
| QISH | ISPT PTY LTD | 1.0077 | 1.0097 |
| QISP | ISPT PTY LTD | 1.007 | 1.0004 |
| QISU | ISPT PTY LTD | 1.0088 | 1.0091 |
| QJAN | JANDAKOT AIRPORT HOLDINGS | | 1.0142 |
| QJOE | CARGILL MALT ASIA PACIFIC PTY LTD (WA) | 1.0159 | 1.0091 |
| QKBG | NORTHERN STAR (KANOWNNA) LIMITED | 1.0878 | 1.1103 |
| QKEM | KEMERTON SILICA SAND PTY LTD | 1.1335 | 1.0709 |
| QKEY | KEYSBROOK LEUCOXENE PTD LTD | 1.0075 | 1.0221 |
| QKUD | NORTHERN STAR (HBJ) PTY LTD | 1.0273 | 1.0241 |
| QKWF | VERVE ENERGY | 1.1031 | 1.0703 |
| QLEH | LEGION ENERGY PTY LTD | 1.0058 | 1.0055 |
| QLES | LENDLEASE PROPERTY MANAGEMENT | 1.0109 | 1.008 |
| QLGA | LANDFILL GAS & POWER PTY LTD | 1.0213 | 1.0259 |
| QLGC | LANDFILL GAS & POWER PTY LTD | 1.0077 | 1.028 |
| QLGD | LANDFILL GAS & POWER PTY LTD | 1.0055 | 1.0055 |
| QLGE | LEGION ENERGY PTY LTD | 1.0176 | 1.0084 |
| QLHT | HAWAIIAN INVESTMENTS PTY LTD | 1.0092 | 1.0088 |
| QLJS | LENDLEASE PROPERTY MANAGEMENT | 1.0078 | 1.0069 |
| QLMR | EVOLUTION MINING (MUNGARRI) PTY LTD | 1.091 | 1.1053 |
| QLPG | FAR EAST HARBOUR TOWN PTY LTD | 1.0135 | 1.0127 |
| QLPM | LENDLEASE PROPERTY MANAGEMENT | 1.0096 | 1.0094 |
| QLSP | LENDLEASE PROPERTY MANAGEMENT | 1.0245 | 1.0349 |
| QMAR | MILNE AGRIGROUP PTY LTD | 1.0092 | 1.0089 |
| QMBW | MT BARKER POWER COMPANY | 1.0305 | 1.0369 |
| QMEE | SCENTRE SHOPPING CENTRE MANAGEMENT (WA) PTY LTD | 1.0075 | 1.0083 |
| QMGS | VICINITY CENTRES PM PTY LTD | 1.0062 | 1.008 |
| QMHP | MIDPOINT HOLDINGS PTY TD | 1.0095 | 1.0096 |
| QMIC | TRONOX PIGMENT BUNBURY LTD | 1.0257 | 1.0061 |
| QMID | CAPITARY NO.3 PTY LTD | | 1.0155 |

| DLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|---|--------------------|---------------------|
| QMIE | CAPITARY NO.3 PTY LTD | | 1.0132 |
| QMIL | MILNE AGRIGROUP PTY LTD | 1.0078 | 1.0078 |
| QMIR | MIRVAC REAL ESTATE PTY LTD | 1.0102 | 1.0104 |
| QMMP | MRS MACS PTY LIMITED | | 1.0195 |
| QMPM | METRO POWER COMPANY PTY LTD | 1.0109 | 1.0192 |
| QMRE | MIRVAC REAL ESTATE PTY LTD | | 1.0055 |
| QMRS | MURDOCH RETIREMENT SERVICES PTY LTD | 1.0087 | 1.0081 |
| QMRY | MURDOCH UNIVERSITY | 1.0075 | 1.0081 |
| QMTC | METCASH TRADING LIMITED | 1.0101 | 1.009 |
| QNEW | NEWMONT POWER PTY LTD | 1.0523 | 1.1019 |
| QNHP | NARROGIN HAY PTY LTD | | 1.0367 |
| QPAG | PADDINGTON GOLD MINE | 1.0476 | 1.0983 |
| QPEA | LANDFILL MANAGEMENT SYSTEMS | 1.0159 | 1.0161 |
| QPEB | ASSET MANAGER AGL NATIONAL ASSETS | 0.9966 | 1.0128 |
| QPED | LANDFILL MANAGEMENT SYSTEMS | 1.0159 | 1.0306 |
| QPER | PERPETUAL TRUSTEE COMPANY LIMITED | 1.0079 | 1.0071 |
| QPLA | PLANTATION ENERGY AUSTRALIA PTY LTD | 1.0425 | 1.0249 |
| QPMP | OVATO PRINT PTY LTD | 1.0112 | 1.0109 |
| QPTA | PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA | 1.0106 | 1.0079 |
| QPTB | PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA | | 1.0061 |
| QPTD | PUBLIC TRANSPORT AUTHORITY OF WESTERN AUSTRALIA | | 1.0103 |
| QPWA | PRIMEWEST (AUSTRALIA PLACE) PTY LTD | 1.0075 | 1.0069 |
| QPWQ | PWQ PTY LTD ATF QUADRANT SUB TRUST | 1.0062 | 1.0071 |
| QRCS | VICINITY CENTRES PM PTY LTD ROCKINGHAM CITY SHOPPING CENTRE | 1.0083 | 1.0082 |
| QRPH | EAST METROPOLITAN HEALTH SERVICE | 1.0102 | 1.0107 |
| QRRR | DOD - RAAF PEARCE | 1.1379 | 1.1164 |
| QRUT | THE TRUSTEE FOR RANSBURG UNIT TRUST | | 1.0128 |
| QSAD | SCENTRE SHOPPING CENTRE MANAGEMENT (WA) PTY LTD | 1.0057 | 1.0102 |

| DLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|---|--------------------|---------------------|
| QSAP | W A SPECIALTY ALLOYS PTY LTD | 1.0067 | 1.007 |
| QSER | SERCO AUSTRALIA PTY LIMITED | 1.0223 | 1.0431 |
| QSGJ | ST JOHN OF GOD HEALTH CARE - MIDLAND | 1.0081 | 1.008 |
| QSIT | SUEZ RECYCLING & RECOVERY PTY LTD | 1.0057 | 1.0151 |
| QSJG | ST JOHN OF GOD HEALTH CARE INCORPORATED | 1.0167 | 1.0151 |
| QSJM | ST JOHN OF GOD HEALTH CARE INCORPORATED | 1.0066 | 1.0056 |
| QSJO | ST JOHN OF GOD HEALTH CARE INCORPORATED | 1.0105 | 1.0106 |
| QSMH | SOUTH METROPOLITAN HEALTH SERVICE | 1.0098 | 1.0125 |
| QSMP | ST MARTINS PROPERTIES AUSTRALIA | 1.0094 | 1.0055 |
| QSMR | SOUTHERN METROPOLITAN REGIONAL COUNCIL | 1.0055 | 1.0056 |
| QSPB | SPB (AUST) PTY LTD & QIC CM PTY LTD | 1.0073 | 1.0111 |
| QSPO | DOWNER EDI SERVICES PTY LTD | 1.0086 | 1.0073 |
| QSPP | BOOKITJA PTY LTD & IBA NORTHAM SOLAR PTY LTD & NORTHAM SOLAR FARM A PTY LTD | 0.9984 | 0.9928 |
| QSPS | STOCKLAND PROPERTY MANAGEMENT PTY LTD | 1.0074 | 0.9905 |
| QSPT | DOWNER EDI SERVICES PTY LTD | 1.007 | 1.007 |
| QSPW | STOCKLAND PROPERTY MANAGEMENT PTY LTD | 1.0116 | 1.0115 |
| QSRP | SUMMIT RURAL (WA) PTY LTD | | 1.0077 |
| QTAL | TALISON LITHIUM AUSTRALIA PTY LTD | 1.0594 | 1.0651 |
| QTCG | TESLA GERALDTON PTY LTD | 1.0102 | 0.9938 |
| QTCK | TESLA KEMERTON PTY LTD | 1.0029 | 1.0031 |
| QTCL | TELSTRA CORPORATION LTD | 1.0276 | 1.0218 |
| QTCM | TELSTRA CORPORATION LTD | 1.0068 | 1.0179 |
| QTCN | TESLA NORTHAM PTY LTD | 1.0055 | 0.9884 |
| QTES | TESLA CORPORATION MANAGEMENT PTY LTD | 1.0134 | 0.9975 |
| QTIF | LEGION ENERGY PTY LTD | 1.0093 | 1.0112 |
| QTMA | TRONOX PIGMENT BUNBURY LTD | | 1.0055 |
| QTSS | THORNLIE SQUARE SHOPPING CENTRE PTY LTD | | 1.0202 |
| QVIC | VICINITY CENTRES PM PTY LTD | 1.0165 | 1.0082 |
| QVID | VICINITY CENTRES PM PTY LTD WARWICK GROVE | 1.0184 | 1.0183 |
| QVLW | VERSACOLD LOGISTICS WA | | 1.0321 |

| DLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|--|--------------------|---------------------|
| QVVM | V&V WALSH MEAT PROCESSORS & EXPORTERS | 1.0107 | 1.0165 |
| QWAA | WESTERN AUSTRALIA CRICKET ASSOCIATION | | 1.0095 |
| QWAC | PERTH AIRPORT PTY LTD | | 1.0082 |
| QWAD | PERTH AIRPORT PTY LTD | | 0.9999 |
| QWAN | WESTERN AREAS LTD | 1.1064 | 1.1064 |
| QWAS | WESTERN AUSTRALIAN SPORTS CENTRE TRUST | 1.0068 | 1.0055 |
| QWBE | WESBEAM PTY LTD | 1.0122 | 1.0127 |
| QWCB | WATER CORPORATION | 1.0139 | 1.0032 |
| QWCD | WATER CORPORATION | | 1.0184 |
| QWCE | WATER CORPORATION | 1.0063 | 1.0063 |
| QWCG | WATER CORPORATION | | 1.0368 |
| QWCI | WATER CORPORATION | 1.0122 | 1.0139 |
| QWCJ | WATER CORPORATION | 1.0061 | 1.0064 |
| QWCK | WATER CORPORATION | 1.0083 | 1.0077 |
| QWCL | WATER CORPORATION | 1.0094 | 1.0009 |
| QWCM | WATER CORPORATION | 1.0162 | 1.0131 |
| QWCO | WATER CORPORATION | 1.0316 | 1.0664 |
| QWCP | WATER CORPORATION | | 1.0165 |
| QWCR | WATER CORPORATION | | 1.013 |
| QWCT | WATER CORPORATION | | 1.0184 |
| QWCV | WATER CORPORATION | | 1.0182 |
| QWCW | WATER CORPORATION | 1.0368 | 1.0322 |
| QWCX | WATER CORPORATION | | 1.0057 |
| QWCY | WATER CORPORATION | | 1.0108 |
| QWCZ | WATER CORPORATION | | 1.0071 |
| QWDB | WATER CORPORATION | 1.0131 | 1.0054 |
| QWDE | WATER CORPORATION | 1.0139 | 1.0058 |
| QWDK | WATER CORPORATION | 1.0139 | 1.0162 |
| QWGS | VICINITY CENTRES PM PTY LTD VICINITY GALLERIA SITE 1 | 1.0144 | 1.0151 |
| QWHF | WEST HILLS FARM P/L | 1.0597 | 1.0403 |
| QWLT | WESTERN LIBERTY GROUP PTY LTD | 1.0066 | 1.007 |

| DLF Code | Description | Applied in 2020/21 | To apply in 2021/22 |
|----------|--|-----------------------|------------------------|
| QWMD | FLETCHER BUILDING (AUSTRALIA) PTY LTD - LAMINEX GROUP PTY LTD | 1.038 | 1.055 |
| QWSI | VICINITY CENTRES PM PTY LTD | 1.0341 | 1.0382 |

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 2021/22. As described above, specific reasons for the movements are difficult to determine.

Contributing factors to the volatility at the following locations include the low generation output at Merredin Power Station. Greenough River Solar Farm increased their generation capacity and output. Significant load decrease at Eneabba. Merredin Solar Farm and Warradarge Wind Farm was previously calculated using estimated data, this year actual data has been used.

Table 7.1 - Transmission Loss Factors changed by more than 0.025

| TLF Code | Description | Applied in 2020/21 | To apply in 2021/22 | Change |
|----------|----------------------------|--------------------|---------------------|---------|
| TMDP | Merredin Power Station | 1.0002 | 0.8965 | -0.1037 |
| TMGS | Greenough River Solar Farm | 0.9906 | 0.9483 | -0.0423 |
| WENB | Eneabba | 1.0248 | 1.0502 | 0.0254 |
| WMSF | Merredin Solar Farm | 1.0435 | 0.9897 | -0.0538 |
| WWDW | Warradarge Wind Farm | 1.0288 | 0.9952 | -0.0336 |

7.2 Individual distribution loss factors

Table 7.2 is a list of the distribution loss factors that moved by more than 0.025 in 2021/22.

Table 7.2: Distribution Loss Factor changed by more than 0.025

| NMI | Customer | DLF variance | Explanation |
|------------|------------------------------|--------------|--|
| 8001000125 | KEMERTON SILICA SAND PTY LTD | -0.0626 | Reconductoring has resulted in changes to losses. Load distribution changes during feeder peak effects losses. |
| 8001000345 | Harvey Beef | 0.0426 | Large change to feeder peak |
| 8001000357 | WATER CORPORATION | 0.0348 | Change in feeder peak Change in CMD |

| NMI | Customer | DLF variance | Explanation |
|------------|----------------------------------|--------------|--|
| 8001000428 | COCKBURN CEMENT LIMITED | -0.0459 | Large change to feeder peak |
| 8001000745 | PADDINGTON GOLD PTY LIMITED | 0.0507 | Other HV customer on feeder usage change by ~1 MVA |
| 8001000998 | NEWMONT POWER PTY LTD | 0.0496 | Other HV customers on feeder change by 1 MVA Another HV customer CMD change by ~2MVA. |
| 8001020092 | BGM MANAGEMENT COMPANY PTY LTD | 0.0406 | Large change to feeder peak |
| 8002013336 | VERVE ENERGY | -0.0328 | DSOC changed |
| 8002016529 | DENMARK COMMUNITY WINDFARM LTD | -0.0278 | On a large feeder with >300km of line |
| 8002016682 | Bremer Bay Windfarm | -0.0810 | Load distribution changes during feeder peak on a 180km feeder |
| 8002034918 | LA MANCHA RESOURCES AUST PTY LTD | 0.0497 | Network reconfiguration with HV customers transferring to other feeders |
| 8002067264 | BGC (AUSTRALIA) PTY LTD | 0.0337 | Large change to feeder peak |
| 8002148204 | ANDERSON WIND FARM | -0.0259 | On a large feeder with >300km of line |
| 8002316600 | Image Resources NL | 0.0372 | Large change to feeder peak |

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 7.3 - Transmission Loss Factors by NMI

| NMI | TLF Code |
|------------|----------|
| 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 |
| 8001001211 | WWWF |

| NMI | TLF Code |
|------------|----------|
| 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 |
| 8002016404 | WCGW |

| NMI | TLF Code |
|------------|----------|
| 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 |
| 8002016665 | WYDW |
| 8002016666 | WMSF |
| 8002016668 | WWDW |

Appendix B

Individual Distribution Loss Factors by NMI

B.1 Individual Distribution loss factors by NMI

The individual distribution loss factors calculated for the 2021/22 financial year are associated with the following NMIs.

Table 7.4 - Individual Distribution Loss Factors by NMI

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8001000107 | QCSW | Optional |
| 8001000117 | QCMT | Optional |
| 8001000121 | QTAL | Required |
| 8001000122 | QPEB | Required |
| 8001000125 | QKEM | Required |
| 8001000130 | QCEM | Required |
| 8001000158 | QLGA | Required |
| 8001000234 | QLGD | Required |
| 8001000259 | QWDB | Optional |
| 8001000261 | QRT5 | Optional |
| 8001000265 | QGWF | Optional |
| 8001000267 | QGWL | Optional |
| 8001000269 | QKUD | Required |
| 8001000270 | QMID | Optional |
| 8001000274 | QGBP | Optional |
| 8001000280 | QWCB | Optional |
| 8001000281 | QWDK | Required |
| 8001000282 | QWCE | Optional |
| 8001000284 | QWCW | Required |
| 8001000286 | QAAL | Optional |
| 8001000287 | QFFM | Required |
| 8001000294 | QGMM | Optional |
| 8001000298 | QSAP | Optional |
| 8001000325 | QWMD | Required |
| 8001000329 | QBPA | Required |

² 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.

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8001000332 | QWCP | Optional |
| 8001000333 | QDOD | Optional |
| 8001000345 | QHVI | Required |
| 8001000357 | QWCO | Required |
| 8001000359 | QHGM | Required |
| 8001000366 | QDWL | Optional |
| 8001000379 | QRT5 | Optional |
| 8001000391 | QDOF | Optional |
| 8001000394 | QSJM | Optional |
| 8001000414 | QBKR | Optional |
| 8001000421 | QCMT | Optional |
| 8001000428 | QCBC | Required |
| 8001000438 | QMMP | Optional |
| 8001000451 | QHMP | Required |
| 8001000463 | QCUT | Optional |
| 8001000493 | QARG | Required |
| 8001000506 | QSMH | Optional |
| 8001000507 | QSMH | Optional |
| 8001000514 | QMIE | Optional |
| 8001000515 | QMIE | Optional |
| 8001000516 | QMRY | Optional |
| 8001000517 | QMRY | Optional |
| 8001000519 | QSMP | Optional |
| 8001000520 | QSMP | Optional |
| 8001000527 | QWCT | Optional |
| 8001000528 | QWCT | Optional |
| 8001000529 | QRT5 | Optional |
| 8001000530 | QRT5 | Optional |
| 8001000533 | QWAC | Optional |
| 8001000534 | QWAC | Optional |
| 8001000535 | QVIC | Optional |
| 8001000536 | QVIC | Optional |

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8001000539 | QFIE | Required |
| 8001000557 | QPWA | Optional |
| 8001000558 | QPWA | Optional |
| 8001000559 | QPWQ | Optional |
| 8001000560 | QPWQ | Optional |
| 8001000561 | QDVC | Optional |
| 8001000562 | QDVC | Optional |
| 8001000563 | QFER | Optional |
| 8001000564 | QFER | Optional |
| 8001000565 | QMIR | Optional |
| 8001000566 | QMIR | Optional |
| 8001000573 | QPER | Optional |
| 8001000574 | QPER | Optional |
| 8001000577 | QGDI | Optional |
| 8001000578 | QGDI | Optional |
| 8001000579 | QERD | Optional |
| 8001000580 | QERD | Optional |
| 8001000589 | QDFM | Optional |
| 8001000590 | QDFM | Optional |
| 8001000591 | QSPO | Optional |
| 8001000592 | QSPO | Optional |
| 8001000598 | QCPC | Optional |
| 8001000599 | QCPC | Optional |
| 8001000623 | QWCK | Optional |
| 8001000624 | QWCK | Optional |
| 8001000642 | QTCL | Required |
| 8001000650 | QWBE | Optional |
| 8001000651 | QWBE | Optional |
| 8001000652 | QBUR | Optional |
| 8001000653 | QBUR | Optional |
| 8001000665 | QRPH | Optional |
| 8001000666 | QRPH | Optional |

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8001000667 | QLJS | Optional |
| 8001000668 | QLJS | Optional |
| 8001000669 | QKUD | Required |
| 8001000670 | QKUD | Required |
| 8001000673 | QMEE | Optional |
| 8001000674 | QMEE | Optional |
| 8001000675 | QVID | Optional |
| 8001000676 | QVID | Optional |
| 8001000677 | QWGS | Optional |
| 8001000678 | QWGS | Optional |
| 8001000679 | QBCB | Optional |
| 8001000680 | QBCB | Optional |
| 8001000681 | QMGS | Optional |
| 8001000682 | QMGS | Optional |
| 8001000687 | QRCS | Optional |
| 8001000688 | QRCS | Optional |
| 8001000691 | QRT5 | Optional |
| 8001000692 | QRT5 | Optional |
| 8001000693 | QRT5 | Optional |
| 8001000694 | QRT5 | Optional |
| 8001000695 | QSAD | Optional |
| 8001000696 | QSAD | Optional |
| 8001000697 | QMTC | Optional |
| 8001000698 | QMTC | Optional |
| 8001000703 | QBTF | Optional |
| 8001000704 | QBTF | Optional |
| 8001000705 | QTMA | Required |
| 8001000706 | QMIC | Required |
| 8001000707 | QAWF | Required |
| 8001000708 | QAWF | Required |
| 8001000713 | QAPI | Optional |
| 8001000714 | QAPI | Optional |

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8001000738 | QLGC | Required |
| 8001000745 | QPAG | Required |
| 8001000756 | QGTS | Optional |
| 8001000766 | QGMC | Optional |
| 8001000780 | QCBH | Required |
| 8001000781 | QRT5 | Optional |
| 8001000789 | QSJO | Optional |
| 8001000790 | QWCG | Required |
| 8001000792 | QJOE | Optional |
| 8001000819 | QBKS | Optional |
| 8001000824 | QKBG | Required |
| 8001000831 | QTCM | Optional |
| 8001000839 | QTCM | Optional |
| 8001000860 | QSJG | Optional |
| 8001000863 | QRRR | Required |
| 8001000864 | QBGC | Optional |
| 8001000875 | QPMP | Optional |
| 8001000876 | QRT5 | Optional |
| 8001000878 | QWAN | Required |
| 8001000916 | QPEA | Required |
| 8001000998 | QNEW | Required |
| 8001001009 | QBMA | Required |
| 8001001046 | QVLW | Optional |
| 8001001110 | QTIF | Optional |
| 8001001128 | QSJG | Optional |
| 8001002178 | QLGE | Optional |
| 8001002482 | QDOF | Optional |
| 8001002551 | QLHT | Optional |
| 8001002905 | QAHU | Optional |
| 8001003155 | QCEN | Optional |
| 8001003397 | QGLG | Optional |
| 8001003492 | QTSS | Optional |

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8001003787 | QBNB | Required |
| 8001005378 | QLPG | Optional |
| 8001005622 | QWCR | Optional |
| 8001005733 | QMAR | Optional |
| 8001006005 | QWAA | Optional |
| 8001006363 | QWCM | Optional |
| 8001006864 | QSER | Required |
| 8001007323 | QNHP | Optional |
| 8001007896 | QRT5 | Optional |
| 8001008047 | QWCI | Optional |
| 8001008631 | QDCS | Required |
| 8001008755 | QISU | Optional |
| 8001009577 | QBUL | Required |
| 8001009720 | QDOF | Optional |
| 8001010090 | QPTA | Optional |
| 8001010318 | QESC | Optional |
| 8001010862 | QDTO | Optional |
| 8001011208 | QLSP | Optional |
| 8001011585 | QIEW | Optional |
| 8001011671 | QDSX | Optional |
| 8001011818 | QRT5 | Optional |
| 8001012213 | QSRP | Optional |
| 8001012464 | QCTE | Optional |
| 8001013036 | QRT6 | Optional |
| 8001013234 | QDXE | Optional |
| 8001014079 | QRT5 | Optional |
| 8001014469 | QHEL | Optional |
| 8001014755 | QMIL | Optional |
| 8001014850 | QSMR | Optional |
| 8001015658 | QBBP | Required |
| 8001016752 | QRUT | Required |
| 8001016838 | QWCV | Optional |

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8001017024 | QASA | Optional |
| 8001017152 | QWSI | Optional |
| 8001017284 | QGRI | Required |
| 8001017512 | QSPT | Optional |
| 8001018080 | QPED | Required |
| 8001019433 | QHLG | Required |
| 8001019556 | QMHP | Optional |
| 8001020053 | QWCD | Optional |
| 8001020092 | QBGM | Required |
| 8001020102 | QLPM | Optional |
| 8001259738 | QMRS | Optional |
| 8001790061 | QCAS | Required |
| 8001988953 | QWLT | Optional |
| 8001993169 | QSPW | Optional |
| 8002002527 | QCEB | Optional |
| 8002006139 | QRT5 | Optional |
| 8002008582 | QLES | Optional |
| 8002013336 | QKWF | Required |
| 8002016087 | QCPU | Optional |
| 8002016406 | QWCZ | Optional |
| 8002016408 | QMBW | Required |
| 8002016420 | QTES | Required |
| 8002016499 | QWHF | Required |
| 8002016507 | QTCG | Required |
| 8002016508 | QTCK | Required |
| 8002016509 | QTCN | Required |
| 8002016529 | QDWF | Required |
| 8002016562 | QWAD | Required |
| 8002016563 | QWAD | Required |
| 8002016580 | QHFM | Required |
| 8002016638 | QDOD | Optional |
| 8002016648 | QWCJ | Optional |

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8002016649 | QSPP | Required |
| 8002016650 | QMPM | Required |
| 8002016651 | QTAL | Required |
| 8002016682 | QBBW | Required |
| 8002019353 | QRT5 | Optional |
| 8002027039 | QISP | Optional |
| 8002027040 | QISP | Optional |
| 8002034918 | QFLM | Required |
| 8002035499 | QJAN | Optional |
| 8002049183 | QDER | Required |
| 8002049586 | QSPB | Optional |
| 8002050616 | QRT6 | Optional |
| 8002055189 | QSIT | Required |
| 8002057792 | QPLA | Required |
| 8002067264 | QBGQ | Required |
| 8002073940 | QCPU | Optional |
| 8002081338 | QFUJ | Optional |
| 8002085923 | QEMO | Required |
| 8002106501 | QWCX | Optional |
| 8002109233 | QWCJ | Optional |
| 8002118572 | QEPF | Optional |
| 8002119358 | QVVM | Optional |
| 8002141398 | QJAN | Optional |
| 8002148204 | QANF | Required |
| 8002162137 | QWCS | Optional |
| 8002163613 | QLEH | Optional |
| 8002166160 | QCMA | Required |
| 8002174244 | QSJM | Optional |
| 8002182945 | QEAP | Optional |
| 8002183852 | QLES | Optional |
| 8002191360 | QLMR | Required |
| 8002204305 | QMRE | Optional |

| NMI | DLF Code | Required or Optional ² |
|------------|----------|-----------------------------------|
| 8002206185 | QBOC | Required |
| 8002209093 | QWAS | Optional |
| 8002214497 | QSGJ | Optional |
| 8002220353 | QWCY | Optional |
| 8002221497 | QFUR | Required |
| 8002227231 | QAAL | Optional |
| 8002227767 | QAAL | Required |
| 8002247735 | QKEY | Required |
| 8002250697 | QBUS | Optional |
| 8002250698 | QBUS | Optional |
| 8002256750 | QHHC | Optional |
| 8002256973 | QWCL | Optional |
| 8002263036 | QSPS | Optional |
| 8002269579 | QBFB | Required |
| 8002276877 | QRT5 | Optional |
| 8002288743 | QEPH | Optional |
| 8002292810 | QWAS | Optional |
| 8002293689 | QPTB | Optional |
| 8002293690 | QPTD | Optional |
| 8002315825 | QMGS | Optional |
| 8002316600 | QIRN | Required |
| 8002317197 | QISH | Optional |
| 8002319360 | QIRL | Required |
| 8002320406 | QDOD | Optional |
| 8002324711 | QWDE | Optional |
| 8002350127 | QALL | Required |
| 8002350828 | QALM | Required |
| 8002350829 | QALP | Required |
| 8002355633 | QVVM | Optional |

Appendix C

Extinct Loss Factor Codes

C.1 Extinct Loss Factor Codes

The following loss factor codes have not been recalculated for the 2021/22 financial year.

Table 7.5 - Individual Distribution Loss Factors

| DLF code | Reason for not being calculated |
|----------|--|
| QAMP | Not requested by retailer |
| QBMB | Requested DLF code name change to QHGM |
| QBMF | Not requested by retailer |
| QBNE | Not eligible for consideration |
| QCBK | Not requested by retailer |
| QCHP | Not requested by retailer |
| QGES | Not requested by retailer |
| QGRA | Not requested by retailer |
| QHAL | Not eligible for consideration |
| QHRO | Not eligible for consideration |
| QIRE | Not eligible for consideration |
| QKNV | Not eligible for consideration |
| QNFM | Not requested by retailer |
| QNXD | Not requested by retailer |
| QPAN | Not requested by retailer |
| QPEN | Not eligible for consideration |
| QPIA | Not requested by retailer |
| QPIB | Not requested by retailer |
| QVCF | Not requested by retailer |
| QVPL | Not requested by retailer |
| QWFL | Not requested by retailer |
| QBGB | Average value applied |
| QISM | Average value applied |
| QLNL | Average value applied |
| QSJB | Average value applied |
| QWCS | Average value applied |
| QWHS | Average value applied |

Table 7.6: Individual Transmission Loss Factors

| Loss Factor Code | Reason not calculated |
|------------------|------------------------------------|
| WMWR | Substation has been decommissioned |
| WNED | Substation has been decommissioned |
| WTLN | Substation has been decommissioned |
| WVPA | Substation is inactive |