

Appendix I Indicative short circuit currents

Tables I.1 to I.3 show indicative maximum and minimum short circuit currents at Powerlink Queensland's substations. This appendix also shows the indicative System Strength Locational Factor (SSLF) calculated as per the Australian Energy Market Operator's (AEMO) System Strength Impact Assessment Guidelines¹. An overview of system strength pricing can be found on Powerlink's [website](#).

I.1 Indicative maximum short circuit currents

Tables I.1 to I.3 show indicative maximum symmetrical three phase and single phase to ground short circuit currents in Powerlink's transmission network for summer 2025/26, 2026/27 and 2027/28.

These results include the short circuit contribution of some of the more significant embedded non-scheduled generators, however smaller embedded non-scheduled generators may have been excluded. As a result, short circuit currents may be higher than shown at some locations. Therefore, this information should be considered as an indicative guide to short circuit currents at each location and interested parties should consult Powerlink and/or the relevant Distribution Network Service Provider (DNSP) for more detailed information.

Powerlink calculated the maximum short circuit currents using a system model:

- in which all generators were represented as a voltage source of 110% of nominal voltage behind sub-transient reactance
- with all model shunt elements removed.

The short circuit currents shown in tables I.1 to I.3 are based on generation shown in tables 6.1 and 6.2 (together with the more significant embedded non-scheduled generators) on the committed network development as forecast at the end of each calendar year. The tables also show the design rating of the Powerlink substation at each location. No assessment has been provided of the short circuit currents within networks owned by DNSPs or directly connected customers, nor has an assessment been made of the ability of their plant to withstand and/or interrupt the short circuit current.

The maximum short circuit currents presented in this appendix are based on all generating units online and an 'intact' network; that is, all network elements are assumed to be in-service. This assumption can result in short circuit currents appearing to be above plant rating at some locations. Where this is found, detailed assessments are made to determine if the contribution to the total short circuit current that flows through the plant exceeds its rating. If so, the network may be split to create 'normally-open' points as an operational measure to ensure that short circuit currents remain within the plant rating, until longer term solutions can be justified.

I.2 Indicative minimum short circuit currents

Minimum short circuit currents are used to inform the capacity of the system to accommodate fluctuating loads and power electronic connected systems (including non-synchronous generators and static VAR compensators (SVC)). Minimum short circuit currents are also important in ensuring power quality and system stability standards are met and for ensuring the proper operation of protection systems.

Tables I.1 to I.3 show indicative minimum system normal and post-contingent symmetrical three phase short circuit currents at Powerlink's substations. These were calculated by taking the existing intact network and setting the synchronous generator dispatch to align with AEMO's assumptions for minimum three phase fault level as described in AEMO's 2024 System Strength Report. The short circuit current is calculated, using the sub-transient machine impedances, with the system intact and with individual outages of each significant network element.

The minimum short circuit current which results from these outages is reported.

The short circuit currents are calculated using the same methodology as the AEMO's assumptions.

These minimum short circuit currents are indicative only. The system strength available to new non-synchronous generators can only be assessed by a Full Impact Assessment using electromagnetic transient (EMT) modelling techniques.

¹ Australian Energy Market Operator, [System Strength Impact Assessment Guidelines](#), Version 2.2, June 2024.

Table I.1 Indicative short circuit currents – Northern Queensland

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal 3 phase fault level (kA)	Indicative minimum N-1			Indicative maximum short circuit currents								SSLF	RefNode
				2025/26			2025/26		2026/27		2027/28					
				3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)			
Aurumfield	275	40	1.2	1.1	1.0	4.1	4.5	4.1	4.6	4.1	4.6	4.1	4.6	1.1060	Ross 275kV	
Bolingbroke	132	31.5	2.0	1.9	1.6	2.5	1.9	2.5	1.9	2.5	1.9	2.5	1.9	1.2135	Ross 275kV	
Bowen North	132	31.5	2.1	0.7	0.9	3	3.2	3	3.2	3.0	3.2	3.0	3.2	1.1638	Ross 275kV	
Cairns (2T)	132	31.5	3.1	0.5	0.6	6.8	9	6.8	8.9	6.8	8.9	6.8	8.9	1.0759	Ross 275kV	
Cairns (3T)	132	31.5	3.1	0.5	0.5	6.8	8.9	6.8	8.9	6.8	8.9	6.8	8.9	1.0760	Ross 275kV	
Cardwell	132	31.5	2.0	0.9	1.2	3.3	3.6	3.3	3.6	3.3	3.6	3.3	3.6	1.1438	Ross 275kV	
Chalumbin	132	31.5	3.4	2.7	3.5	7.4	8.4	7.4	8.5	7.4	8.5	7.4	8.5	1.0790	Ross 275kV	
Chalumbin	275	40	2.0	1.6	2.1	5.4	5.5	5.4	5.5	5.4	5.5	5.4	5.5	1.0453	Ross 275kV	
Clare South	132	31.5	3.4	3.0	3.7	8.4	8.3	8.4	8.5	8.7	8.5	8.7	8.5	1.0687	Ross 275kV	
Collinsville North	132	31.5	5.2	4.5	5.5	11.7	12	11.7	12.0	11.7	12.0	11.7	12.0	1.0432	Ross 275kV	
Coppabella	132	31.5	2.2	1.5	1.8	3	3.4	3	3.4	3.0	3.4	3.0	3.4	1.1880	Ross 275kV	
Crush Creek	275	40	3.5	3.0	4.0	10.9	12	10.8	11.9	10.8	11.9	10.8	11.9	1.0200	Ross 275kV	
Dan Gleeson (1T)	132	31.5	4.2	3.8	5.0	13.3	13.5	13.3	13.6	13.3	13.6	13.3	13.6	1.0323	Ross 275kV	
Dan Gleeson (2T)	132	31.5	4.2	3.8	5.0	13.3	13.6	13.3	13.6	13.3	13.6	13.3	13.6	1.0323	Ross 275kV	
Eagle Downs	132	31.5	3.0	1.5	1.7	4.6	4.4	4.6	4.4	4.6	4.4	4.6	4.4	1.1297	Lilyvale 132kV	
Edmonton	132	31.5	2.9	0.9	1.1	6.1	7.3	6.1	7.3	6.1	7.3	6.1	7.3	1.0835	Ross 275kV	
ElArish	132	31.5	2.3	1.0	1.4	3.8	4.6	3.8	4.6	3.8	4.6	3.8	4.6	1.1213	Ross 275kV	
Garbutt	132	31.5	3.9	1.7	2.0	11.4	11.2	11.4	11.2	11.4	11.2	11.4	11.2	1.0400	Ross 275kV	
Goonyella Riverside	132	31.5	3.5	3.0	3.3	6	5.4	6	5.4	6.0	5.4	6.0	5.4	1.1090	Ross 275kV	
Greenland	132	31.5	3.4	2.1	2.2	5.5	5.1	5.5	5.1	5.5	5.1	5.5	5.1	1.1165	Ross 275kV	
Guybal Munjan	275	40	2.2	1.9	2.2	6.7	5.2	6.7	5.2	6.7	5.2	6.7	5.2	1.0266	Ross 275kV	
Houghton River	275	40	2.7	2.1	2.7	8.5	8.6	8.5	8.6	8.5	8.6	8.5	8.6	1.0132	Ross 275kV	

Table I.1 Indicative short circuit currents – Northern Queensland (continued)

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal 3 phase fault level (kA)	Indicative minimum N-1			Indicative maximum short circuit currents						SSLF	RefNode	
				2025/26		2025/26		2025/26		2026/27		2027/28			
				3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)		
Ingham South	132	31.5	2.0	1.1	1.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	1.1533	Ross 275kV
Innisfail	132	31.5	2.1	1.3	1.7	3.3	3.9	3.3	3.9	3.3	3.9	3.3	3.9	1.1434	Ross 275kV
Invicta	132	31.5	2.6	2.4	2.4	5.4	4.8	5.4	4.9	5.4	4.9	5.4	4.9	1.1055	Ross 275kV
Kamerunga (1T)	132	31.5	2.6	0.6	0.8	5	5.8	5.0	5.8	5.0	5.8	5.0	5.8	1.1061	Ross 275kV
Kamerunga (2T)	132	31.5	2.6	0.6	0.8	5	5.8	5.0	5.8	5.0	5.8	5.0	5.8	1.1061	Ross 275kV
Kareeya	132	31.5	3.2	2.4	3.0	6.2	6.8	6.2	6.8	6.2	6.8	6.2	6.8	1.0957	Ross 275kV
Kemmis	132	31.5	3.9	1.6	2.1	6.1	6.6	6.1	6.6	6.1	6.6	6.1	6.6	1.1014	Ross 275kV
King Creek	132	31.5	3.2	1.4	1.5	5.6	4.4	5.6	4.4	5.6	4.4	5.6	4.4	1.0887	Ross 275kV
Lake Ross	132	31.5	4.8	4.3	5.9	18.9	21	18.9	21.0	18.9	21.0	18.9	21.0	1.0187	Ross 275kV
Mackay	132	31.5	3.4	2.9	3.7	5.1	6.1	5.1	6.1	5.1	6.1	5.1	6.1	1.1190	Ross 275kV
Mackay Ports	132	31.5	2.6	1.6	2.1	3.5	4.1	3.5	4.1	3.5	4.1	3.5	4.1	1.1612	Ross 275kV
Mindi	132	31.5	3.5	3.3	2.8	4.9	3.7	4.9	3.7	4.9	3.7	4.9	3.7	1.1167	Ross 275kV
Moranbah	132	31.5	4.0	3.3	4.4	8	9.5	8.0	9.5	8.0	9.5	8.0	9.5	1.0977	Ross 275kV
Moranbah Plains	132	31.5	2.7	2.3	2.8	4.4	4.8	4.4	4.8	4.4	4.8	4.4	4.8	1.1540	Ross 275kV
Moranbah South	132	31.5	3.3	2.8	3.1	5.7	5.3	5.7	5.3	5.7	5.3	5.7	5.3	1.1216	Ross 275kV
Mt McLaren	132	31.5	1.6	1.4	1.3	2.1	2.3	2.1	2.3	2.1	2.3	2.1	2.3	1.2713	Ross 275kV
Nebo	132	31.5	7.1	6.2	7.8	14.3	16.3	14.4	16.4	14.4	16.4	14.4	16.4	1.0525	Ross 275kV
Nebo	275	40	4.6	4.0	5.0	12.1	12.1	12.2	12.2	12.2	12.2	12.2	12.2	1.0370	Ross 275kV
Newlands	132	31.5	2.5	1.3	1.7	3.6	4	3.6	4.0	3.6	4.0	3.6	4.0	1.1490	Ross 275kV
North Goonyella	132	31.5	2.9	2.5	2.5	4.5	3.7	4.5	3.7	4.5	3.7	4.5	3.7	1.1330	Ross 275kV
Oonooie	132	31.5	2.4	1.5	2.0	3.1	3.7	3.1	3.7	3.1	3.7	3.1	3.7	1.1772	Ross 275kV
Peak Downs	132	31.5	2.8	2.1	2.3	4.2	3.7	4.2	3.7	4.2	3.7	4.2	3.7	1.1364	Lilyvale 132kV

Table I.1 Indicative short circuit currents – Northern Queensland (continued)

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal 3 phase fault level (kA)	Indicative minimum N-1			Indicative maximum short circuit currents								SSLF	RefNode
				3 phase (kA)	L – G (kA)	3 phase (kA)	2025/26	2026/27		2027/28						
Pioneer Valley	132	31.5	4.1	3.6	4.5	6.6	7.5	6.6	7.6	6.6	7.6	6.6	7.6	1.0966	Ross 275kV	
Proserpine	132	31.5	2.5	1.8	2.3	3.6	4.1	3.5	4.1	3.5	4.1	3.5	4.1	1.1375	Ross 275kV	
Ross	132	31.5	4.8	4.4	5.9	19.6	21.9	19.6	21.9	19.6	21.9	19.6	21.9	1.0178	Ross 275kV	
Ross	275	40	2.8	2.5	3.3	10.4	11.3	10.4	11.3	10.4	11.3	10.4	11.3	1.0000	Ross 275kV	
Springlands	132	31.5	5.5	4.7	5.9	13	14.5	13.0	14.5	13.0	14.5	13.0	14.5	1.0384	Ross 275kV	
Stony Creek	132	31.5	2.7	1.2	1.4	3.8	3.7	3.8	3.7	3.8	3.7	3.8	3.7	1.1343	Ross 275kV	
Strathmore	132	31.5	5.6	4.8	6.1	13.4	15.4	13.4	15.4	13.4	15.4	13.4	15.4	1.0371	Ross 275kV	
Strathmore	275	40	3.5	3.0	4.1	11	12.1	10.9	12.1	10.9	12.1	10.9	12.1	1.0197	Ross 275kV	
Townsville PS	132	31.5	3.5	2.4	3.2	10.2	10.7	10.2	10.7	10.2	10.7	10.2	10.7	1.0535	Ross 275kV	
Townsville East	132	31.5	3.9	1.6	1.8	13.4	12.8	13.5	12.9	13.5	12.9	13.5	12.9	1.0403	Ross 275kV	
Townsville South	132	31.5	4.3	4.0	5.5	18.3	21.8	18.4	21.9	18.4	21.9	18.4	21.9	1.0305	Ross 275kV	
Tully	132	31.5	2.8	1.5	1.8	5	5.7	5.0	5.7	5.0	5.7	5.0	5.7	1.0892	Ross 275kV	
Tully South	275	40	1.7	1.2	1.4	3.9	3.7	3.9	3.7	3.9	3.7	3.9	3.7	1.0506	Ross 275kV	
Tumoulin	275	40	1.8	1.3	1.6	4.5	4.9	4.5	4.9	4.5	4.9	4.5	4.9	1.0540	Ross 275kV	
Turkinje	132	31.5	1.8	1.2	1.6	2.8	3.1	2.8	3.2	2.8	3.2	2.8	3.2	1.1932	Ross 275kV	
Walkamin	275	40	1.7	1.4	1.8	4.3	4.8	4.3	4.9	4.3	4.9	4.3	4.9	1.0575	Ross 275kV	
Wandoo	132	31.5	3.3	3.1	2.6	4.6	3.3	4.6	3.3	4.6	3.3	4.6	3.3	1.1241	Ross 275kV	
Woree	132	31.5	3.2	2.7	3.9	7.1	9.6	7.1	9.6	7.1	9.6	7.1	9.6	1.0730	Ross 275kV	
Woree	275	40	1.8	1.5	2.0	4.6	5.4	4.5	5.4	4.5	5.4	4.5	5.4	1.0530	Ross 275kV	
Wotonga	132	31.5	3.5	1.7	2.2	6	7	6.0	7.0	6.0	7.0	6.0	7.0	1.1132	Ross 275kV	
Yabulu South	132	31.5	3.8	3.3	4.0	11.4	10.8	11.4	10.8	11.4	10.8	11.4	10.8	1.0422	Ross 275kV	

Table I.2 Indicative short circuit currents – Central Queensland

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal 3 phase fault level (kA)	Indicative minimum N-1				Indicative maximum short circuit currents								SSLF	RefNode
				2025/26		2025/26		2026/27		2027/28		2026/27		2027/28			
				3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)		
Baralaba	132	31.5	3.4	2.1	2.0	4.4	3.8	4.4	3.8	4.4	3.8	4.4	3.8	4.4	3.8	1.1421	Lilyvale 132kV
Biloela	132	31.5	6.1	3.5	4.0	8.2	8.4	8.2	8.3	8.1	8.3	8.1	8.3	8.1	8.3	1.0889	Gin Gin 275kV
Blackwater	132	31.5	4.0	3.3	4.3	6	7.3	6	7.1	6.0	7.1	6.0	7.1	6.0	7.1	1.0480	Lilyvale 132kV
Bluff	132	31.5	2.6	2.3	2.6	3.5	4.3	3.5	4.3	3.5	4.3	3.5	4.3	3.5	4.3	1.1057	Lilyvale 132kV
Bouldercombe	132	31.5	10.2	6.3	7.8	15	17.2	15	17.3	15.1	17.3	15.1	17.3	15.1	17.3	1.0595	Gin Gin 275kV
Bouldercombe	275	40	10.1	8.6	10.2	22	20.8	22	21.3	22.5	21.3	22.5	21.3	22.5	21.3	1.0375	Gin Gin 275kV
Broadsound	275	40	6.0	4.9	6.7	16.1	18.7	16.1	17.7	16.5	17.7	16.5	17.7	16.5	17.7	1.0434	Lilyvale 132kV
Bundoora	132	31.5	5.2	4.4	5.2	9.5	9.2	9.5	9.2	9.5	9.2	9.5	9.2	9.5	9.2	1.0120	Lilyvale 132kV
Callemondah	132	31.5	16.0	6.7	7.1	22.4	24.9	22.4	25.0	22.5	25.0	22.5	25.0	22.5	25.0	1.0397	Gin Gin 275kV
Calliope River	132	40	17.5	14.2	18.0	25.2	30.2	25.2	30.3	25.4	30.3	25.4	30.3	25.4	30.3	1.0372	Gin Gin 275kV
Calliope River	275	40	10.4	8.7	11.3	22.1	25.1	22.1	25.6	22.6	25.6	22.6	25.6	22.6	25.6	1.0231	Gin Gin 275kV
Calvale	275	40	10.2	8.4	10.7	24.4	26.5	24.4	26.8	24.6	26.8	24.6	26.8	24.6	26.8	1.0379	Gin Gin 275kV
Calvale (1T)	132	31.5	6.6	2.8	3.1	8.6	9.4	8.6	9.3	8.6	9.3	8.6	9.3	8.6	9.3	1.0839	Gin Gin 275kV
Calvale (2T)	132	31.5	6.8	3.1	3.3	9	9.8	9	9.8	8.9	9.8	8.9	9.8	8.9	9.8	1.0822	Gin Gin 275kV
Duaringa	132	31.5	1.9	1.6	1.4	2.3	2.9	2.3	2.9	2.3	2.9	2.3	2.9	2.3	2.9	1.2140	Lilyvale 132kV
Dysart	132	31.5	3.2	1.9	2.4	4.8	5.4	4.8	5.4	4.8	5.4	4.8	5.4	4.8	5.4	1.1041	Lilyvale 132kV
Egans Hill	132	31.5	6.4	1.6	1.8	8.5	8.3	8.5	8.3	8.5	8.3	8.5	8.3	8.5	8.3	1.0851	Gin Gin 275kV
Gladstone PS	132	40	16.0	12.6	14.8	22.1	25.2	22.1	25.3	22.2	25.3	22.2	25.3	22.2	25.3	1.0411	Gin Gin 275kV
Gladstone PS	275	40	9.9	8.4	10.7	20.4	22.7	20.4	23.0	20.9	23.0	20.9	23.0	20.9	23.0	1.0241	Gin Gin 275kV
Gladstone South	132	31.5	12.3	9.6	11.1	16.4	17.3	16.4	17.3	16.4	17.3	16.4	17.3	16.4	17.3	1.0479	Gin Gin 275kV
Glencoe	275	40	-	-	-	-	-	-	9.4	9.4	9.5	9.4	9.5	9.4	9.5	-	-
Grantleigh	132	31.5	2.3	2.0	1.7	2.7	2.8	2.7	2.8	2.7	2.8	2.7	2.8	2.7	2.8	1.2084	Gin Gin 275kV
Gregory	132	31.5	5.7	4.7	6.0	10.6	11.8	10.6	11.8	10.6	11.8	10.6	11.8	10.6	11.8	1.0027	Lilyvale 132kV

Table I.2 Indicative short circuit currents – Central Queensland (continued)

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal fault level (kA)			Indicative minimum N-1			Indicative maximum short circuit currents						SSLF	RefNode
			3 phase (kA)	L-G (kA)	3 phase (kA)	2025/26	2025/26	2025/26	2025/26	2026/27	2026/27	2026/27	2026/27	2027/28		
Larcom Creek	275	40	9.2	3.3	3.3	4.4	16.7	18.4	17.0	18.5	17.0	18.5	17.0	18.5	1.0296	Gin Gin 275kV
Larcom Creek	132	31.5	7.9	4.2	4.2	5.0	12.5	14.2	12.6	14.2	12.6	14.2	12.6	14.2	1.0597	Gin Gin 275kV
Lilyvale	132	31.5	5.9	4.8	4.8	6.3	11.2	13	11.3	13.0	11.3	13.0	11.3	13.0	1.0000	Lilyvale 132kV
Lilyvale	275	40	3.5	2.6	2.6	3.2	6.8	6.6	6.8	6.6	6.8	6.6	6.8	6.6	1.0216	Lilyvale 132kV
Moura	132	31.5	3.2	1.5	1.5	2.0	4.4	5.4	4.4	5.3	4.4	5.3	4.4	5.3	1.1545	Gin Gin 275kV
Muranu	275	40	-	-	-	-	-	-	14.9	14.2	14.9	14.2	14.9	14.2	-	-
Norwich Park	132	31.5	2.7	2.5	2.5	2.1	3.7	2.7	3.7	2.7	3.7	2.7	3.7	2.7	1.1087	Lilyvale 132kV
Pandoin	132	31.5	5.4	1.2	1.2	1.3	7	6.1	7.0	6.1	7.0	6.1	7.0	6.1	1.0971	Gin Gin 275kV
Raglan	275	40	7.7	4.3	4.3	3.8	12.5	11.1	12.6	11.2	12.6	11.2	12.6	11.2	1.0375	Gin Gin 275kV
Rockhampton (1T)	132	31.5	5.1	1.8	1.8	2.1	6.6	6.4	6.5	6.4	6.5	6.4	6.5	6.4	1.1022	Gin Gin 275kV
Rockhampton (5T)	132	31.5	5.0	1.8	1.8	2.1	6.3	6.2	6.3	6.2	6.3	6.2	6.3	6.2	1.1047	Gin Gin 275kV
Stanwell	275	40	10.8	9.0	9.0	11.2	25.2	26.2	25.8	27.3	25.8	27.3	25.8	27.3	1.0381	Gin Gin 275kV
Stanwell	132	31.5	4.8	3.7	3.7	4.3	6	6.5	6.0	6.5	6.0	6.5	6.0	6.5	1.1085	Gin Gin 275kV
Wurdong	275	40	9.4	6.4	6.4	6.4	17.3	17.1	17.7	17.3	17.7	17.3	17.7	17.3	1.0267	Gin Gin 275kV
Wycarbah	132	31.5	3.7	3.0	3.0	3.2	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4	1.1346	Gin Gin 275kV
Yarwun	132	31.5	8.0	4.5	4.5	6.0	13.1	15	13.1	15.0	13.1	15.0	13.1	15.0	1.0617	Gin Gin 275kV

Table I.3 Indicative short circuit currents – Southern Queensland

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal 3 phase fault level (kA)	Indicative minimum N-1				Indicative maximum short circuit currents								SSLF	RefNode	
				2025/26		2025/26		2025/26		2026/27		2026/27		2027/28				
				3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	3 phase (kA)	L – G (kA)	
Abermain	110	31.5	12.9	10.4	11.7	22.2	25	22.0	24.7	22.0	24.7	22.0	24.7	22.0	24.7	22.0	24.7	Greenbank 275kV
Abermain	275	40	8.1	6.3	7.0	19.7	19.8	20.2	20.1	20.2	20.1	20.2	20.1	20.2	20.1	20.2	20.1	Greenbank 275kV
Algerster	110	31.5	12.8	11.5	12.5	21.8	21.3	21.6	21.0	21.6	21.0	21.6	21.0	21.6	21.0	21.6	21.0	Greenbank 275kV
Ashgrove West	110	31.5	12.1	9.3	10.4	19.8	20.6	19.5	20.3	19.6	20.3	19.6	20.3	19.6	20.3	19.6	20.3	Greenbank 275kV
Banana Bridge	275	40	7.5	5.0	6.9	27.4	29	28.2	29.7	28.3	29.7	28.3	29.7	28.3	29.7	28.3	29.7	Western Downs 275kV
Belmont	110	40	15.3	14.3	18.5	29.1	35.7	29.0	35.4	29.0	35.4	29.0	35.4	29.0	35.4	29.0	35.4	Greenbank 275kV
Belmont	275	40	7.8	7.2	8.8	18.3	18.8	18.6	18.8	18.7	18.8	18.7	18.8	18.7	18.8	18.7	18.8	Greenbank 275kV
Blackstone	110	40	14.5	13.3	15.2	26.5	28.8	26.4	28.6	26.4	28.6	26.4	28.6	26.4	28.6	26.4	28.6	Greenbank 275kV
Blackstone	275	40	8.6	7.8	9.8	23.4	25.4	24.5	26.9	24.6	26.9	24.6	26.9	24.6	26.9	24.6	26.9	Greenbank 275kV
Blackwall	275	40	9.9	8.3	10.5	24.8	26	25.5	26.3	25.6	26.3	25.6	26.3	25.6	26.3	25.6	26.3	Greenbank 275kV
Blythdale	132	31.5	3.1	2.3	3.0	4.3	5.3	4.3	5.3	4.3	5.3	4.3	5.3	4.3	5.3	4.3	5.3	Western Downs 275kV
Braemar	330	50	7.0	5.7	7.0	25.5	27.1	25.7	27.2	25.9	27.2	25.9	27.2	25.9	27.2	25.9	27.2	Western Downs 275kV
Braemar (1T)	275	50	9.9	5.3	7.1	28.4	32.4	28.4	32.3	28.5	32.3	28.5	32.3	28.5	32.3	28.5	32.3	Western Downs 275kV
Braemar (2T)	275	50	7.9	4.5	6.1	30.2	32.6	30.6	32.8	30.7	32.8	30.7	32.8	30.7	32.8	30.7	32.8	Western Downs 275kV
Bulli Creek	330	50	6.8	6.2	6.9	20.2	15.6	20.6	15.7	21.1	15.7	21.1	15.7	21.1	15.7	21.1	15.7	Western Downs 275kV
Bulli Creek	132	31.5	3.0	3.0	3.4	3.8	4.3	4.3	4.7	4.3	4.7	4.3	4.7	4.3	4.7	4.3	4.7	Western Downs 275kV
Bundamba	110	31.5	11.1	7.6	7.8	17.7	16.9	17.5	16.6	17.5	16.6	17.5	16.6	17.5	16.6	17.5	16.6	Greenbank 275kV
Cameby	132	31.5	4.7	3.6	4.1	9.1	8.5	9.2	8.6	9.2	8.6	9.2	8.6	9.2	8.6	9.2	8.6	Western Downs 275kV
Chinchilla	132	31.5	3.8	3.0	3.5	6.5	7.9	6.5	7.9	6.5	7.9	6.5	7.9	6.5	7.9	6.5	7.9	Western Downs 275kV
Clifford Creek	132	31.5	4.0	3.3	3.3	5.9	5.3	6.0	5.3	6.0	5.3	6.0	5.3	6.0	5.3	6.0	5.3	Western Downs 275kV
Columboola	132	31.5	6.8	4.9	6.7	17.3	20.4	17.7	20.8	17.7	20.8	17.7	20.8	17.7	20.8	17.7	20.8	Western Downs 275kV
Columboola	275	40	5.3	3.9	4.9	14.3	13.3	14.9	13.6	14.9	13.6	14.9	13.6	14.9	13.6	14.9	13.6	Western Downs 275kV
Condabri Central	132	31.5	4.9	3.9	3.9	9.2	6.8	9.3	6.8	9.3	6.8	9.3	6.8	9.3	6.8	9.3	6.8	Western Downs 275kV

Table I.3 Indicative short circuit currents – Southern Queensland (continued)

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal 3 phase fault level (kA)	Indicative minimum N-1			Indicative maximum short circuit currents						SSLF	RefNode
				2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2026/27	2026/27	2026/27		
Condabri North	132	31.5	6.1	4.6	5.5	13.8	12.9	14.1	13.0	14.1	13.0	1.0438	Western Downs 275kV	
Condabri South	132	31.5	4.1	3.3	2.9	6.6	4.5	6.7	4.5	6.7	4.5	1.0804	Western Downs 275kV	
Coopers Gap	275	40	8.1	3.1	4.1	18.5	18.2	18.4	18.0	18.4	18.0	1.0158	Western Downs 275kV	
Diamondy	275	40	7.9	6.7	5.6	15.1	11.5	15.4	12.9	15.4	12.9	1.0222	Western Downs 275kV	
Dinoun South	132	31.5	4.4	3.6	4.1	6.8	7	6.9	7.1	6.9	7.1	1.0707	Western Downs 275kV	
Eurombah	132	31.5	4.6	3.4	4.4	7.2	8.8	7.4	9.0	7.4	9.0	1.0672	Western Downs 275kV	
Eurombah	275	40	2.7	1.2	1.4	4.7	4.8	4.8	4.9	4.8	4.9	1.0491	Western Downs 275kV	
Fairview	132	31.5	3.0	2.5	3.3	4.1	5.1	4.1	5.2	4.1	5.2	1.1177	Western Downs 275kV	
Fairview South	132	31.5	3.7	2.9	3.9	5.4	6.8	5.5	6.8	5.5	6.8	1.0895	Western Downs 275kV	
Gin Gin	132	31.5	8.6	6.7	7.6	12.5	13.7	13.4	14.4	13.4	14.4	1.0185	Gin Gin 275kV	
Gin Gin	275	40	6.1	4.3	4.5	9.6	9.1	10.2	9.4	10.2	9.4	1.0000	Gin Gin 275kV	
Goodna	110	40	14.6	12.9	13.5	26.5	28.3	26.4	28.0	26.4	28.0	1.0164	Greenbank 275kV	
Goodna	275	40	7.8	5.5	6.1	17.4	16.8	17.6	16.6	17.7	16.6	1.0078	Greenbank 275kV	
Greenbank	275	50	8.5	7.7	10.0	22.7	25.2	23.5	25.9	23.6	25.9	1.0000	Greenbank 275kV	
Halys	275	50	12.3	9.6	11.9	35.7	30.9	36.0	31.1	36.1	31.1	1.0129	Western Downs 275kV	
Kumbarilla Park	132	31.5	7.6	4.3	5.2	11.7	13.4	11.5	13.2	11.5	13.2	1.0431	Western Downs 275kV	
Kumbarilla Park	275	40	6.7	1.4	1.6	17.1	16.1	17.0	16.0	17.1	16.0	1.0173	Western Downs 275kV	
Loganlea	110	40	13.3	12.0	14.9	23.5	28	23.3	27.7	23.4	27.7	1.0170	Greenbank 275kV	
Loganlea	275	40	7.3	6.0	7.1	16	16.2	16.2	16.2	16.3	16.2	1.0059	Greenbank 275kV	
Middle Ridge	110	40	10.6	8.8	11.4	22.1	26	21.8	25.6	21.9	25.6	1.0350	Greenbank 275kV	
Middle Ridge	275	40	7.6	6.7	8.2	20.2	19.8	20.2	19.7	20.5	19.7	1.0136	Greenbank 275kV	
Middle Ridge (4T)	330	50	5.8	3.6	3.6	14.1	13.3	14.0	13.2	14.2	13.2	1.0244	Western Downs 275kV	
Middle Ridge (5T)	330	50	5.9	3.6	3.5	14.5	13.8	14.5	13.6	14.7	13.6	1.0240	Western Downs 275kV	

Table I.3 Indicative short circuit currents – Southern Queensland (continued)

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal 3 phase fault level (kA)	Indicative minimum N-1			Indicative maximum short circuit currents							SSLF	RefNode																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
				2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26			2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26	2025/26

Table I.3 Indicative short circuit currents – Southern Queensland (continued)

Substation	Voltage (kV)	Substation Design Rating (kA)	Indicative minimum system normal 3 phase fault level (kA)	Indicative minimum N-1			Indicative maximum short circuit currents								SSLF	RefNode
				3 phase (kA)	L – G (kA)	3 phase (kA)	2025/26	2025/26		2025/26		2026/27		2027/28		
Rocklea (2T)	275	40	5.4	2.3	2.6	9.2	8.7	9.1	8.6	9.1	8.6	9.1	8.6	1.0235	Greenbank 275kV	
Runcorn	110	31.5	11.8	8.6	9.7	19.4	19.6	19.2	19.2	19.2	19.2	19.2	19.2	1.0237	Greenbank 275kV	
South Pine	275	40	9.3	7.9	10.6	21.6	25.4	22.0	25.7	22.0	25.7	22.0	25.7	1.0099	Greenbank 275kV	
South Pine (East)	110	40	13.6	11.5	15.5	24	31	23.6	32.5	23.6	32.5	23.6	32.5	1.0253	Greenbank 275kV	
South Pine (West)	110	40	12.9	10.1	11.7	21.3	24.6	21.1	24.2	21.1	24.2	21.1	24.2	1.0249	Greenbank 275kV	
Sumner	110	31.5	12.8	9.1	9.9	21.4	21.2	21.2	20.8	21.2	20.8	21.2	20.8	1.0226	Greenbank 275kV	
Swanbank E	275	40	8.5	7.3	8.9	23	24.8	24.1	26.1	24.1	26.1	24.1	26.1	1.0017	Greenbank 275kV	
Tangkam	110	31.5	6.0	4.2	5.1	13.8	12.6	13.7	12.5	13.7	12.5	13.7	12.5	1.0729	Greenbank 275kV	
Tarong	66	31.5	12.3	7.0	7.7	15.5	16.6	15.1	16.2	15.1	16.2	15.1	16.2	1.0642	Greenbank 275kV	
Tarong	275	50	11.9	9.5	12.7	37.4	39.5	37.6	39.4	37.6	39.4	37.7	39.4	1.0111	Greenbank 275kV	
Teebar Creek	132	31.5	7.2	4.5	5.3	10.1	11.1	11.6	13.1	11.6	13.1	11.6	13.1	1.0469	Gin Gin 275kV	
Teebar Creek	275	40	4.9	2.3	2.6	7.5	7.2	9.0	9.9	9.0	9.9	9.0	9.9	1.0319	Gin Gin 275kV	
Tennyson	110	31.5	10.8	1.8	1.9	16.7	16.7	16.5	16.4	16.5	16.4	16.5	16.4	1.0309	Greenbank 275kV	
Tummalville	330	50	6.2	5.8	7.1	20.2	19	20.3	19.0	21.2	19.0	21.2	19.0	1.0210	Western Downs 275kV	
Upper Kedron	110	40	13.1	11.4	11.8	22.1	19.8	21.9	19.5	21.9	19.5	21.9	19.5	1.0227	Greenbank 275kV	
Wandoan South	132	31.5	5.5	4.2	5.8	10.2	13.1	10.6	13.5	10.6	13.5	10.6	13.5	1.0512	Western Downs 275kV	
Wandoan South	275	40	3.8	3.0	4.0	8.2	9.3	8.9	9.8	8.9	9.8	8.9	9.8	1.0272	Western Downs 275kV	
West Darra	110	31.5	14.5	13.3	13.9	26	24.6	25.8	24.3	25.8	24.3	25.8	24.3	1.0173	Greenbank 275kV	
Western Downs	275	50	7.7	5.1	7.1	29.8	32.4	30.8	33.4	30.8	33.4	30.9	33.4	1.0000	Western Downs 275kV	
Woolooga	132	31.5	9.0	7.1	9.2	14.5	18	16.0	19.8	16.0	19.8	16.0	19.8	1.0394	Gin Gin 275kV	
Woolooga	275	40	6.4	5.4	6.8	10.8	12.4	12.1	13.6	12.1	13.6	12.1	13.6	1.0223	Gin Gin 275kV	
Yuleba North	132	31.5	5.0	3.9	4.9	8.2	9.9	8.4	10.1	8.4	10.1	8.4	10.1	1.0590	Western Downs 275kV	
Yuleba North	275	40	3.4	2.7	3.5	6.5	7.1	6.9	7.3	6.9	7.3	6.9	7.3	1.0349	Western Downs 275kV	