

Essential Energy - Register of Completed Embedded Generation Projects

Year Completed	Premise Classification	Location	Technology of Generating Unit	Connection Volatge	Generating Unit Make and Model	Maximum Power Generation Capacity (MW)	Contribution to fault levels	Size and rating of relevant transformer	SLD of the connection arrangement (refer CEOP8012 Protection Guidelines)	Protection and communication systems	Voltage Control / Power Factor Control and Reactive Power Capability (MVAR)
2024	Solar PV - Generation	Narromine	Asynchronous-Solar PV-Single axis tracking	22kV	2 x 3MVA SMA SC-3000EV inverters	4.99	0.17	1x 6MVA 22/0.655/0.655kV Dy11y11 Tx	5.4.5	CEOP8012	Power Factor Control; +/- 2.198
2024	Solar PV - Generation	Werris Creek	Asynchronous-Solar PV-Single axis tracking	11kV	27 x 185 kVA Huawei SUN2000-185KTL-H1 inverters	4.99	0.343	2 x 3.15 MVA (6.3 MVA) 11/0.8 Dy11 TX	5.4.5	CEOP8012	Power Factor Control; +/- 3
2024	Solar PV - Generation	Grong Grong	Asynchronous-Solar PV-Single axis tracking	11kV	1 x 1818kVA PVS980-58-1818kVA inverter	1.48	0.115	1 x 2MVA 0.6/11kV Dy11 TX	5.4.5	CEOP8012	Power Factor Control; +/- 1.5
2024	Solar PV - Generation	Cootamundra	Asynchronous-Solar PV-Single axis tracking	11kV	1 x SMA SC 4600 UP Inverter	4.6	0.241	1 x 4.14MVA 11/0.69kV Dy11 Tx	5.4.5	CEOP8012	Power Factor Control; +2.5 /- 3
2023	Solar HV - Generation	Narrandera	Asynchronous-Solar PV-Single axis tracking	11kV	2 x 2.475MVA Sungrow SG2475HV PV Inverters	4.76	0.337 kA	1 x 5MVA 11/0.55/0.55kV Dy11y11 TX	5.4.5	CEOP8012	Power Factor Control; +/- 2
2023	Solar HV - Generation	Nyngan	Asynchronous-Solar PV-Single axis tracking	22kV	2 x 3MVA SMA SC-3000EV inverters	4.99	0.193kA	2 x 3MVA 22/0.655kV	5.4.5	CEOP8012	Power Factor Control; +/- 3
2023	Solar HV - Generation	Coleambally	Asynchronous-Solar PV-Single axis tracking	11kV	2.475MVA Sungrow SG2475HV PV inverters	4.55	0.37kA	1 x 5MVA 11/0.55/0.55kV Dy11y11 TX	5.4.5	CEOP8012	Power Factor Control; +/- 2.2
2023	Solar HV - Generation	Dubbo	Asynchronous-Solar PV-Single axis tracking	11kV	2 x 2.475MVA Sungrow SG2475HV PV Inverters	4.61	0.37kA	1 x 5MVA 11/0.55/0.55 kV	5.4.5	CEOP8012	Power Factor Control; +/- 2
2023	Solar HV - Generation	Griffith	Asynchronous-Solar PV-Single axis tracking	33kV	2 x 2.475MVA Sungrow SG2475HV PV Inverters	4.8	0.37kA	1 x 5MVA 33/0.55/0.55 kV Dy11y11 TX	5.4.5	CEOP8012	Power Factor Control; +/- 3
2023	Solar HV - Generation	Armidale	Asynchronous-Solar PV-Single axis tracking	11kV	2 x 3MVA SMA SC-3000EV inverters	4.99	0.279 kA;	1 x 6MVA 11/0.655/0.655kV Dy11y11 TX	5.4.5	CEOP8012	Power Factor Control; +/- 3
2023	Solar HV - Generation	Albury	Asynchronous-Solar PV-Single axis tracking	22kV	2 x 3MVA SMA SC-3000EV inverters	4.99	0.193kA	2 x 3MVA 22/0.655kV Dy11 TX	5.4.5	CEOP8012	Power Factor Control; +/- 3
2023	Wind - Generation	Orange	Asynchronous-Wind Turbine-Onshore	132kV	38 x GE GE137- 3.83 MW Wind Turbine Generators (DFIG)	154.54	1.273 kA	1 x 175MVA 132/33/33 kV YNyn11D11	5.4.1	CEOP8012	Voltage Control; +/- 55.3
2023	Cogen - Generation	Moree	Asynchronous-Solar PV-Single axis tracking Storage - Battery	22kV	2 x 2.475MVA Sungrow SG2475 inverters 4 x Sungrow ST2752-UX storage units, 1 x Sungrow SG4950 HV-MV, Converter unit	3.325	0.182 kA;	1 x 4.95MVA 22/0.55/.55 Dy11y11	5.4.5	CEOP8012	Power Factor Control; +1.09/-0.68
2023	Solar HV - Generation	Wagga Wagga	Asynchronous-Solar PV-Single axis tracking	132kV	38 x 1.637MVA Ingeteam 1640TL B630 inverters	53	0.328 kA	1 x 93MVA 132/33kV YNd11	5.4.1	CEOP8012	Power Factor Control; +/- 20.93
2022	Solar HV - Generation	Temora	Asynchronous-Solar PV-Single axis tracking	132kV	29 x 3630 kW Power Electronics Inverters HEMK 3630	90	0.602kA	1 x 132/33kV 100MVA	5.4.1	CEOP8012	Voltage Control; +23/-35
2022	Solar HV - Generation	Goondiwindi	Asynchronous-Solar PV Single axis tracking Storage - Battery	22kV	2 x 2.499 SMA SCS2530 UP-XT Inverters ; 4x Sungrow ST2752	4.99	0.204kA	2 x 22/0.660kV 3MVA	5.4.5	CEOP8012	Voltage Control; +/-2.24
2021	Solar HV - Generation	Griffith	Asynchronous-Solar PV-Single axis tracking	132kV	40 x 2.75MVA SMA Sunny Central 2750-EV Inverters	85	0.41kA	1 x 132/33kV 60/100MVA	5.4.1	CEOP8012	Voltage Control; +/- 33.57
2021	Solar HV - Generation	Wagga Wagga	Asynchronous-Solar PV-Single axis tracking	132kV	40 x SMA Sunny Central 2750-EV inverters	90	0.7kA	1 x 132/33kV 120MVA	5.4.1	CEOP8012	Voltage Control; +10/-35.55
2021	Solar HV - Generation	Temora	Asynchronous-Solar PV-Single axis tracking	66kV	22 x 1.640MVA [OEM] Ingeteam 1640TL B630 Inverters	30	0.347kA	1 x 66/22kV 24/40MVA	5.4.4	CEOP8012	Voltage Control; +/- 11.9
2021	Solar HV - Generation	Leeton	Asynchronous-Solar PV-Single axis tracking	33kV	49 x Huawei SUN2000-90KTL-HW Inverters	4.9	0.087kA	1 x 33/0.8 kV 6MVA	5.4.5	CEOP8012	Power Factor Control; +/- 2.45
2021	Solar HV - Generation	Albury	Asynchronous-Solar PV-Single axis tracking	22kV	2 x 1.637 MVA INGECON SUN PowerMax 1640TL B630 inverters	30	1.230kA	8 x 22/0.63kV 5MVA	5.4.4	CEOP8012	Voltage Control; +/- 11.96
2021	Solar HV - Generation	Leeton	Asynchronous-Solar PV-Single axis tracking	33kV	49 x Huawei SUN2000-90KTL-HW Inverters	4.99	0.087kA	1 x 33/0.8 kV 6MVA	5.4.5	CEOP8012	Power Factor Control; +/- 2.45
2020	Solar HV - Generation	Parkes	Asynchronous-Solar PV-Single axis tracking	11kV	2 x 1.637 MVA INGECON SUN PowerMax 1640TL B630 inverters	4.99	2.65kA	2 x 66/22kV 5MVA	5.4.5	CEOP8012	Power Factor Control; +/-1.971
2020	Solar HV - Generation	Parkes	Asynchronous-Solar PV-Single axis tracking	22kV	2 x 66/22kV 5MVA transformers equipped with TOLS	4.99	1.192kA	2 x 66/22kV 5MVA	5.4.5	CEOP8012	Power Factor Control; +/- 3.33
2020	Solar HV - Generation	Parkes	Asynchronous-Solar PV-Single axis tracking	66kV	20 x SMA Sunny Central SC 2750-EV inverters	50	0.59kA	1 x 66/33kV 55MVA	5.4.1	CEOP8012	Power Factor Control; +12.09/-19.75
2020	Cogen - Generation	Armidale	Asynchronous-Solar PV-Fixed	11kV	2.75MVA SMA Invertor	3	6.936kA	1 x 11/0.433kV 2.75MVA	5.4.4	CEOP8012	Power Factor Control; +/-0.547