

## Essential Energy - Register of Completed Embedded Generation Projects

Year Completed	Location	Technology of Generating Unit	Connection Voltage	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)
2022	Goondwindi	Asynchronous-Solar PV;Storage-Single axis tracking;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	<a href="#">CEOP8012</a>	Voltage Control; +/-2.24
2022	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	<a href="#">CEOP8012</a>	Voltage Control; +23/-35
2021	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	<a href="#">CEOP8012</a>	Power Factor Control; +/- 2.45
2021	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	<a href="#">CEOP8012</a>	Voltage Control; +/- 11.9
2021	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	<a href="#">CEOP8012</a>	Voltage Control; +/- 11.96
2021	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	<a href="#">CEOP8012</a>	Voltage Control; +/- 33.57
2021	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	<a href="#">CEOP8012</a>	Voltage Control; +10/-35.55
2021	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	<a href="#">CEOP8012</a>	Power Factor Control; +/- 2.45
2020	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	<a href="#">CEOP8012</a>	Power Factor Control; +12.09/-19.75
2020	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	<a href="#">CEOP8012</a>	Power Factor Control; +/- 3.33
2020	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	<a href="#">CEOP8012</a>	Power Factor Control; +/-1.971
2020	Armidale	Asynchronous-Solar PV-Fixed	11kV	2.75MVA SMA Invertor	3	6.936KA	1 x 11/0.433kV 2.75MVA	5.4.4	<a href="#">CEOP8012</a>	Power Factor Control; +/-0.547
2019	Nyngan	Asynchronous-Solar PV-Single axis tracking	132kV	60x2.2MVA SMA SC2200	105	0.662kA	53 x 0.385 / 22 kV 2.5 MVA	5.4.1	<a href="#">CEOP8012</a>	Voltage Control; +/- 41.7
2019	Moree	Asynchronous-Solar PV-Single axis tracking	22kV	2 x SMA SC3000-EV Inverters	4.999	0.223kA	1 x 22/0.65kV 6MVA	5.4.5	<a href="#">CEOP8012</a>	Power Factor Control; +/-1.82
2019	FW South	Asynchronous-Solar PV-Fixed	22kV	48 x x SMA STP60 string inverters	2.88	0.960kA	1x 0.6kV/33kV	5.4.5	<a href="#">CEOP8012</a>	Power Factor Control; +/-1.37
2019	FW North	Asynchronous-Solar PV-Fixed	22kV	DEMI Genius	0.5	0.014kA	1x 22/0.433kV 1.5MVA	5.4.5	<a href="#">CEOP8012</a>	Voltage Control; +/- 3.30
2018	Orange	Asynchronous-Solar PV-Single axis tracking	22kV	Sunny Central 2500-EV	50	1.57kA	20 x 11/0.55kV 2.5MVA	5.4.3	<a href="#">CEOP8012</a>	Voltage Control; +6.1/-9.6