

## Appendix A: Detailed Power Sector Data

Table A.1 lists the power stations in operation in South Africa as of 2012, giving the installed capacity by type, and the expected date of decommissioning.

**Table A.1** Current power plants in South Africa, 2012

Type of station	Name of station	Nominal capacity (MW)	Current proposed decommissioning schedule
Coal—baseload	Arnot	2,232	2025–2029
Coal—baseload	Duvha	3,450	2030–2034
Coal—baseload	Hendrina	1,865	2021–2027
Coal—baseload	Kelvin	600	
Coal—baseload	Kendal	3,840	2027, 2038–2043
Coal—baseload	Kriel	2,850	2026–2029
Coal—baseload	Lethabo	3,558	2035–2040
Coal—baseload	Majuba	3,843	2046–050
Coal—baseload	Matimba	3,690	2023, 2037–2041
Coal—baseload	Matimba B	3,990	
Coal—baseload	Matla	3,450	2029–2033
Coal—baseload	Pretoria West	180	
Coal—baseload	Rooiwal	300	
Coal—baseload	Tutuka	3,510	2024, 2035–2040
Coal—baseload	Medupi	4,788	
Coal—baseload	Kusile	4,800	
Nuclear-baseload	Koeberg	1,940	
Coal (return to service)—baseload	Camden	1,510	2020–2023
Coal (return to service)—baseload	Grootvlei	1,200	2025–2028
Coal (return to service)—baseload	Komati	940	2024–2028

(continued)

**Table A.1** (continued)

Type of station	Name of station	Nominal capacity (MW)	Current proposed decommissioning schedule
Hydroelectric—peaker	Gariep	360	
Hydroelectric	Steebras	180	
Hydroelectric—peaker	Vanderkloof	240	
Pumped Storage—peaker	Ingula	1,332	
Pumped Storage—peaker	Drakensberg	1,000	
Pumped Storage—peaker	Palmiet	400	
Natural Gas Turbine—peaker	Ankerlig	1,338	
Gas	Avon	670	
Gas	Dedisa	335	
Natural gas turbine—peaker	Gourikwa	746	
Natural gas turbine—peaker	Acacia	171	
Natural gas turbine—peaker	Port Rex	171	
Renewables—wind (under construction)	Amakhala Emoyeni	134.4	
Renewables—wind (under construction)	Coega	43.2	
Renewables—wind (under construction)	Cookhouse	138.6	
Renewables—wind (under construction)	Dorper	100	
Renewables—wind	Eastern Cape	80	
Renewables—wind (under construction)	Eastern Cape #2	27	
renewables—wind	Grassridge	61.5	
Renewables—wind	Hopefield	66.6	
Renewables—wind	Klipheuwel	30.1	
Renewables—wind	Klipheuwel	3	
Renewables—wind	Nobelsfontaine	73.8	
Renewables—wind	Sere	100	
Renewables—wind	Van Stadens	27	
CSP		100	
CSP (under construction)	Bokpoort	54.5	
CSP (under construction)	KaXu Solar One	100	

(continued)

**Table A.1** (continued)

Type of station	Name of station	Nominal capacity (MW)	Current proposed decommissioning schedule
CSP (under construction)	Khi Solar One	50	
CSP (under construction)	Xina Solar One	100	
Hydroelectric	First Falls	6	
Hydroelectric	Second Falls	11	
Hydroelectric	Colley Wobbles	42	
Hydroelectric	Ncora	2	
	<b>Total MWs</b>	45,710	

Source Eskom, South African department of energy and international energy agency

Table A.2 lists the renewable power projects that have been awarded under the REIPPPP bid windows, grouped by type.

**Table A.2** South African REIPPPP Bid Windows 1, 2 and 3 projects by renewable energy technology. Source Eberhard [8]

	Project name	Capacity awarded (MW)
Wind	1. Nobelsfontein Phase 1	75
	2. Dorper Wind Farm	97.5
	3. Dassieklip Wind Energy Facility	27
	4. Metrowind Van Stadens Wind Farm Onshore	27
	5. Kouga Red Cap Wind Farm—Oyster Bay	80
	6. Jeffreys Bay Onshore Wind	138
	7. Hopefield Wind Farm Onshore Wind	65.4
	8. Cookhouse Wind Farm Onshore Wind	138.6
	9. Gouda Wind Project	135.5
	10. Amakhala Wind Project	133.7
	11. Tsitsikamma Community Wind Farm	94.8
	12. Wind Farm West Coast 1	90.8
	13. Waainek Wind Power	23.3
	14. Grassridge Onshore Wind Project	59.8
	15. Chaba Wind Power	21
	16. Longyuan Mulilo Green Energy De Aar 2 North Wind	139
	17. Longyuan Mulilo De Aar Maanhaarberg Wind Energy	96.5
	18. Nojoli Wind Farm	96.5
	19. Loeriesfontein 2	138.2
	20. Noupoot	79.1
	21. Khobab Wind	137.7
	22. Red Cap—Gibson Bay	110

(continued)

**Table A.2** (continued)

	Project name	Capacity awarded (MW)
Photovoltaic (PV)	23. Letsatsi Solar Photovoltaic Park Photovoltaic	64
	24. Lesedi Solar Photovoltaic Park Photovoltaic	64
	25. Witkop Solar Park	30
	26. Touwsrivier Solar Park	36
	27. Soutpan Solar Park	28
	28. Mulilo Solar PV De Aar	10
	29. Mulilo Solar PV Prieska	20
	30. Konkoonsies Solar Energy Facility	9.7
	31. RustMo1 Solar Farm	6.9
	32. Kalkbult	72.5
	33. Aries Solar Energy Facility	9.7
	34. Slimsun Swartland Solar Park	5
	35. Mainstream Renewable Power De Aar PV	45.6
	36. Greefspan PV Power Plant	9.9
	37. Kathu Solar Plant	75
	38. Solar Capital De Aar	75
	39. Mainstream Renewable PowerDroogfontein	45.6
	40. Herbert PV Power Plant	20
	41. Solar Capital De Aar 3	75
	42. Sishen Solar Facility	74
	43. Aurora-Rietvlei Solar Power	9
	44. Vredendal Solar Park	8.8
	45. Linde	36.8
	46. Dreunberg	69.6
	47. Jasper Power Company	75
	48. Boshoff Solar Park	60
	49. Upington Airport	8.9
	50. Adams Solar PV 2	75
	51. Electra Capital (Pty) Ltd	75
	52. Mulilo Sonnedix Prieska PV	75
	53. Mulilo Prieska PV	75
54. Tom Burke Solar Park	60	
55. Pulida Solar Park	75	
CSP <sup>a</sup>	56. Kaxu Solar One	100
	57. Khi Solar One	50
	58. Bokpoort CSP project	50
	59. Ilanga CSP 1 / Karoshoek Solar One	100
	60. !XiNa Solar One	100
Other	61. Stortemelk Hydro Power Plant	4.4
	62. Neusberg Hydro Electrical Project	10
	63. Mkuze Biomass	16.5
	64. Joburg Landfill Gas to Electricity	18

<sup>a</sup>Concentrated solar power