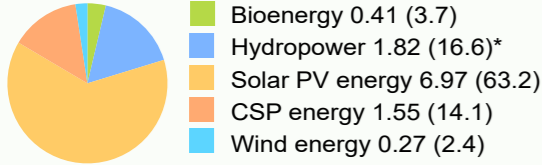


South Africa • Renewable energy

Gross electricity generation from renewable sources by 2021, TWh (%)



Total: 11.03 (100)

Source: Renewable Energy Statistics 2023 © IRENA
* excluding pumped storage

Major biomass power plants over 200 000 t/y (May 2017):

- 1 Sezela, Illovo Sugar
- 2 Felixton, Tongaat Hulett Sugar
- 3 Maidstone, Tongaat Hulett Sugar
- 4 Amatikulu, Tongaat Hulett Sugar
- 5 Malelane, TSB Sugar Holding Ltd.
- 6 Noodsberg, Illovo Sugar

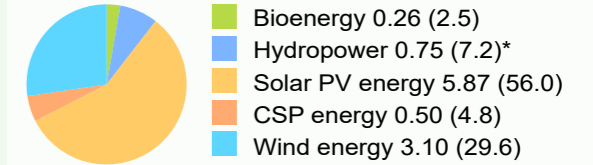
Major bioethanol plants:

- 1 Secunda, Sasol
- 2 Durban, NCP Alcohols
- 3 Durban, Illovo Sugar-Merebank
- 4 Durban, Greenpoint Alcohols
- 5 Umvoti Valley, KZN, Glendale Distilling

Major biogas plants:

- 1 Bronkhorstspruit, Bio2Watt
- 2 Cape Dairy, Bio2Watt
- 3 Mossel Bay, PetroSA Biogas Project

Total installed renewable energy power capacity by 2022, GW (%)



Total: 10.49 (100)

Source: Renewable Energy Statistics 2023 © IRENA
* excluding pumped storage

Key solar PV power plants over 70 MWe, MWe:

- 1 Solar Capital De Aar I, III, 150.0
- 2 Jasper Solar Energy Project, 75.0
- 3 Adams, 82.5
- 4 Pulida, 82.5
- 5 Mulilo Sonnedix Prieska, 75.0
- 6 Paleisheuwel, 82.5
- 7 Sishen, 74.0

Major landfill gas-to-energy plants over 1 MW, MW:

- 1 Johannesburg, 18.0
- 2 Bisasar Road, Durban, 6.5
- 3 Mariannhill, Durban, 1.0

CSP Parabolic type with thermal storage plants over 1 MW, MW:

- 1 Kathu Solar Park, 100*
- 2 Xina Solar One, 100*
- 3 Ilanga I, 100*

* under construction

CSP Tower type with thermal storage plants over 1 MW, MW:

- 1 Khi Solar One, 50

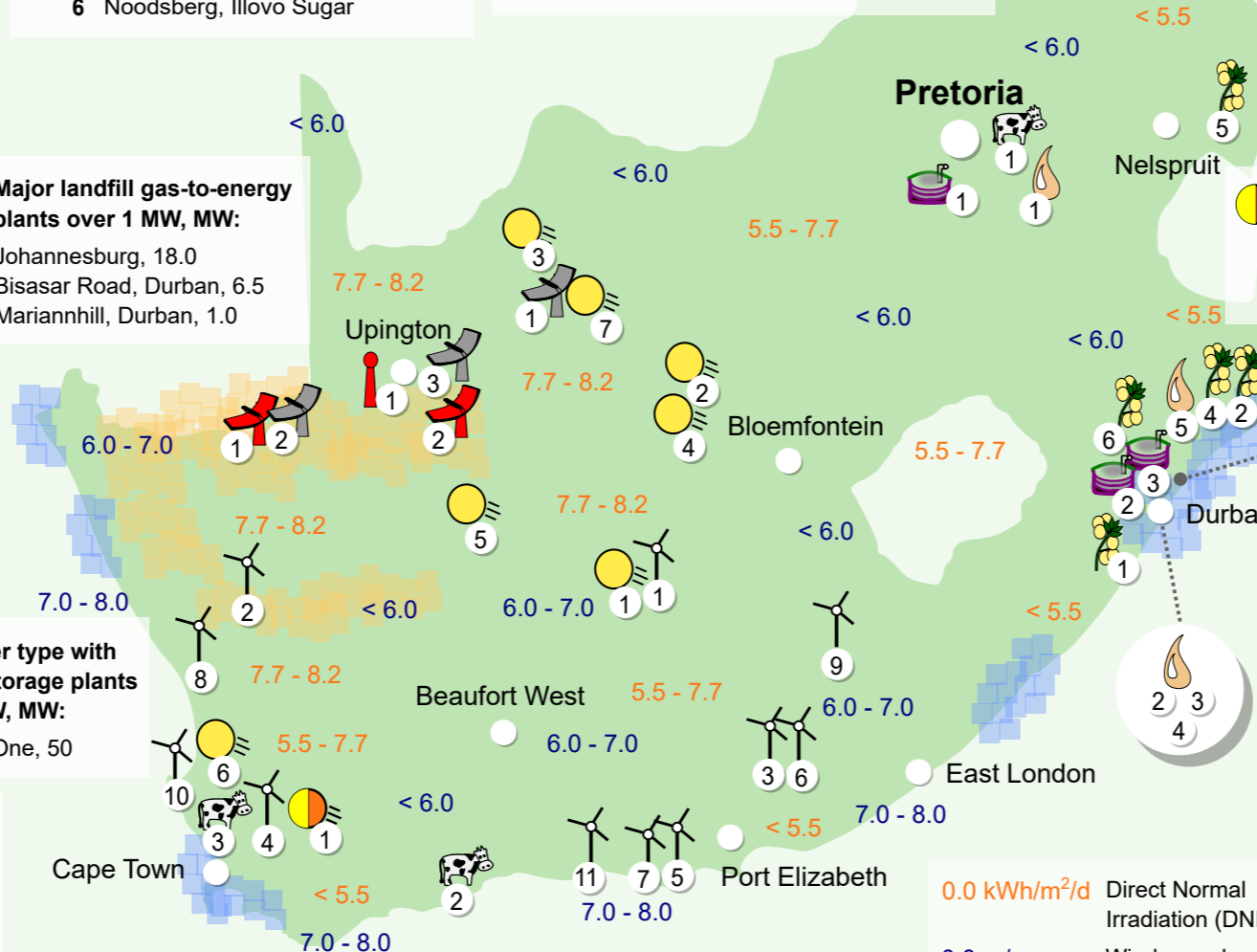
CSP Parabolic type with thermal storage plants over 1 MW, MW:

- 1 KaXu Solar One, 100
- 2 Bokpoort, 50

Wind power plants over 90 MW, MW:

- 1 Longyuan Mulilo De Aar 1-2, 244.5*
- 2 Khobab, 140.0*
- 3 Cookhouse, 138.6
- 4 Gouda, 138.0
- 5 Jeffreys Bay, 138.0
- 6 Amakhala Emoyeni Phase 1, 134.4
- 7 Gibson Bay, 111.0
- 8 Sere, 100.0
- 9 Dorper, 100.0
- 10 West Coast Phase 1, 94.0
- 11 Tsitsikamma, 93.0

* under construction



High activity areas:

- The most common solar DNI intensity is over 8.2 kWh/m² per day, distributed in the northwestern part of country, in Northern Cape province.
- The most common wind speed is over 8.3 m/s per year at 50 m are distributed in the provinces of Northern Cape, Western Cape, Eastern Cape and Kwazulu-Natal coastlines on the Atlantic and Indian Ocean's.

0.0 kWh/m²/d Direct Normal Irradiation (DNI)
0.0 m/s Wind speed

Source: Energydata.info