

CSIR releases 2021 statistics on utility-scale power generation in SA

The Council for Scientific and Industrial Research (CSIR) has released its 2021 statistics on utility-scale power generation in South Africa. Technologies in the analysis include coal, nuclear, hydro, solar photovoltaics (PV), wind, concentrated solar power (CSP), pumped storage and diesel-fuelled open cycle gas turbines.



Source: Gallo/Getty

In 2021, the total system demand increased by 6.5 terawatt hours (TWh), a 3% increase compared to the 2020 total system demand. The 2021 total system demand is, however, still lower by 5.3TWh - a 2% decrease - when compared to 2019, pre-lockdown. Coal still dominates the South African energy mix, providing 81.4% of the total system load. The contribution of renewable energy technologies (wind, solar PV and CSP) increased in 2021 to a total of 5.7GW installed capacity and provided 6.6% of the total energy mix.



Kusile Unit 4 connected to power system

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The Eskom fleet energy availability factor (EAF) continued its declining trend in 2021 with an average EAF of 61.8% for 2021, compared to the EAF of 65% for 2020, 66.9% for 2019 and 71.9% for 2018. This is largely due to the increase of unplanned outages (detailed by the unplanned capacity loss factor) experienced by Eskom. Loadshedding in 2021 overtook 2020 as the most intensive year of loadshedding to date, with loadshedding concentrated in October and November, and dominated by Stage 2 loadshedding overall.

Access the full report [here](#).

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