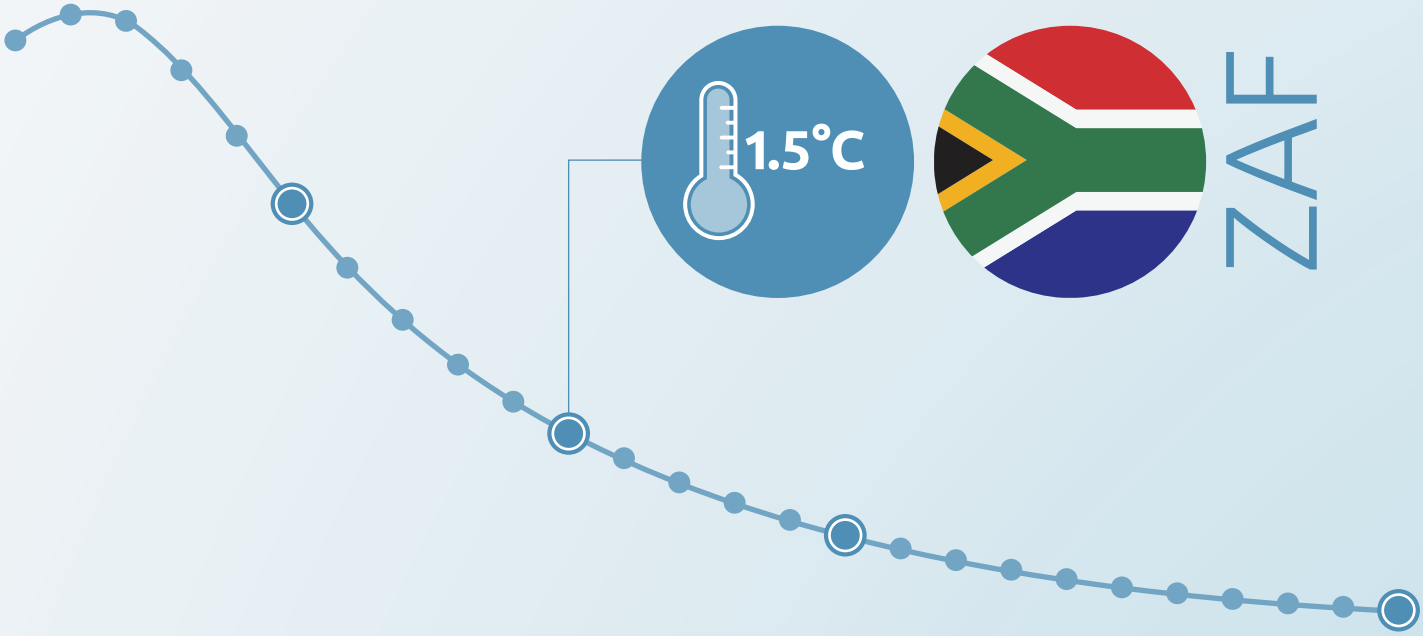
Climate Action Tracker



Climate Action Tracker

1.5°C-compatible climate action and targets: South Africa

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CLIMATE ANALYTICS
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IESR Institute for Essential Services Reform

SOUTH AFRICA

South Africa is undergoing change in both its political and energy systems. Following the 2024 elections, the new coalition government has intensified efforts to enhance energy security, creating a window of opportunity for greater climate ambition and more decisive mitigation action.

This momentum comes at a pivotal moment. South Africa's current 2030 NDC target is close to, but not fully aligned with, a 1.5°C compatible modelled domestic pathway. With an equity lens, the target falls short of aligning with a 1.5°C-compatible fair share pathway. The upcoming NDC submission, which will introduce a 2035 target and ideally revise the 2030 target, offers a chance for South Africa to close this ambition gap.

A stronger NDC could also anchor the country's ambition in tangible action. With full implementation of announced and selected additional policies, South Africa could accelerate the transition to a renewables-based and reliable energy system, while getting the emission reductions observed since the late 2000s on track to align with the Paris Agreement's 1.5˚C warming limit.

South Africa's energy strategy at a crossroads

The government is currently pursing two conflicting strategies. On one hand, it is scaling up renewable energy, aiming to expand renewable generation capacity from 11 GW in 2023 to 28 GW in 2030 (excl. large hydro), and preparing to legally adopt sectoral carbon budgets.

But at the same time, it still plans to expand fossil gas-based electricity generation capacity and continues to delay a decisive shift away from coal-based generation. These conflicting strategies are largely driven by persistent power shortages, exacerbated by an ageing coal fleet and chronic underinvestment in grid infrastructure. After record levels of load-shedding in 2023, the situation improved in 2024 and is expected to stabilise further as structural reforms advance – including efforts to unbundle and reform Eskom, the state-owned electricity utility.

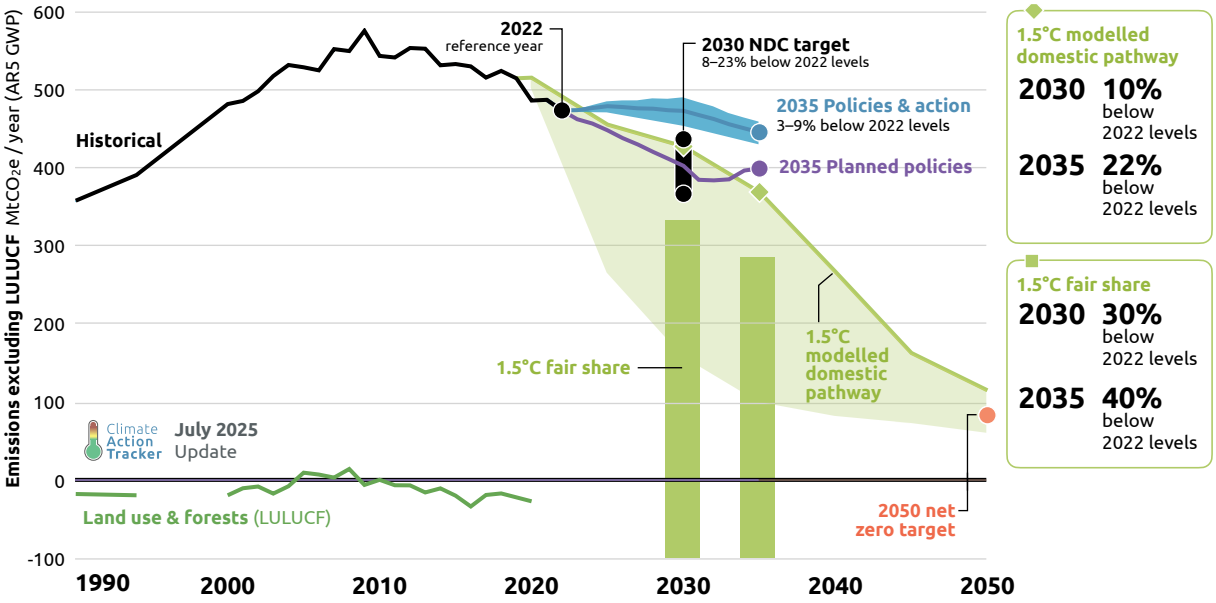
Coal remains the backbone of South Africa's power mix, accounting for 82% of electricity generation in 2024 and making the power sector by far the largest source of greenhouse gas emissions in South Africa. Although coal's share in total generation has recently declined by just under 2% annually, total coal capacity has increased over the past decade due to new capacity and delays in plant decommissioning. At the same time, the government plans to expand fossil gas capacity, despite having no notable gas-fired generation as of 2024.

Despite this context, there are encouraging developments. The share of renewables in the electricity mix rose to 13% in 2024 – more than double the 2019 level. The growth in renewable energy generation and capacity is directly attributable to policies, such as the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) and rooftop solar tax incentives for residential and commercial applications. Further, the July 2024 Climate Change Act puts forward sector emission targets to be updated every five years in alignment with national emission targets.

Just Energy Transition Partnership

At COP26 in Glasgow, South Africa, France, Germany, the UK, the US, and the EU made a political declaration to establish a long-term partnership to support South Africa's pathway to low-emissions and climate resilient development. Since then, additional international donors such as the World Bank, the African Development Bank and CIF have increased the available funding, while the US withdrew from the partnership in early 2025 – leaving South Africa with USD 12.8 billion in funding. Although implementation of the Just Energy Transition Partnership (JET-P) projects has commenced, concerns remain regarding overall policy coherence. This includes, for example, the lack of policy sequencing and integration between decommissioning coal plants and scaling up renewable energy capacity.

1.5°C-compatible NDC targets for 2030 and 2035



South Africa should continue to increase its climate ambition over time, in line with the spirit of the Paris Agreement. The updated 2030 NDC submitted in September 2021 marked a significant improvement over the 2016 target – now is the opportunity to build on that progress.

The current 2030 target aims to reduce emissions by 8-23% below 2022 levels (excluding LULUCF). While the lower end of the range aligns with a 1.5°C-compatible domestic pathway, the upper end does not. To be fully 1.5°C aligned, emissions must fall by at least 10% by 2030 and 22% by 2035 below 2022 levels (excluding LULUCF).

Current policy projections indicate that South Africa's 2035 emissions will be 432-460 $MtCO_2e$ (excl. LULUCF) or 3-9% below 2022 levels, whereas they need to fall to 369 $MtCO_2e$ (excl. LULUCF) or at least 22% below 2022 levels to be compatible with 1.5°C modelled domestic pathway (MDP). When including LULUCF, emissions need to fall to 328 $MtCO_2e$ by 2035.

To be in line with our 1.5°C fair share pathway, South Africa would need to cut emissions even further to at least 284 $MtCO_2e$ (excl. LULUCF) or 40% below 2022 levels by 2035.[1]

South Africa's current policies and actions are not aligned with its 2030 emissions target range. However, considering additional policies in the pipeline (see "planned policies"), we project a notable shift from the status quo – one that could bring emissions in line with a 1.5°C modelled domestic pathway by 2030, though additional efforts will be required to stay on track through to 2035. These planned measures include ramping up the carbon tax, implementing the 2019 Integrated Resource Plan (IRP), and advancing green transport and energy efficiency initiatives.

Entry points to increasing climate action

In order to align both climate ambition and climate action with a 1.5°C-compatible pathway, South Africa could take the following steps:

Raise ambition by narrowing the NDC target range: South Africa's 2030 NDC target range of 350-420 $MtCO_2e$ (incl. LULUCF) leaves significant uncertainty about its true level of ambition. Aligning more closely with the lower end of the range would better reflect the Paris Agreement's "highest possible ambition" principle and enhance both transparency and accountability.

1 As of June 2025, the Climate Action Tracker has begun presenting its results and data using Global Warming Potential (GWP) values from the **IPCC Fifth Assessment Report (AR5)**. Previous analyses and country assessments, including the most recent update on South Africa published on our website in May 2025, were based on GWP values from the Fourth Assessment Report (AR4). This change explains the slight differences between the data and results presented in this short report and country update published in May 2025.

Accelerate renewables deployment: although cumulative renewable capacity has grown, annual additions of wind and solar remain highly volatile. The government has not yet published an updated Integrated Resource Plan (IRP) since releasing the now-outdated 2019 version and a draft 2023 version, which has not yet been officially adopted.

Set a clear coal phase out target: the government has yet to define an official timeline for phasing out coal-based electricity generation. The coal plant decommissioning roadmap, indicated in the 2019 IRP, appears to have been delayed, and new coal capacity was added to the grid in 2024. A clear coal exit strategy with concrete milestones is essential to guide the accelerated uptake of renewables and grid infrastructure investments, and unlock timely and tailored just transition support for a just transition that benefits local communities most affected by the coal phase-out.

Advance industry decarbonisation: the combustion of fossil fuels for the industrial production of materials such as steel or cement is a major source of emissions. Beyond a carbon tax which still includes broad exemptions, there are no strong policies in place to incentivise improvements in energy efficiency or fuel switching. The tax has so far failed to deliver significant emission reductions, and is unlikely to do so in the future unless the tax level is raised and the instrument is structurally improved (e.g., by reducing free allowances). While the government has expressed interest in scaling up (green) hydrogen production or use, it has yet to take concrete steps in this direction.

Support electric vehicle uptake and manufacturing: government interest in establishing a domestic EV manufacturing industry, with the first plug-in hybrids (PHEVs) being produced in 2021, the adoption of EVs is falling behind. In 2024, EVs accounted for less than 1% of new vehicle sales, pointing to the need for further adoption incentives. Similarly, deep emission reductions in the demand sectors such as transport require electrification strategies to be accompanied by an accelerated decarbonisation of electricity supply.

Ramping up investments in transmission and distribution infrastructure: this will be one critical measure under JET-P to enable private-sector deployment of renewables.

For further details on South Africa's climate targets and actions, please see our South Africa assessment.

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CAT The Consortium

The Climate Action Tracker (CAT) is an independent scientific analysis produced by two research organisations tracking climate action since 2009. We track progress towards the globally agreed aim of holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.

climateactiontracker.org

Climate Analytics is a non-profit institute leading research on climate science and policy in relation to the 1.5°C limit in the Paris Agreement. It has offices in Germany, the United States, Togo, Australia, Nepal and Trinidad and Tobago.

climateanalytics.org

NewClimate Institute is an independent non-profit organisation that develops solutions to tackle climate change and drives their implementation worldwide. Through research, policy advice and knowledge sharing, we aim to raise the ambition for climate action and support sustainable development.

newclimate.org

Institute for Essential Services Reform (IESR) is an energy and environment focused think-tank that aims to accelerate the energy transition by supporting sustainable mobility, green economy, and well designed climate change policy. IESR has experience mainly in Indonesia, but is expanding its focus to work in other regions and countries.

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