

Scaling Up Renewable Energy Investment in South Africa



There is a solid business case for the development of renewables in South Africa, owing to the country's great potential in renewable resources, increasing demand for power and its ambition to achieve 100% access to electricity. In the Integrated Resource Plan (IRP 2019-2030), announced in 2019, renewable energy plays a leading role in the electricity supply mix. Furthermore, South Africa's Low Emission Development Strategy of 2020 foresees around 35% to 40% of renewable electricity in the country's supply mix by 2030, corresponding to 30 gigawatts (GW) of renewable energy capacity, up from only 9.6 GW in 2020. As part of its efforts to reach a net-zero economy by 2050, South Africa recently announced the decommissioning of its coal power plants in three progressive stages: 5.4 GW by 2022, 10.5 GW by 2030 and 35 GW by 2050, further demonstrating its growing political ambition for the energy transition.

In 2011, the country introduced its Renewable Energy Independent Power Producers Procurement Programme (REI4P), through which scheduled competitive tenders and bidding schemes take place. The programme, which guarantees signed Power Purchase Agreements (PPA) for a period of 20 years, has been able to attract both International Independent Power Producers (IPPs) and local participants. The REI4P is complemented by a small projects' procurement programme, dedicated to projects with capacities of 5 MW or less, to encourage participation of small and medium enterprises (SMEs). Furthermore, in early 2021, eight preferred bidders for the Risk Mitigation IPP Procurement Programme were announced. Despite being an emergency tender geared towards traditional fuels, some capacity was awarded to solar, wind and storage hybrid applications, demonstrating the economic competitiveness of renewables.

South Africa also offers simplified permissions for smaller renewable energy projects (less than 1 MW). The National Energy Regulator of South Africa (NERSA) has, to date, registered 200 projects under 1 MW in size totalling 94 MW. By amending the Electricity Regulation Act and increasing the threshold for registering embedded generation projects from 1 MW to 100 MW, the government has further incentivised renewable energy uptake.

The national electrification rate in South Africa was around 85% in 2019. Small distributed generation and off-grid solutions continue to present an opportunity for renewable energy uptake, especially for rural areas, allowing South Africa to achieve 100% access to electricity in the near future.

The IRENA Coalition for Action Business and Investors Group, which brings together leading renewable energy players, sees tremendous potential for renewable energy investments in South Africa. The group represents a sizeable portfolio of renewable energy assets worldwide and is planning to further contribute substantial additional investments needed for a green and resilient economic recovery post-COVID-19 and to reach global climate objectives. From an industry point of view and based on its engagement in the South African market, the Business and Investors Group has put together the following key recommendations that the government may wish to consider in order to reach higher shares of renewable energy.



1. Ensure policy certainty and planning for delivering the IRP 2019-2030 and predictability of off-taker contracts

While historically the legal and regulatory frameworks in South Africa have centred on a coal-based power system, the IRP has set out a promising framework for renewables and allowed for the launch of five auctions under the REI4P since 2011, including the most recent Bid Window 5 initiated in March 2021. However, the programme has suffered from several inconsistencies, such as unforeseeable waiting times between two different rounds of auctions, delays in the signing of PPAs of winning projects, and projects being curtailed despite signed power purchasing contracts. The launch of Bid Window 6 was planned for August 2021 but has not yet been initiated. These uncertainties have led to industry concerns around predictability and a reluctance to invest.

Actions

- **Create a stable momentum of continuous and regular capacity procurement** through a policy framework backed by a strong long-term political commitment. Providing systematic, reliable, and predictable auctions and keeping to the schedule will help attract sustainable investment, encourage local value chains and support socio-economic development.
- **Strengthen REI4P processes** to minimise delays in selecting bidders and signing PPA contracts in each round.
- **Reinforce the legal framework** to ensure that contracts are respected, minimise off-take risks such as curtailments at a later stage, and provide confidence to investors.

2. Support direct PPAs with IPPs and facilitate distribution

The main route to the energy market for IPPs continues to be through South Africa's single buyer Eskom and the REI4P. Therefore, it remains difficult for other entities, such as corporates and municipalities, to engage in direct PPAs with IPPs in South Africa. Challenges include securing wheeling agreements with Eskom, obtaining the required ministerial approval for projects over 100 MW, and increasing the currently limited number of tenders for renewable energy projects.

Actions

- **Remove ministerial approval** required for the signing of direct PPAs with IPPs.
- **Clarify the rules for electricity procurement** for corporate buyers and municipalities directly from IPPs and extend opportunities to grant generation licenses.
- **Provide support to municipalities** serving as electricity distribution companies to enable them to carry out their roles and facilitate easier access to renewable energy investment.



3. Finalise Eskom's unbundling

Reforming Eskom remains critical to creating an adequately resourced independent transmission company that can support the generation and distribution sectors. Currently, with significant financial challenges and the mounting debt Eskom is facing, only government guarantees for renewable projects can ensure their bankability. Completing Eskom's unbundling would help support its status as a reliable off-taker, even in a scenario without a government guarantee for REI4P projects.

Actions

- **Commit to the timeline of Eskom's legal unbundling** operations and show progress in a transparent manner to maintain credibility and reassure future investors.
- **Speed up the implementation of an independent system operator** to ensure a fair market trading environment and access to the grid.

4. Improve grid capacity and transmission infrastructure

Expanding South Africa's transmission infrastructure and increasing the grid capacity, particularly in areas best endowed with renewable resources, can further unlock the country's renewable energy potential. Recently, the updated Generation Connection Capacity Assessment (GCCA) for the Northern Cape has indicated a lack of grid capacity and the necessity for network upgrades in the region, which have affected many renewable energy projects and led to investment uncertainties.

Actions

- **Increase transmission capacity** in high renewable energy potential areas, particularly the Northern Cape, and ensure long-term, transparent and realistic grid-capacity planning to improve infrastructure and provide investor confidence.
- **Expand transmission connections** between the Northern Cape region and metropolitan areas with high power demand.
- **Provide relevant and accurate grid-capacity information** to all relevant stakeholders, including the IPP office responsible for auction management, to enhance transparency for investors.

5. Streamline permitting and planning requirements

Requirements around permitting and planning are considered to be more complicated and lengthier than international standards from an investor perspective. Further, these processes have often not been designed through a consultative, multi-stakeholder approach.

Actions

- **Revisit requirements through a consultative process and ensure transparency** for permitting and environmental impact assessments.
- **Enforce a reasonable deadline by which licences and permits must be provided** to shorten permitting timeframes.
- **Provide institutional support and training** to IPPs in their application process for permits.
- **Facilitate the licensing process** for smaller distributed generation projects.



6. Develop and support the off-grid and mini-grid sector

Off-grid and mini-grid projects can play an important role in achieving 100% access to electricity in South Africa and providing electrification to rural households. Although the Integrated National Electrification Programme puts forward non-grid electrification policies, these need to be further strengthened to achieve progress towards Sustainable Development Goal 7 and attract more private investment into this sector.

Actions

- **Design an enabling regulatory, institutional and policy framework** to support the off-grid and mini-grid sector.
- **Provide finance mechanisms and subsidy support** (e.g.,: capital cost subsidies, operational cost subsidies, etc.).
- **Increase and encourage community, local stakeholders and municipalities' participation** to create mutually beneficial partnerships between the different players.
- **Support local capacity and skills** to manage local maintenance in rural areas and support concession companies' business models.

7. Create an enabling environment to build and sustain local value chains

Local content requirements (LCRs) in South Africa are ambitious, and building local value chains remains a priority. However, LCRs have been difficult to enforce due to, among other factors, a lack of predictability for future tenders and past REI4P uncertainties – leading to many local manufacturers closing down between 2015 and 2018. Given that local manufacturing in the renewable energy sector is still in its infancy in the country, exemptions from LCRs are often introduced at a later stage in the development of a project, thus creating uneven competition.

Actions

- **Implement industrial policies**, including business incubation initiatives and development programmes, to increase competitiveness of local suppliers, strengthen the capabilities of existing firms, and support SMEs and key industrial clusters.
- **Revisit LCRs**, taking into consideration South Africa's existing and planned local manufacturing capacity, and firmly commit to them.
- **Reassess the components subjected to LCRs** to create simpler and clearer component lists.
- **Provide education and capacity building to the local workforce as well as financial provisions** (e.g.,: funding mechanisms, tax incentives, scholarships, etc.) to encourage technical training and address skills shortages.



8. Ensure a just and inclusive energy transition

The energy transition away from fossil fuels and towards renewables will lead to temporary labour market misalignments, with an expected decline of 35% to 40% of coal sector-based employment between 2020 and 2050 in South Africa. Sustainable energy jobs will, however, continue to increase (e.g., direct employment in projects under REI4P rose from 17 800 jobs in 2014 to 45 450 in 2019) and introduce new opportunities for socio-economic development. These include jobs for former fossil fuel workers in renewables and/or in repurposed and repowered coal plants to hydrogen or storage applications, among others.

Actions

- **Reskill and retrain fossil fuel workers** for renewable energy jobs, and implement capacity building programmes to maximise socio-economic benefits.
- **Redirect sustainable investments towards coal regions and modify auction rules** to prioritise renewable energy development in these regions.

9. Strengthen dialogue between investors and the government

Increased dialogue between industry and government can help formulate more effective policies and ensure successful implementation of South Africa's renewable energy targets and broader climate objectives.

The Business and Investors Group and the wider IRENA Coalition for Action stands ready to provide co-ordinated input and support for South Africa's energy transition.

Actions

- **Strengthen consultation processes that feed into the IRP** to allow for greater transparency and buy-in.
- **Engage with industry** when formulating new policies.

About the IRENA Coalition for Action

The IRENA Coalition for Action brings together leading renewable energy players from around the world. The Coalition facilitates global dialogues between public and private sectors to develop actions to increase the share of renewables in the global energy mix and accelerate the global energy transition. Within the Coalition, the Business and Investors Working Group is chaired by the Global Wind Energy Council and SolarPower Europe. The Group puts forward analysis and recommendations based on on-the-ground experiences of some of the leading private sector players in the renewable energy field. IRENA acts as the Secretariat of the Coalition. <https://coalition.irena.org>

Coalition for Action Business and Investors Group Members: Abo Wind, Abengoa Solar, ACCIONA, Alectris, Alliance for Rural Electrification (ARE), AMEA Power, Boston Consulting Group, Clean Energy Business Council MENA, Confederation of Indian Industry (CII), Dii Desert Energy, Dutch Marine Energy Centre (DMEC), Enel Green Power, Energy Watch Group, European Geothermal Energy Council (EGEC), Falck Renewables, Finergreen, First Solar, FTI Consulting, Global Solar Council (GSC), Global Wind Energy Council (GWEC), Graded, Iberdrola SA, Hitachi ABB Power Grids, Integrated Development Association Kandy, International Council for Local Environmental Initiatives (ICLEI), International Geothermal Association (IGA), International Hydropower Association (IHA), International Network for Sustainable Energy (INFORSE), International Renewable Energy Agency (IRENA), kiloWattsol, Lekela Power, Lusophone Renewable Energy Association (ALER), Mainstream Renewable Power, MAKE/Wood Mackenzie, Masdar, Middle East Solar Industry Association (MESIA), National Solar Energy Federation of India (NSEFI), Netherlands Wind Energy Association, New Energy Nexus, Novozymes, Ocean Energy Europe, Ørsted, Phanes Group, QWAY energy, Rahimafrooz Renewable Energy, Renewable Energies Association of Colombia (SER Colombia), Renewable Energy and Energy Efficiency Partnership (REEEP), Renewables Grid Initiative (RGI), Res4Africa Foundation, Ryse Energy, Siemens Gamesa Renewable Energy, Schneider Electric, SkyPower, SolarCoin Foundation, SMA Solar Technology, SolarPower Europe, Syndicat des énergies renouvelables (SER), TCX Fund, TERI School of Advanced Studies, The Climate Group/RE100, The Nature Conservancy, Trina Solar, TVP Solar, Vestas Wind Systems, World Bioenergy Association (WBA), World Business Council for Sustainable Development (WBSCD), WPO, World Resources Institute (WRI), World Wind Energy Association (WWEA), World Wide Fund for Nature (WWF), Yellow Door Energy.

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