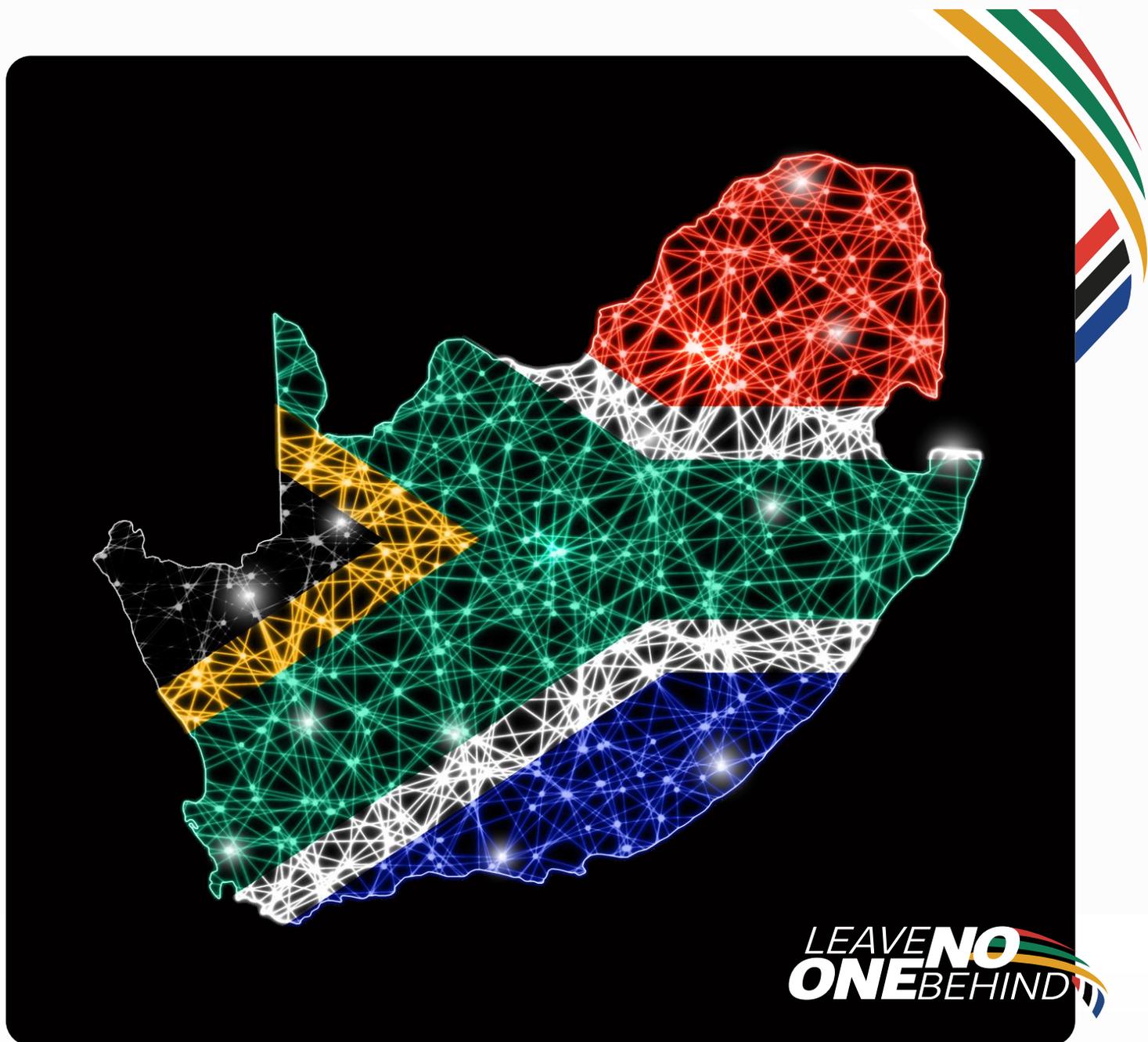
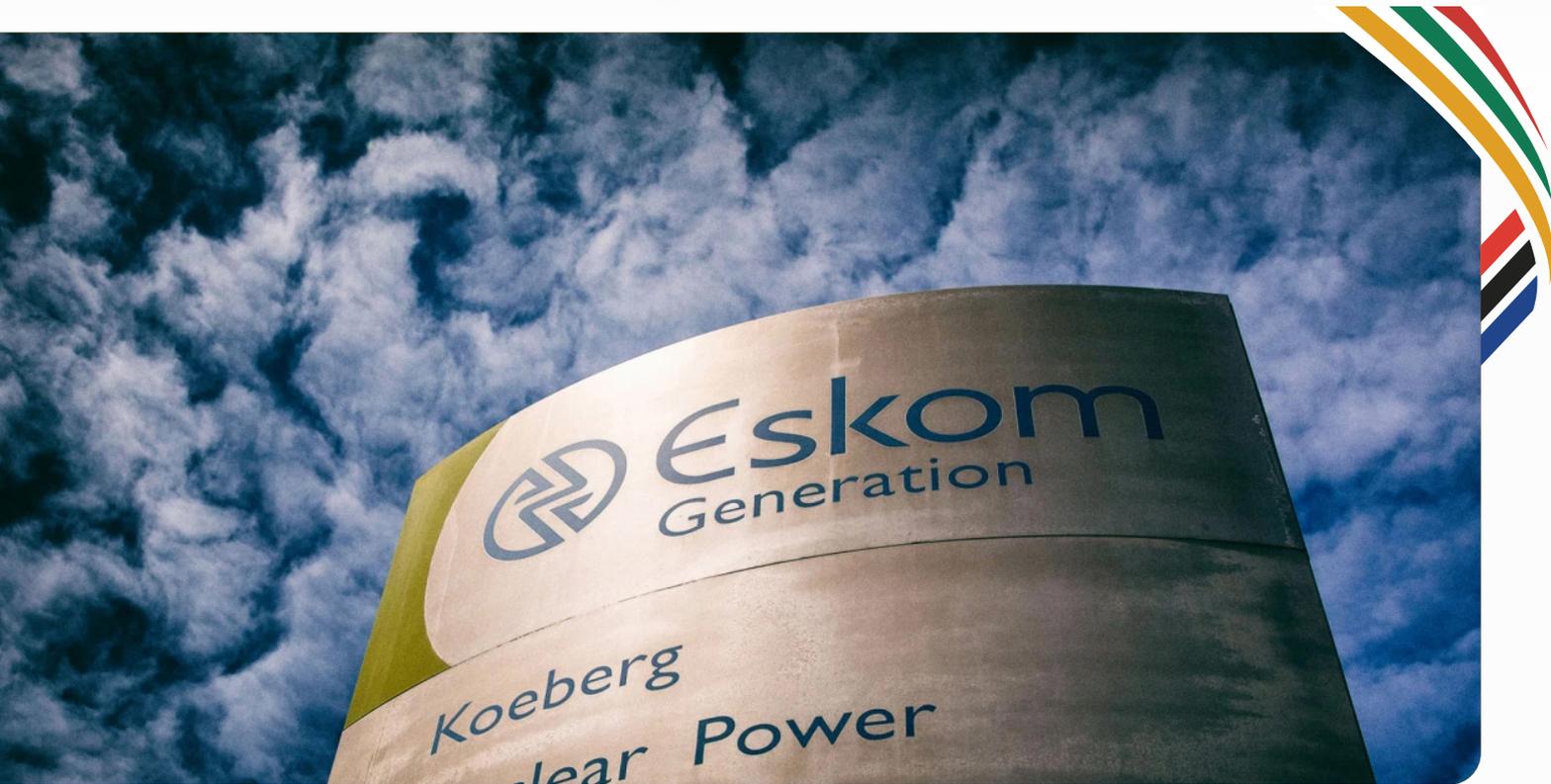


CONFRONTING THE ENERGY CRISIS: AN ACTION PLAN TO END LOAD SHEDDING



THE PRESIDENCY
REPUBLIC OF SOUTH AFRICA

Introduction



- Load shedding is the single biggest constraint on South Africa's economic growth. Government is taking action both to address the immediate crisis and to make load shedding a thing of the past. We are mobilising all the resources at our disposal and will do whatever it takes to achieve energy security.
- By applying a **laser focus** to a limited number of high-impact interventions, and by acting with **urgency and decisiveness**, we can end load shedding.
- Government is focused on two overriding objectives:
 - » First, to improve the performance of Eskom's existing power stations; and
 - » Second, to add as much new generation capacity to the grid as possible, as quickly as possible.
- We will achieve this by **removing barriers to new generation capacity** and **unlocking energy from many different sources** – including Eskom, independent power producers, businesses and households – as part of a **collective national effort**.
- At the same time, we can **diversify our energy sources** and **achieve energy security** in the long term.
- A **dedicated National Energy Crisis Committee (NECOM)** has been established comprising all **government departments and Eskom**, led by the Director-General in the Presidency, to implement this action plan. **It reports directly to an Inter-Ministerial Committee** comprising the Minister in the Presidency, the Minister of Mineral Resources and Energy, the Minister of Public Enterprises, the Minister of Finance, the Minister of Forestry, Fisheries and the Environment and the Minister of Trade, Industry and Competition.

Why are we experiencing load shedding?



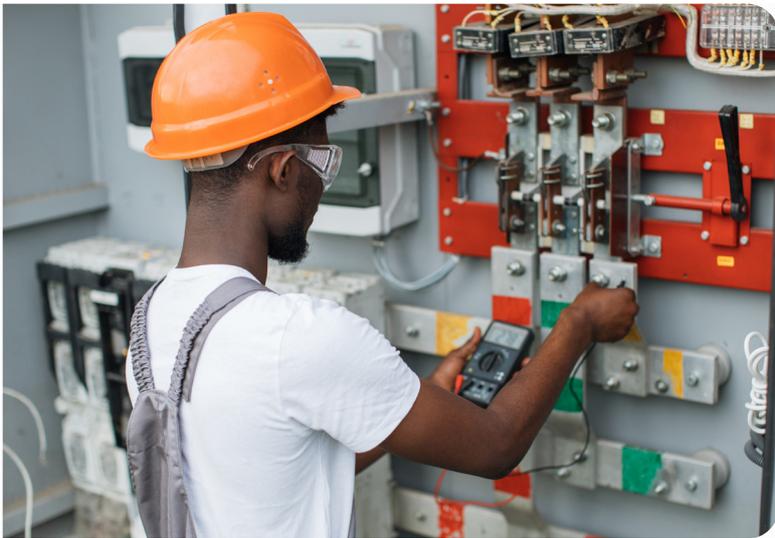
- Stage 6 load shedding was triggered during the past week as over 18000 MW of generation capacity was unavailable due to unit breakdowns as well as labour action by Eskom workers.
- Eskom's fleet of coal-fired power stations is on average over 40 years old, and its performance is deteriorating.
- The construction of our two biggest power stations, Medupi and Kusile, was delayed and has been set back by numerous design flaws. During the subsequent years, power shortages forced Eskom to delay necessary maintenance and run plant harder than their design specification. The neglect of maintenance has created a vicious cycle of deteriorating performance.
- At the same time, demand for energy is growing as the economy recovers from the impact of the coronavirus pandemic.
- This has led to a shortfall of up to 6000 MW of generation capacity. When there are unplanned outages due to failures at one or more power stations, load shedding is necessary to protect the grid and prevent a blackout.

What actions has government taken to address load shedding?



- Several actions have already been taken to address the shortfall in electricity supply which is the main cause of load shedding.
- One of the first steps President Ramaphosa took in 2018 was to revive the renewable energy procurement programme. This enabled 2205 MW from Bid Window 4 to proceed to construction, the majority of which has now been connected to the grid.
- A further 6800 MW of solar PV and wind power is being procured through Bid Windows 5, 6 and 7. This additional generation capacity will connect to the grid from late 2023. Another 3000 MW of gas and 513 MW of battery storage will be procured through the next bid windows.
- The first three projects from the emergency procurement programme launched in 2020 have now been approved.
- In addition to the procurement of new generation capacity, the President announced in June 2021 that the licensing threshold for new generation projects would be raised to 100 MW. This means that private investors do not require a license to build generation facilities up to this size.
- There is a pipeline of more than 70 confirmed private sector projects under development with a combined capacity of over 5000 MW, several of which will commence construction this year.
- Changes have been made to the Regulations on New Generation Capacity to allow municipalities to procure power independently. As a result, several municipalities are in the process of procuring additional power.
- Eskom has made land available adjacent to its existing power stations, where there is existing grid capacity, for private investments in renewable energy projects. This will allow a further 1800 MW to be connected to the grid.
- A capable and effective management team has been established in Eskom and is working hard to turn around the utility and reverse years of decay.
- Design modifications have been completed to optimize the performance of Medupi Units 1, 2 and 3, and are underway in Units 5 and 6.

Immediate actions to restore system stability and increase generation capacity



The system outlook has improved for the week ahead, and generation capacity is steadily being restored. As the system recovers, Eskom will reduce load shedding to lower stages.

A range of measures is being implemented in the short term to improve the availability of electricity and restore system stability:

- An agreement has been reached between Eskom and labour unions **to resolve the illegal strike action**, which will enable critical repairs and return additional units to operation.
- Eskom's **operational performance is being improved** by ensuring that capable leadership and skills are in place at all power stations; recruiting experienced former Eskom staff, including engineers and power station managers; restoring good operating procedures and practices; and increasing the budget allocated for critical maintenance.

- This includes a coordinated effort underway by law enforcement agencies to **address sabotage, theft and fraud at Eskom** and improve the quality and security of coal.
- The **availability of diesel supply for the Open Cycle Gas Turbines** is being improved through timely procurement and improved logistics and storage capacity.
- The **transmission line from Cahora Bassa** has been restored, adding 600MW of capacity to the grid, and Medupi Units 5 and 6 have returned to service.
- **Additional generation units at Lethabo and Koeberg power stations will come online over the next two week**, adding much-needed capacity and alleviating pressure on the grid.

Immediate actions to restore system stability and increase generation capacity



In addition, government is implementing several measures to add new generation capacity to the system in the short term:

- Additional capacity will be made available in the short term by **allowing existing IPPs to sell surplus power to Eskom**. This will involve amending contracts with existing IPPs from previous bid windows to enable them to sell additional capacity.
- In addition, Eskom will be allowed to **procure power from existing private generators**, such as mining companies and shopping malls which have installed solar panels and can supply their excess power to the grid. The DMRE is working closely with Eskom to ensure that the necessary approvals are waived or granted to enable this approach.

- In the immediate term, **Eskom will be allowed to procure immediately dispatchable interim power on an emergency basis for a period of two to three years**, while ensuring transparency and cost-effectiveness.
- Eskom is also exploring the possibility of **importing additional power** through the Southern African Power Pool.
- **Projects from the risk mitigation procurement programme and Bid Window 5 of the REIPPPP** will unlock significant new generation capacity and are ready to proceed once approvals are granted. To achieve this, **work is underway between the IPP Office, Eskom, Operation Vulindlela and the DTIC to ensure that these projects reach financial close as quickly as possible.**

Additional measures to end load shedding



In addition to these short-term measures, we are **implementing a comprehensive plan to end load shedding as quickly as possible**. This plan outlines five interventions with specific actions and timeframes to address the electricity shortfall:

1. Fix Eskom and improve the availability of existing supply
2. Enable and accelerate private investment in generation capacity
3. Accelerate procurement of new capacity from renewables, gas and battery storage
4. Unleash businesses and households to invest in rooftop solar
5. Fundamentally transform the electricity sector to achieve long-term energy security

We have **established a dedicated National Energy Crisis Committee (NECOM)** to implement these actions, with a mandate to do whatever it takes to end load shedding. This team is led by the Director-General in the Presidency, including all government departments and Eskom, and reports to the relevant Ministers.

Intervention I:



Fix Eskom and improve the availability of existing supply system stability and increase generation capacity

- The remaining units at Medupi and Kusile will be brought online as quickly as possible. Kusile Unit 4 reached commercial operation on 1 June 2022. Unit 5 will come online in June 2023, and Unit 6 in November 2023.
- Eskom will continue to **implement reliability maintenance** across its fleet during the next 12 months to prevent a further decline in its energy availability. This will be enabled by the recruitment of former Eskom staff and offers of support from the private sector; as well as improving the availability of spare parts and expertise from Original Equipment Manufacturers (OEMs) through more agile procurement.
- National Treasury is working on a **sustainable solution to deal with Eskom's debt** in a manner that is equitable and fair to all stakeholders. This solution should be finalised before the Medium-Term Budget Policy Statement in October, and will provide Eskom with the space that it needs to undertake necessary investments.

Intervention 2:



Enable and accelerate private investment in generation capacity

- The raising of the licensing threshold from 1 MW to 100 MW has unlocked massive investment by the private sector. More than 70 projects are at various stages of development, representing over 5000 MW of new generation capacity. We are identifying those projects which are most advanced and ensuring that they obtain the remaining approvals as quickly as possible.
- Following the success of this reform, the **licensing threshold for new generation projects will be removed entirely**. This will allow private investment in much larger, utility-scale plants, harnessing economies of scale.
- A number of measures are already in place to accelerate these projects, including:
 - » Embedded generation projects have been declared as Strategic Infrastructure Projects (SIPs), shortening the timeframes for environmental authorisations, water use licenses and other requirements
 - » The Department of Forestry, Fisheries and the Environment has declared 11 Renewable Energy Development Zones where strategic environmental assessments have already been undertaken
 - » Dedicated capacity has been created within Eskom to process grid connection applications more quickly
 - » The NERSA registration process has been simplified, including through the removal of the requirement for a Power Purchase Agreement
- To further enable private investment, special legislation will be tabled in Parliament on an expedited basis to **ease regulatory hurdles and facilitate investment in new generation capacity** for a limited period. This will require broad support from political parties, and a willingness to work together to address this crisis through extraordinary measures.
- In addition, Eskom will proceed with the **release of land adjacent to its existing power stations** in Mpumalanga for private investment in renewable energy projects, which will unlock 1800 MW of new capacity.

Intervention 3:



Accelerate procurement of new capacity from renewables, gas and battery storage

- A massive rollout of renewable energy offers our best chance of ending load shedding as quickly as possible.
- Eskom is in the process of procuring 400 MW of battery storage through its Battery Energy Storage Systems (BESS) programme, with the first projects reaching completion within the next twelve months.
- Preferred bidders from Bid Window 6 will be announced in October 2022 and will reach financial close in early 2023. The capacity procured through Bid Window 6 will be doubled from the current allocation of 2600 MW to 5200 MW.
- The release of further bid windows for renewable energy, gas and battery storage will be brought forward, and the amount of new capacity procured will be increased.
- To further accelerate the procurement of additional capacity, a Ministerial determination will be issued for the remaining allocations in the IRP 2019 – this includes 14771 MW of renewable energy and storage.
- In addition, the IRP 2019 will be reviewed and updated to ensure its continued relevance in line with our energy needs and climate commitments.

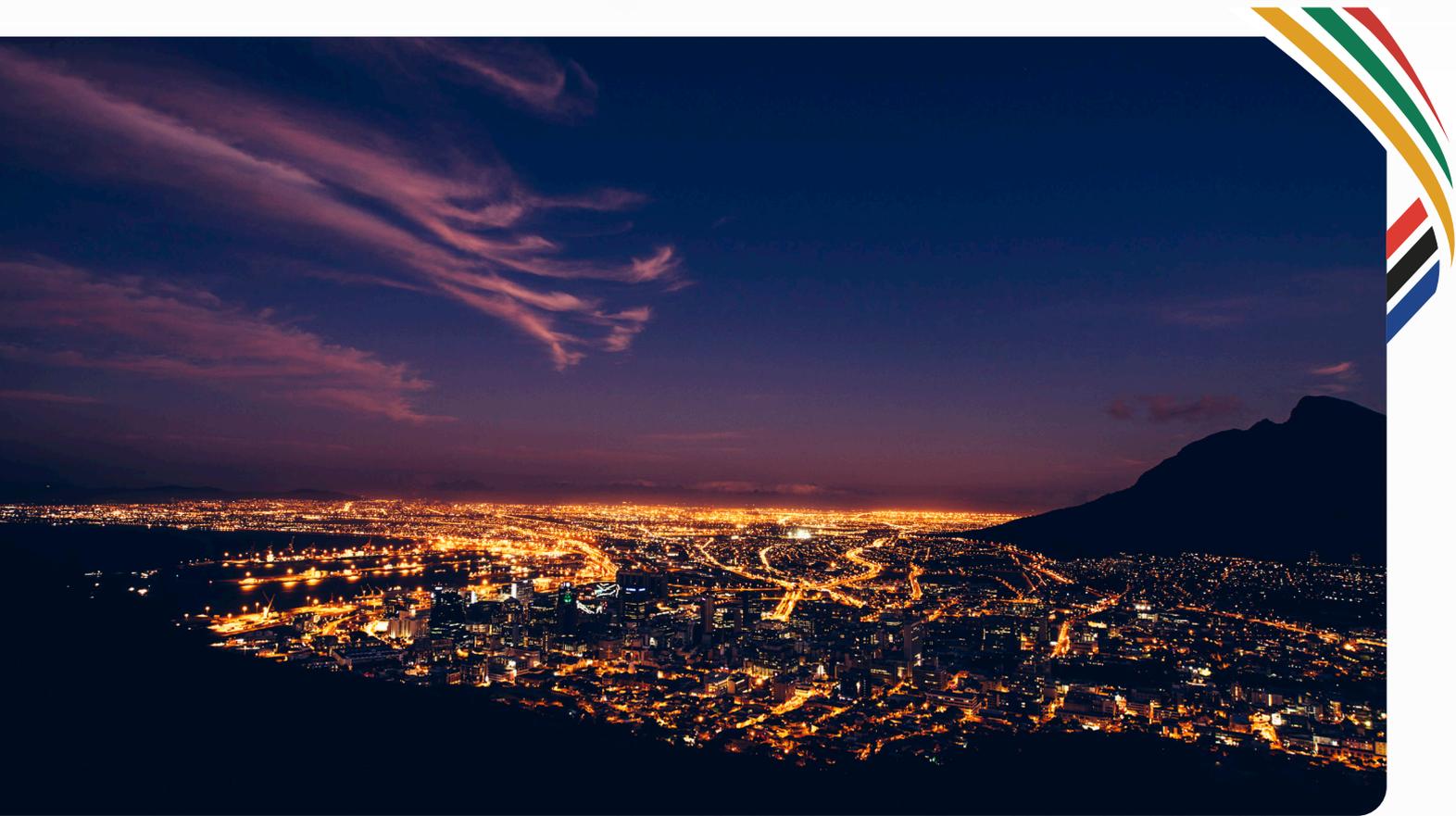
Intervention 4:



Unleash businesses and households to invest in rooftop solar

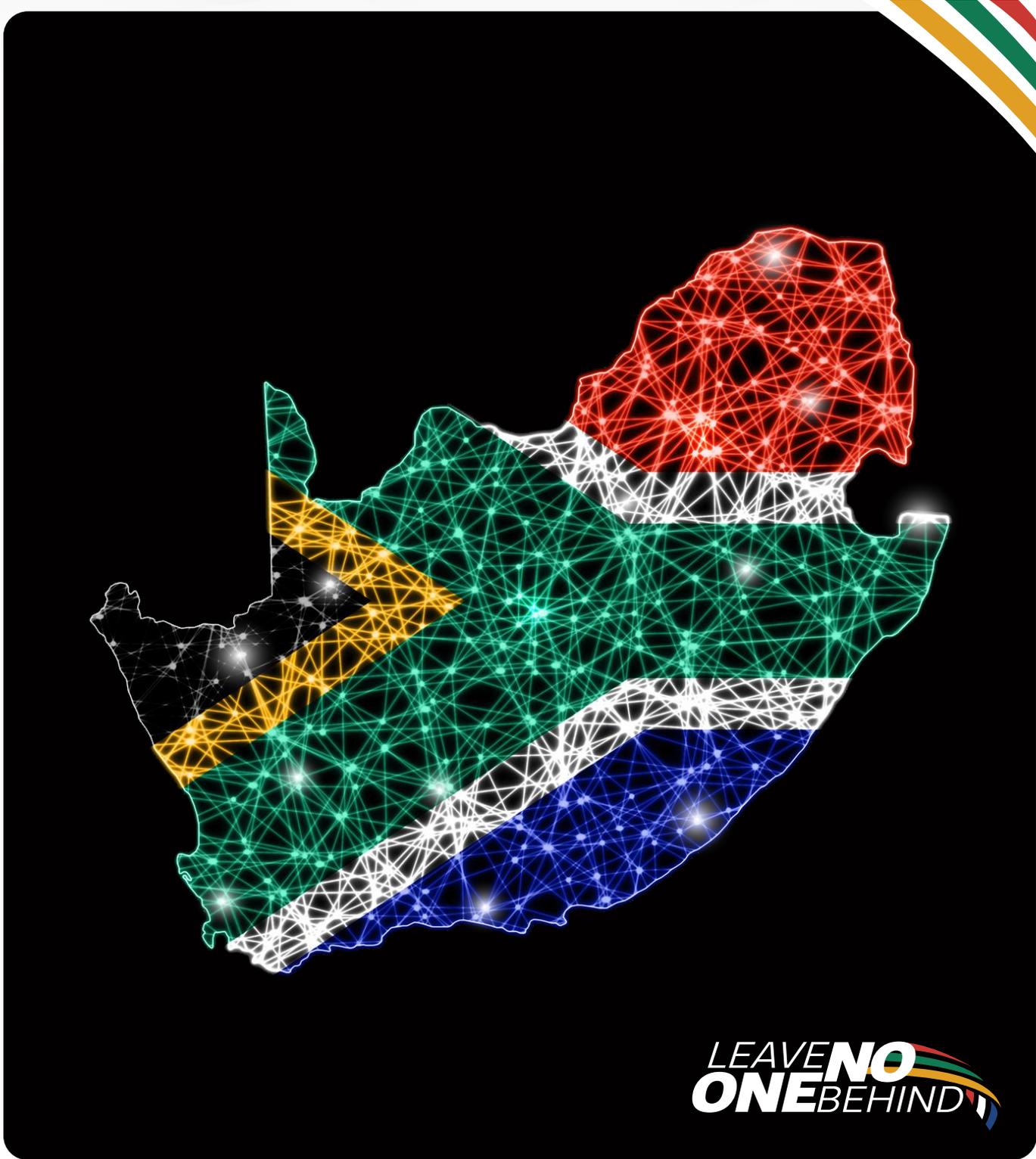
- There is significant potential for households and businesses to install rooftop solar PV and connect this power to the grid. This has benefits for users as well as for the country as a whole.
- To speed up the rollout and reduce the cost of rooftop solar, Eskom will **develop a feed-in tariff for small-scale embedded generators.**
- In addition, National Treasury will **consider the expansion of tax incentives for residential and commercial installations.**

Intervention 5:



Fundamentally transform the electricity sector to achieve long-term energy security

- Eskom has established an independent transmission company and is on track to separate its generation and distribution businesses by the end of 2022 to facilitate reform of the electricity sector.
- Broader reforms to establish a competitive electricity market will be expedited through the finalisation of the **Electricity Regulation Amendment Bill** to enable private investment and remove the need for guarantees – this is the only long-term solution to address the shortfall.
- These changes will **allow multiple generators (both private and state-owned) to compete on an equal footing**, while the grid remains public and managed by an independent transmission company. This is key to enabling new investment in generation capacity at the scale required over the next decade and beyond – ending our reliance on Eskom



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