



SAWEA

South African Wind Energy Association

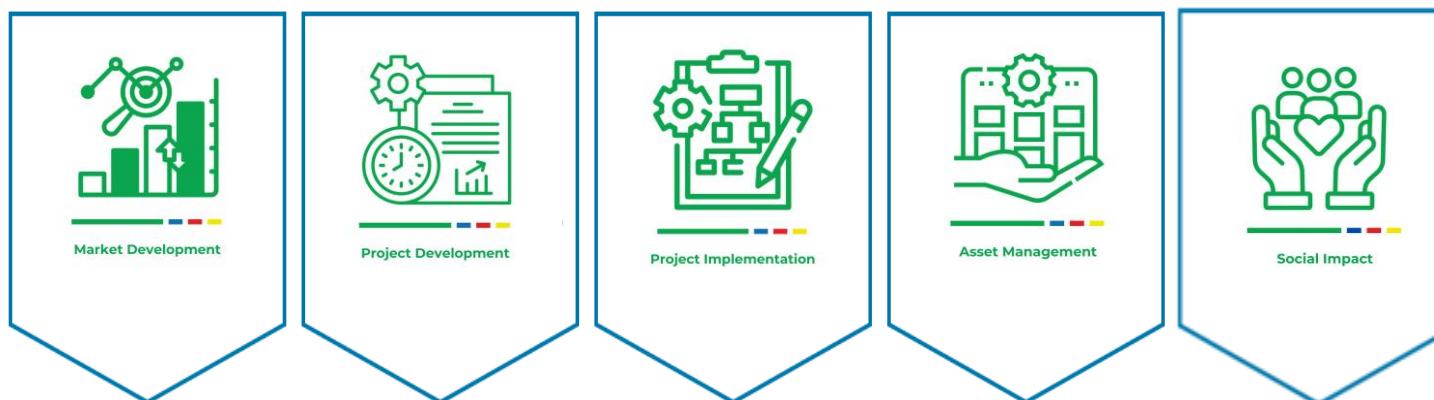
BRIEFING: Portfolio Committee on Electricity and Energy

Niveshen Govender
SAWEA CEO

2024

WHO WE ARE

SAWEA is a member-based not-for-profit industry association advocating for the accelerated growth of wind energy in South Africa. We aim to promote a better policy environment to sustain a thriving wind industry and support local participation and beneficiation.



SA WIND ENERGY ACHIEVEMENTS



36
wind energy
projects procured



3.6mil
ave. households
powered annually



R89,6 Billion
invested in
wind energy



33%
black SA
shareholding



3442 MW
installed capacity



22 985
job yrs
82% in construction



70%
reduction of wind
energy cost from
1.88c to 58c



R24billion
47%
of project value
spent locally



46480
GWhs of Wind Energy
Contributed to the
National Grid



38.8 Mton
CO2 emissions
avoided



84%
domestic
investment



R898mil
SED and ED
initiatives

Total global wind power capacity is now **up to 1TW**, helping the world avoid over 1.2 billion tonnes of CO₂ annually⁽¹⁾

Wind power technical benefits to power systems are crucial for a sustainable transition to clean energy

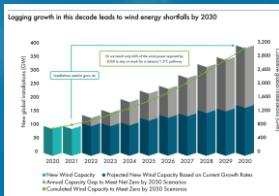
Increase in Wind Powered Green Hydrogen Projects

Increase in Hybrid Projects

Offshore wind accelerating growth

GLOBAL PERSPECTIVE

Overall lagging growth during 2020-2030 – if continued, Paris Climate Accord targets will not be met



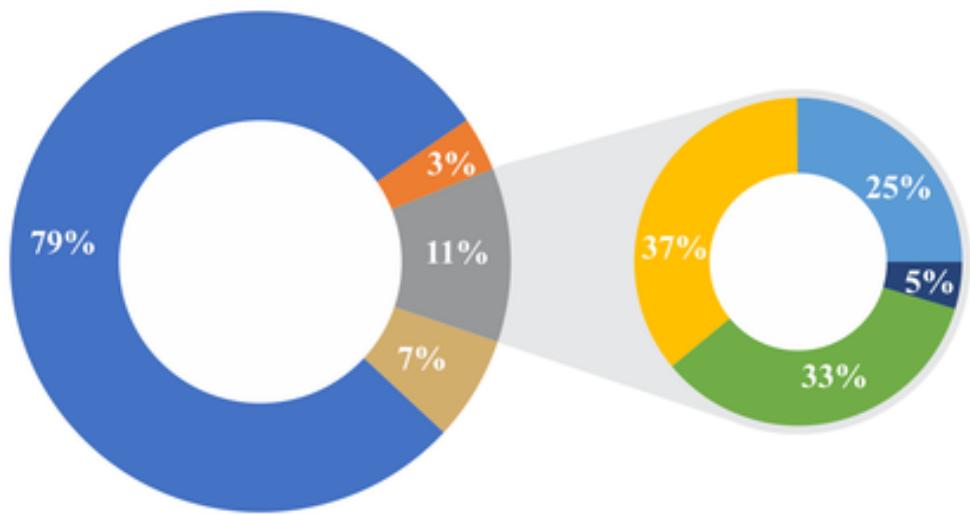
Global supply chain recovering slowly

Africa being an attractive investment destination for Wind Energy
South Africa representing 30% of Africa's Wind Energy Installed Capacity and development pipeline.

2030 OUTLOOK - IRP 2019



INSTALLED CAPACITY 2018

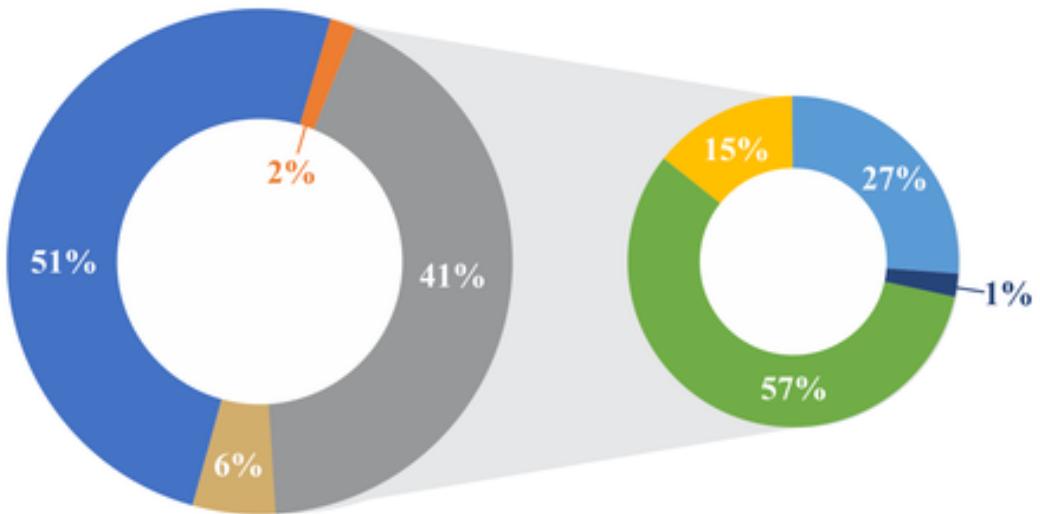


Fossil Fuels
Renewables

Nuclear
Other
Solar PV
Wind
Hydro

*Fossil Fuels includes Coal & Natural Gas / Diesel.
*Other includes Cogeneration, Biomass, & Landfill.

IRP TARGET BY 2030



Fossil Fuels
Renewables

Nuclear
Other
Solar PV
Wind
Hydro

*Others includes Storage (Pumped Storage).

Public Procurement

2010 -2019



Launch of **Bid Windows 1 - 4**

3442MW procured, constructed and operational

5 years with no signed PPAs (2015 – 2019)

2020



RMI PPPP: Launched in 2020 to urgently bring new generation onboard

2 Hybrid projects with Wind Energy under construction totaling **150MW** of wind energy

2021



BW5 launched resulting in 1608MW of wind procured

12 wind projects procured, 6 in construction (**784MW**). 6 have not reached FC (824MW)

Aggressive Market conditions, global supply chain challenges

2022



BW6 launched with 4.1GW of wind bids submitted and no wind procured

23 wind projects bid, 0 procured

No new wind energy procurement

Grid constraints in wind resource-rich areas

2023



BW7 launched

2024



BW7 awaiting preferred bidder announcement

8 wind projects submitted totalling 1692.4 MW bid

NOTE: 1.3GW of privately procured wind projects in construction.

PROJECT DEVELOPMENT PIPELINE - SA

South African RE Grid Survey 2024

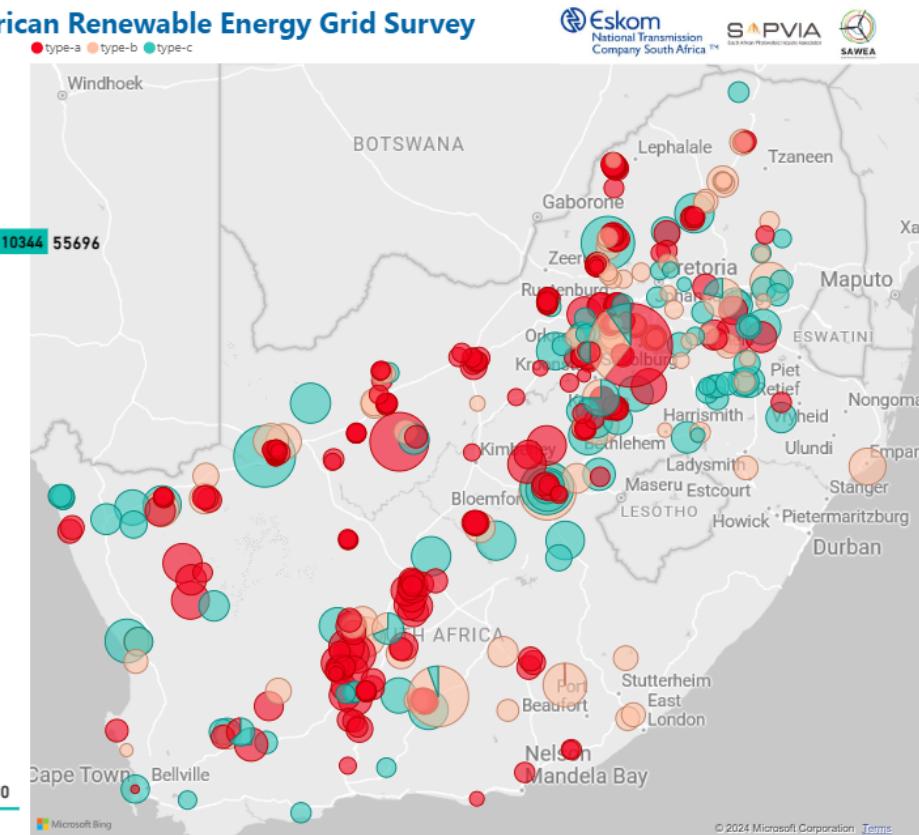
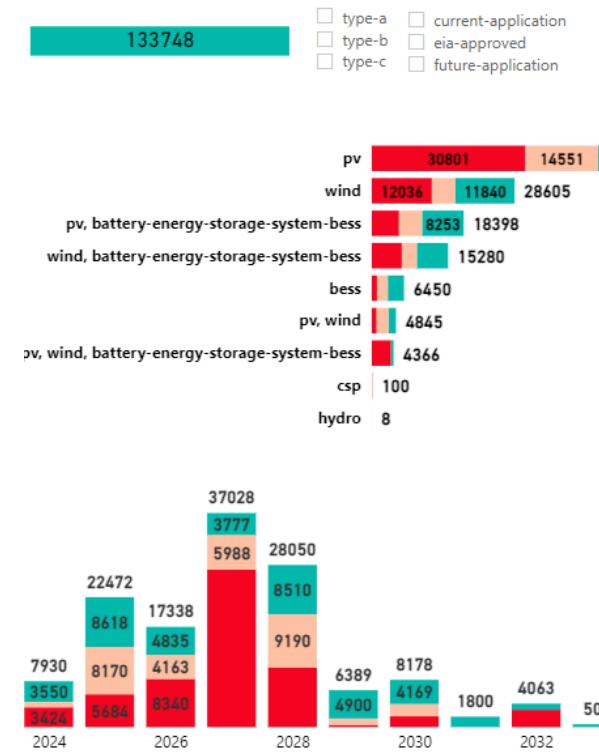
Total 53 096 MW of Wind Projects in SA

Type of Project	South Africa
Pure Wind Projects	28 605 MW
Wind + Battery Storage	15 280 MW
Wind + PV	4 845 MW
Wind + PV + BESS	4 366 MW
Total	53 096 MW

Project Type / Status

133748

2024 (July) South African Renewable Energy Grid Survey



PROJECT DEVELOPMENT PIPELINE - SA

Wind projects which could be developed in the short term:

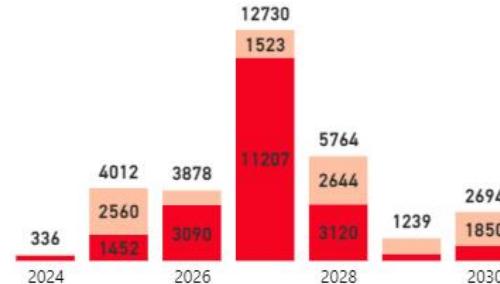
33 166MW of projects in the next 3-5 years

Project Type / Status

33166

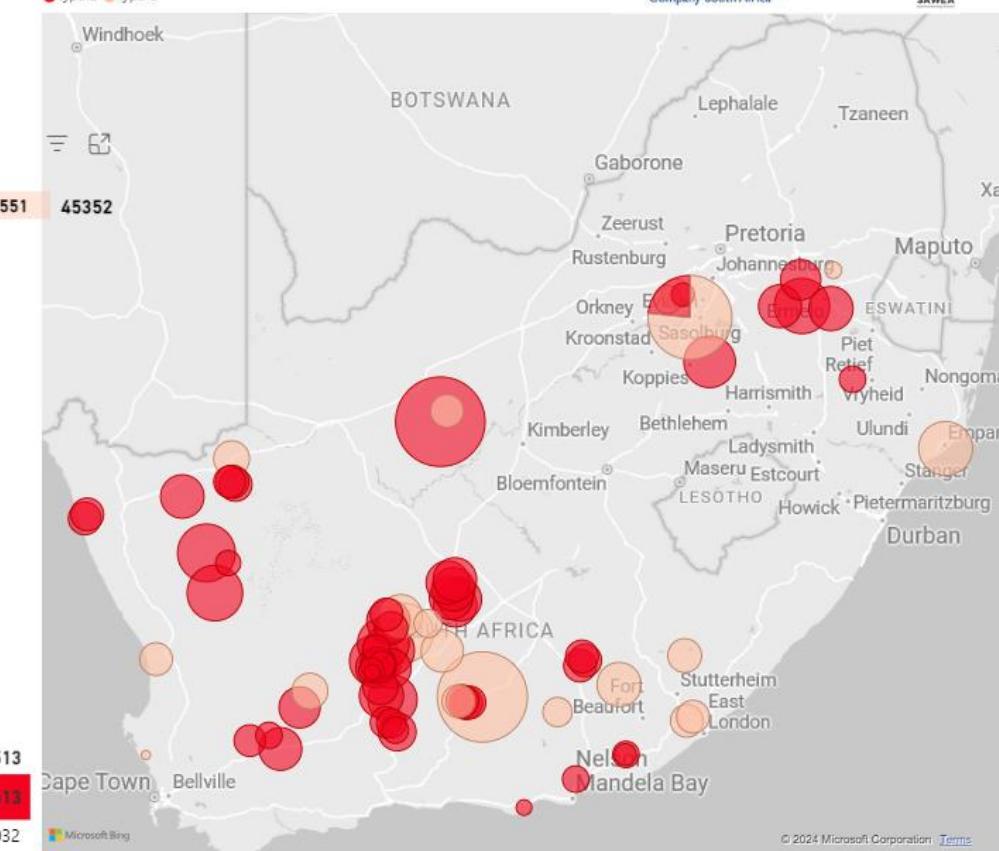
■ type-a ■ type-b ■ type-c
□ current-application □ eia-approved □ future-application

pv	30801	14551	45352
wind	12036	16765	
pv, battery-energy-storage-system-bess	10145		
wind, battery-energy-storage-system-bess	9080		
pv, wind, battery-energy-storage-system-bess	3886		
pv, wind	3435		
bess	3248		
csp	100		
hydro	8		



2024 (July) South African Renewable Energy Grid Survey

● type-a ● type-b



KEY CHALLENGES

In South Africa, the market also experiences its own challenges.

1.

Lack of certainty
on Grid Capacity,
Access and
Allocation in
wind resource
rich areas

2.

Pending Policy
Reform in
Regulatory
Environment

3.

Logistics in the
construction of
new projects

4.

Supply chain
challenges are
still affecting
operating
assets.

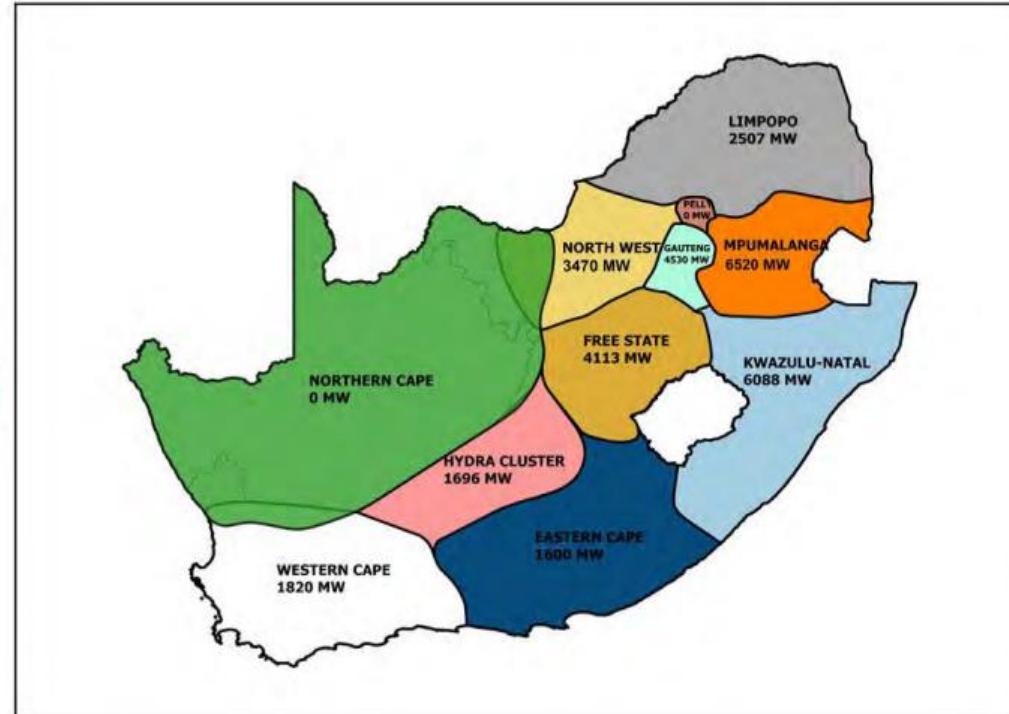
5.

Skilled
workforce:
The availability
of a ready and
able workforce
with the
necessary
training and
skills for the
wind industry.

Grid Access – GGCA 2025

By accepting a reasonable share of no more than 10% of curtailment, 3 470 MW of additional wind generation can be connected to the grid almost immediately, with 2 680 MW in the Western Cape and 790 MW in the Eastern Cape.

MW of new generation capacity that can be added based on grid availability



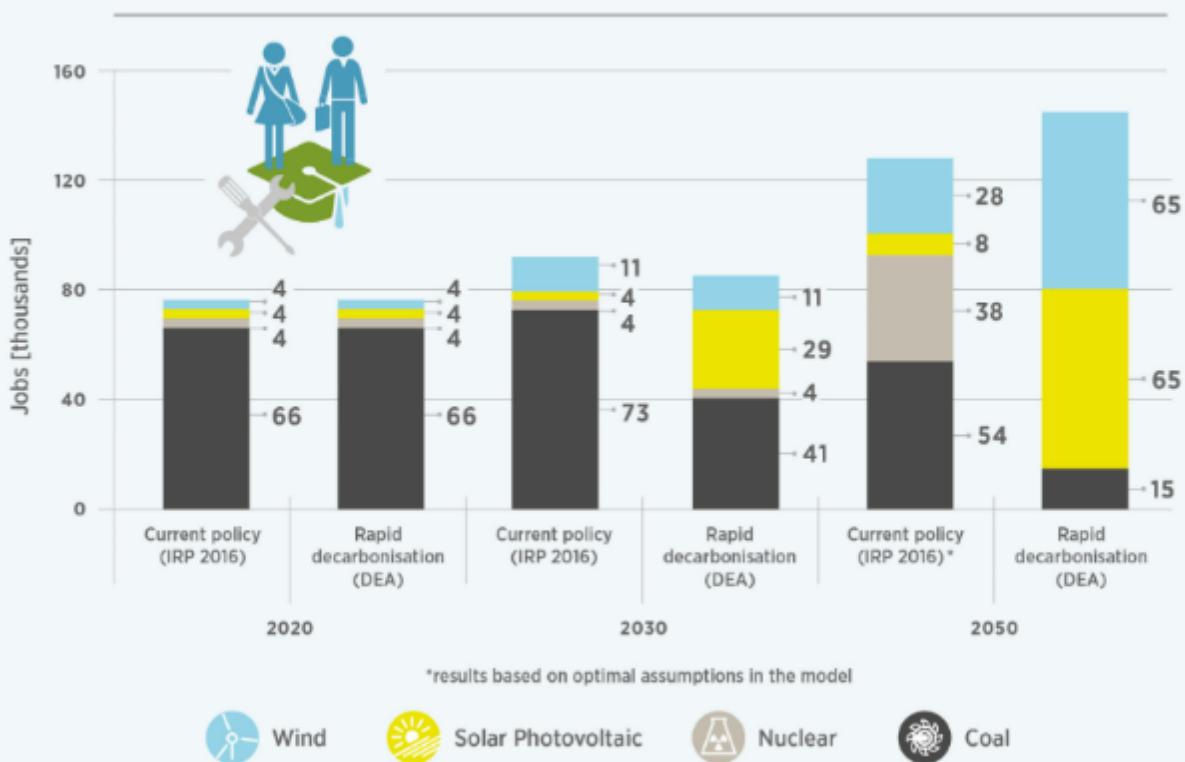
Insights

- Grid availability per province as per the Generation Connection Capacity Assessment 2024
- Capacity reserved for REIPPPP Bid Window 5 and 6 as well as RMIPPPP.
- Development of the Transmission Grid is as per the TDP 2023-2032
- Estimated new transmission lines total more than **14 000 km** and more than **170** transformers in the period



Skills and Job Creation Opportunities

Decarbonising South Africa's power sector can create **145 000** net jobs by **2050**



Industrialisation Opportunities



TIPS
TRADE & INDUSTRIAL POLICY STRATEGIES

WWF

INSIGHTS INTO THE WIND ENERGY VALUE CHAIN IN SOUTH AFRICA

OPPORTUNITIES IN SOUTH AFRICA'S WIND ENERGY VALUE CHAIN

WHAT IS NEEDED TO PRODUCE WIND TURBINES?

WHAT IS THE STATE OF SOUTH AFRICA'S WIND ENERGY MARKET?

HOW CAN SA SUPPORT LOCAL WIND ENERGY GROWTH?

Report Summary

Report Summary: This report highlights opportunities in South Africa's wind energy manufacturing value chain. It identifies key sectors like steel, aluminium, and copper, and discusses the potential for local value creation. It also covers the state of the market, opportunities for growth, and policy recommendations.

Report Authors: Kate Rivett-Carnac, Researcher

Report Date: 15 August 2024

Report Status: Published

Report Type: Research Report

Report ID: TIPS-15-08-2024

Report URL: www.tips.org.za/reports/15-08-2024

WWF South Africa is working towards lasting positive outcomes for people and nature in the places where we work and from the priority environmental challenges we focus on

info@wwf.org.za
www.wwf.org.za

TIPS supports policy development through research and dialogue. Its areas of focus are industrial policy, trade and regional integration, sustainable growth, and a just transition to a sustainable inclusive economy

info@tips.org.za
www.tips.org.za



OLSF
PROUDLY SUPPORTING LOCAL INDUSTRY

November 2023

Manufacturing Localisation Potential in Renewable Energy Value Chains

Renewable Energy Localisation Potential

Prepared by BMA

Authors: Justin Barnes, Meghan King, O'Neill Marais, Sean Ellis, and Dylan

November 2023

Manufacturing Localisation Potential in Renewable Energy Value Chains

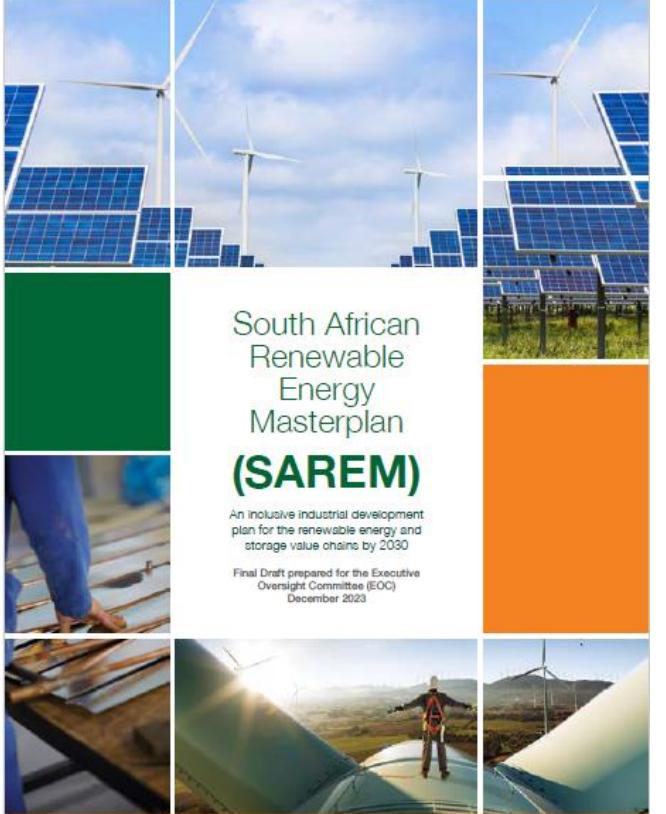
Wind Energy Localisation Potential



South African Renewable Energy Masterplan (SAREM)

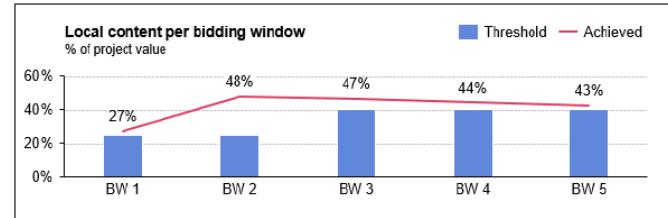
An inclusive industrial development plan for the renewable energy and storage value chains by 2030

Final Draft prepared for the Executive Oversight Committee (EOC)
December 2023



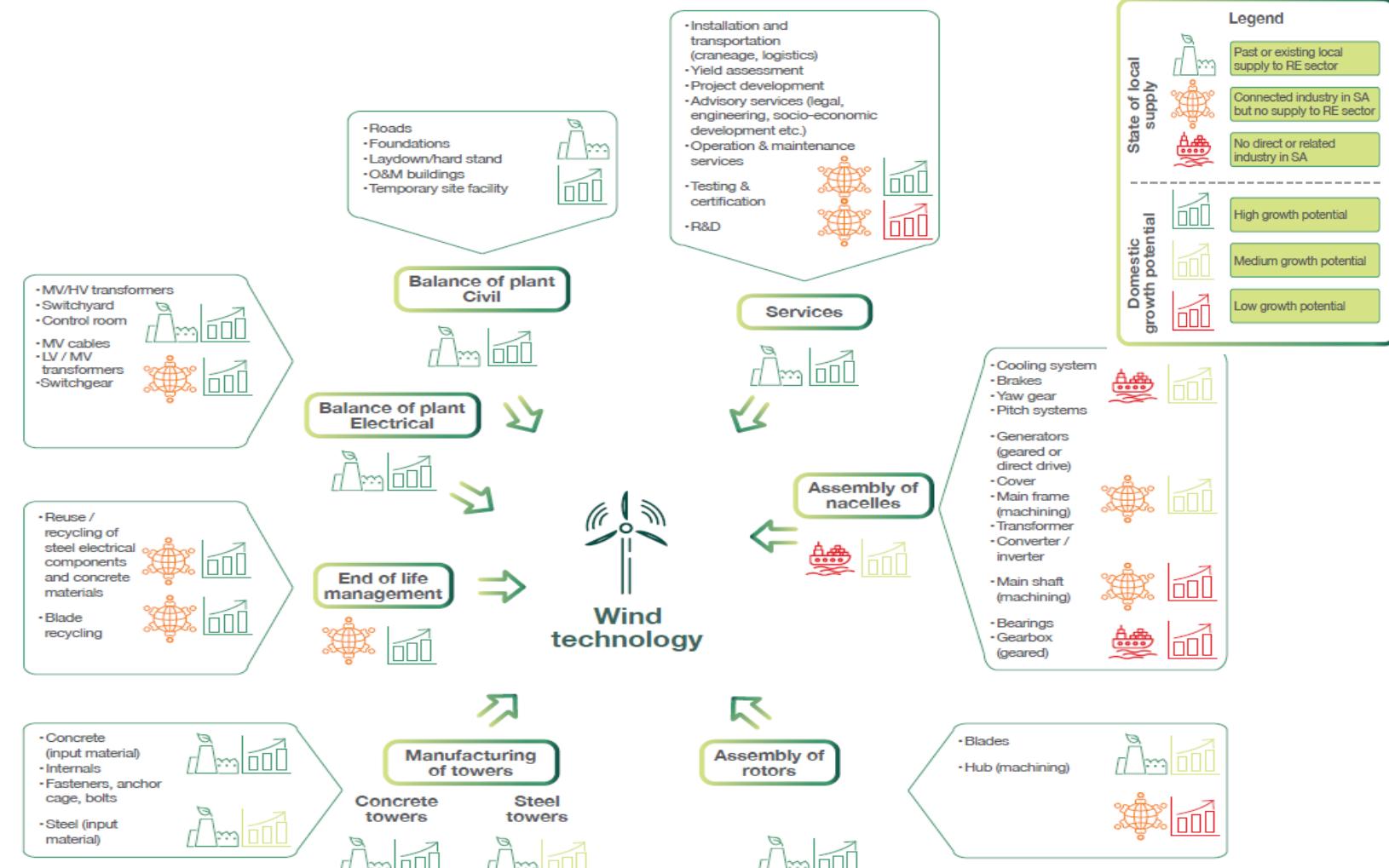
Local Content Opportunity Mapping

Figure 11: Percentage of value localised through the REIPPP



Existing Manufacturers to Support

Transformers	Towers
Zest WEG	GRI Towers
ACTOM Power Transformers	Concrete Units
Powertech Transformers	Nordex/WBHO Copperton
SGB-SMIT POWER MATLA	DCD Wind Towers (Closed)



Key Considerations

Wind projects which could be developed in the short term:

33 166MW of projects in the next 3-5 years

- 1) Grid Capacity – access through curtailment in the short term and intense transmission infrastructure development in the long term**
- 2) Consistent Demand from both public and private markets informed through IRP**
- 3) Clear and transparent rules for grid connection from Eskom/NTCSA**
- 4) A reformed public procurement programme**
- 5) An investable market including fast and more efficient permitting processes for:**
 - 1) Approval of sites**
 - 2) Environmental impact assessments**
 - 3) General permitting**
- 6) Incentives for localisation such as:**
 - I. Tax incentives,**
 - II. Research and development incentives**
 - III. Government assisted financing mechanisms for SMMEs**
- 7) Focus on Skills Development**



SAWEA

South African Wind Energy Association

Thank you