



INVESTMENT PROPOSITION

# South African renewable energy value chain

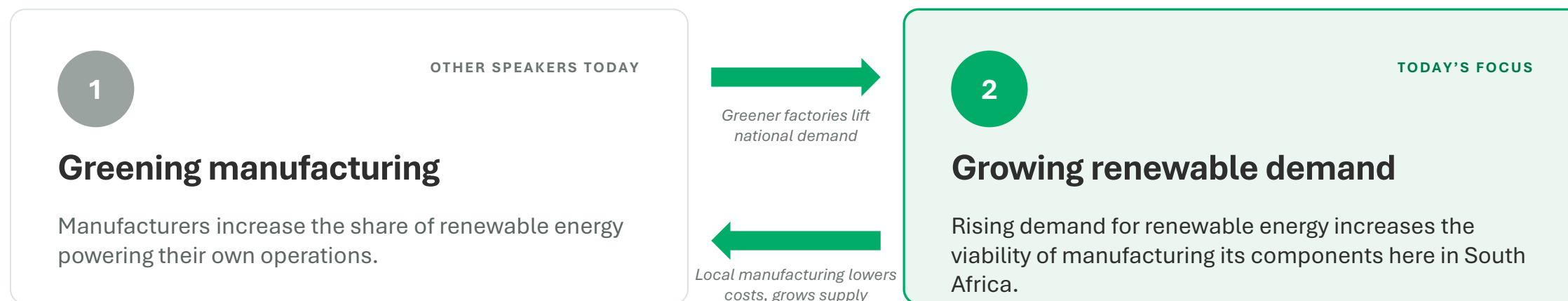
Manufacturing investment proposition  
the dtic & GreenCape, September 2026



## TODAY'S CONVERSATION

# Two conversations, one reinforcing cycle

The greening of manufacturing and the growth of renewable energy manufacturing are feeding each other — today's speakers cover one side each.



**What this session covers:** how growing renewable energy demand increases the viability of manufacturing renewable energy components in South Africa.

**Keen on the greening-of-manufacturing side?** Scan the QR code on our closing slide for more information and support.

# A series for investors and OEMs evaluating South Africa

## About this proposition

Prepared for domestic and international investors and multinational OEMs seeking to capitalise on South Africa's projected 35.1 GW renewable energy pipeline by 2035.

Sets out South Africa's strategic position as a primary manufacturing hub for sub-Saharan Africa.

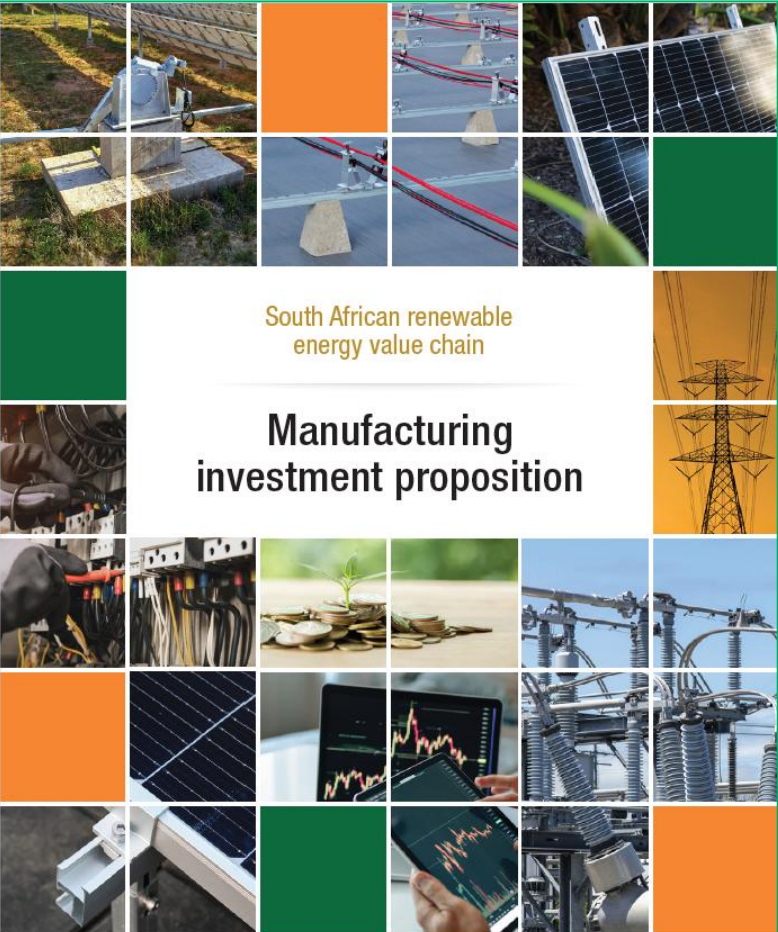
Presents an investment case for investors evaluating the bankability of local component manufacturing, within the SAREM framework.

## What is SAREM?

The definitive national industrial policy framework, linking renewable energy and storage expansion to domestic industrial development.

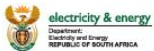
A coordinated commitment between government, labour and the private sector to make the energy transition deliver manufacturing investment.

Improves viability through four interventions: demand visibility, predictable localisation, industrial de-risking and infrastructure enablement.



# South African renewable energy value chain

## Manufacturing investment proposition





This document is part of a series prepared for domestic and international investors and multinational OEMs seeking to capitalise on South Africa's projected 35.1 GW<sup>1</sup> renewable energy pipeline by 2035 and the country's strategic position as a primary manufacturing hub for sub-Saharan Africa. It presents an investment case for commercial banks and development finance institutions evaluating the bankability of local component manufacturing, within the framework of the South African Renewable Energy Masterplan (SAREM).

### Investor location readiness summary

South Africa offers a significant industrial opportunity tied to the projected deployment of 35.1 GW of renewable energy capacity by 2035. The market is entering a planned expansion phase, underpinned by energy sector liberalisation, grid investment, and an annual build rate of approximately 3.5 GW. Together, these factors provide the scale, demand visibility, and long-term certainty needed to support domestic component manufacturing.

South Africa is also positioned to serve as a regional manufacturing and distribution hub for sub-Saharan Africa, supported by established trade agreements including African Continental Free Trade Area (AfCFTA), Southern African Development Community (SADC), and Southern African Customs Union (SACU). Near-term localisation opportunities are strongest in components that align with existing industrial capabilities — particularly transformers, mounting structures, trackers, and cabling — where the country's metals, fabrication, and electrical equipment industries provide a competitive manufacturing foundation.

The following table assesses South Africa's readiness as a strategic manufacturing location, drawing on evidence of the country's industrial capacity and regulatory environment to supply components for the projected renewable energy pipeline.

Table 1: Comparative assessment of South Africa's investor location factors

| Investor location factor      | Specific investment drivers                         | South African market evidence                                                                                                                                                                                                                | Status <sup>2</sup> |
|-------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Market demand                 | Local, regional & global market demand              | 35.1 GW total pipeline by 2035 with a 3.5 GW annual build rate.                                                                                                                                                                              | Robust              |
| Talent & labour               | Experienced and non-experienced staff availability  | Manufacturing workforce of 1.68 million. Supported by 26 universities, 50 Technical and Vocational Education and Training (TVET) colleges, and the PowerUp skills platform to help with renewable energy sector specific skills development. | Established         |
| Infrastructure & connectivity | Waterways, seaports, airports & power               | Eight commercial seaports with specialised renewable energy hubs at Saldanha and Ngqura. Largest road network in Africa made for abnormal loads.                                                                                             | Improving           |
| Regulations                   | Policy, permitting processes & customs              | The SAREM framework provides demand visibility, industrial de-risking, and predictable localisation targets. Additionally, provincial and local frameworks offer localised support mechanisms that investors can benefit from.               | Improving           |
| General business environment  | Macro stability, government support & incentives    | 15% preferential corporate tax in special economic zones (SEZs). Streamlined permitting via the InvestSA Energy One Stop Shop.                                                                                                               | Established         |
| Sector specialisation         | Strength of sector expertise & supply chain density | High expertise in metals and machinery (20% of manufacturing). Active ecosystem of component manufacturers, service providers, and project developers already supplying the domestic market.                                                 | Robust              |

Investors should note two macro-level considerations. On sovereign risk: South Africa is rated sub-investment grade (S&P BB positive, Fitch BB- stable, Moody's Ba2 stable), though the trajectory is improving following S&P's first upgrade in approximately 20 years in November 2025. On currency risk: The ZAR is volatile, with USD/ZAR ranging from R11.57 to R19.93 over the past decade. Manufacturing investors with USD cost structures and ZAR revenues should model this exposure and utilise available JSE hedging instruments. Both considerations are addressed in detail in Section 5.

<sup>1</sup> Projections used Integrated Resource Plan (IRP) 2025 growth numbers of solar PV, wind, embedded generation and BESS.

<sup>2</sup> Robust, indicates a primary competitive advantage with proven scale; Established, refers to foundational systems and infrastructure that are stable, functional, and ready to support industrial operations. While, improving acknowledges areas where strategic reforms, funded infrastructure projects, and regulatory refinements are actively underway to enhance operational efficiency.

## CONTENTS

# What this proposition covers

- 
- |    |                             |
|----|-----------------------------|
| 01 | Investor location readiness |
|----|-----------------------------|
- 
- |    |                                                                       |
|----|-----------------------------------------------------------------------|
| 02 | Investment opportunities for renewable energy component manufacturing |
|----|-----------------------------------------------------------------------|
- 
- |    |                                        |
|----|----------------------------------------|
| 03 | Human capital and workforce capability |
|----|----------------------------------------|
- 
- |    |                                        |
|----|----------------------------------------|
| 04 | Strategic infrastructure and logistics |
|----|----------------------------------------|
- 
- |    |                                 |
|----|---------------------------------|
| 05 | Policy and regulatory framework |
|----|---------------------------------|
- 
- |    |                                     |
|----|-------------------------------------|
| 06 | Business environment and incentives |
|----|-------------------------------------|
- 
- |    |                                                    |
|----|----------------------------------------------------|
| 07 | Sector specialisation and localisation opportunity |
|----|----------------------------------------------------|
- 
- |    |                                   |
|----|-----------------------------------|
| 08 | Investment pathway considerations |
|----|-----------------------------------|
- 
- |    |                          |
|----|--------------------------|
| 09 | Sector investment briefs |
|----|--------------------------|
-

## READINESS

# Investor location readiness snapshot

| INVESTOR LOCATION FACTOR        | SOUTH AFRICAN MARKET EVIDENCE                                           | STATUS      |
|---------------------------------|-------------------------------------------------------------------------|-------------|
| Market demand                   | 35.1 GW total by 2035; ~3.5 GW built every year                         | Robust      |
| Talent and labour               | 1.68m manufacturing workers; 26 universities, 50 TVET colleges          | Established |
| Infrastructure and connectivity | 8 seaports incl. Saldanha Bay and Ngqura; Africa's largest road network | Improving   |
| Regulations                     | SAREM mandates demand visibility and predictable localisation targets   | Improving   |
| General business environment    | 15% SEZ corporate tax rate; InvestSA Energy One Stop Shop               | Established |
| Sector specialisation           | Metals and machinery equal 20% of manufacturing output                  | Robust      |



Robust



Established



Improving

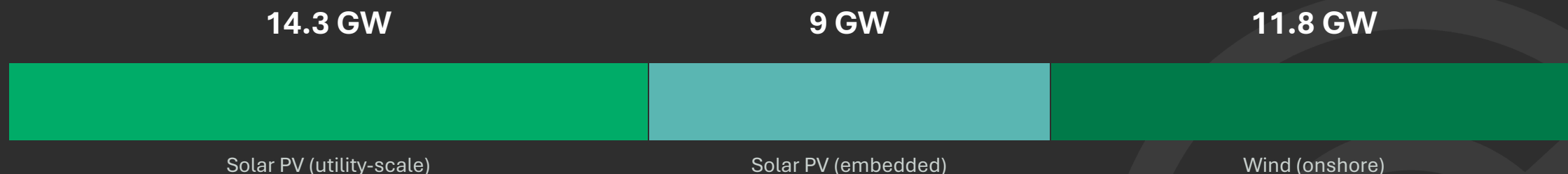
Source: GreenCape analysis, the dtic; South African Renewable Energy Masterplan (SAREM).

## INVESTMENT OPPORTUNITY

# 35.1 GW pipeline by 2035

Expected total installed solar and wind capacity by 2035 — up from approximately 10-13 GW online today.

Breakdown of the 35.1 GW total by technology



■ **Plus approximately 3.7 GW of large-scale battery energy storage (BESS) by 2035**

Source: GreenCape analysis, IRP 2025. Projections use IRP 2025 growth numbers for solar PV, wind, embedded generation and BESS.



## South Africa doesn't need to build the whole value chain — just a defined, growing subset it can make at competitive scale.

This is not an exhaustive list — and it keeps growing.

See who's already manufacturing, and add your facility to the living database:

[www.greencape.co.za/archives/renewable-energy-value-chain-manufacturers-database](http://www.greencape.co.za/archives/renewable-energy-value-chain-manufacturers-database)

# Priority localisation matrix

### BIG WINS

*Strongest alignment with existing industrial strengths in metals and electrical equipment.*

- Solar PV mounting structures & trackers
- Step-up transformers (solar & collector)
- Value-added mineral products
- Steel and concrete wind towers and tower internals

### ENTRY-POINT OPPORTUNITIES

*Practical entry points for domestic firms to adapt existing fabrication and electrical lines.*

- Primary steel structures for wind projects.
- Flexible and rigid MV cables (wind).
- LV and MV cables (solar PV).
- Fasteners used in solar and wind installations.
- Battery management systems (BMS) and energy management systems (EMS).
- Lithium-ion battery components and casings.

### HIGH STAKES, HIGH REWARD

*Significant potential but faces high capital intensity and globally concentrated supply chains.*

- Polysilicon, wafers and ingots
- Solar cells and modules
- Lithium-ion battery cells
- Wind turbine hubs, nacelles, blades

### TRANSITION OPPORTUNITIES

*Meaningful value but requires moderate development of technical capability or increased market scale.*

- BMS and EMS
- Li-ion battery components & casings
- Collector and string inverters

# 02

## Human capital and workforce capability

Workforce scale and cost-competitiveness, and the technical skills and sectoral training ecosystem.

## WORKFORCE

# Workforce scale and cost-competitiveness

**1.68m**

manufacturing workforce,  
up 4.4% y/y

**41.7m**

working-age population,  
growing 1.3%/year

**60%**

labour force participation  
rate

**R25 364**

average monthly  
manufacturing wage (~USD 1  
400)

Source: Stats SA Quarterly Employment Statistics (QES); the dtic Investment Project Book 2025.

# A skills pipeline built for industrial scale



## Higher education

26 universities, RE research centres



## Technical training

50 TVET colleges, 364 campuses



## Artisan development

SEIFSA metals and engineering artisans



## PowerUp platform

Bridges industry and PSET curricula



## Funding and planning

National SETAs fund skills planning



## Industry collaboration

SAPVIA and SAWEA align sector skills

# 03

## Strategic infrastructure and logistics

Transport and port connectivity, energy infrastructure and grid modernisation, and operational cost-efficiency.

# Strategic infrastructure and logistics

## Ports and roads

Eight seaports; Saldanha Bay and Ngqura handle heavy renewable cargo

N1, N2 and N3 corridors gazetted for abnormal loads

Largest road network in Africa, built for abnormal loads

## Rail and grid investment

R120bn ring-fenced for rail rehabilitation and port efficiency

Freight rail network opening to third-party operators

~14 500 km of new transmission lines and 210 transformers planned

# 04

## Policy and regulatory framework

The South African Renewable Energy Masterplan, trade and regional integration, and sovereign and currency risk.

# How SAREM de-risks local manufacturing

01

## Demand visibility

Consolidated procurement pipelines give manufacturers demand certainty.

02

## Predictable localisation

A 40% minimum local content floor has held across every REIPPPP bid window.

03

## Industrial de-risking

Existing incentives align with the renewable value chain for new facilities.

04

## Infrastructure enablement

Prioritises transmission expansion and stronger electricity trading rules.

**SAREM improves commercial viability and scalability through these four interventions, rather than relying on protectionist measures alone.**

Source: South African Renewable Energy Masterplan (SAREM), the dtic.

# Two macro-level considerations for investors

## Sovereign rating

S&P: BB, positive outlook (first upgrade in ~20 years)

Fitch: BB-, stable outlook

Moody's: Ba2, stable outlook

## Currency risk

USD/ZAR has ranged from R11.57 to R19.93 over the past decade

Ten-year average of approximately R15.12/USD

JSE currency derivatives allow forward cover on import costs

05

# Business environment and incentives

Fiscal and manufacturing incentives, and regulatory efficiency and investor support.

## INCENTIVES

# Fiscal and investor support



### Preferential tax rate

15% corporate tax rate in SEZs



### Employment Tax Incentive

Lowers the cost of workforce growth



### Customs and VAT relief

Duty and VAT relief in Customs Controlled Areas



### IDC development finance

Development finance for the green economy



### Section 12I allowance

Capital allowance, reinstatement under review



### InvestSA One Stop Shop

One entry point for licensing and permitting

# 06

## Investment pathway considerations

Strategic pillars for investors and OEMs assessing market entry and operational scale-up.



# How investors should sequence market entry

01

## Sector prioritisation

Focus on transformers, mounting structures and cabling first.

02

## Location and incentives

SEZs such as Atlantis and Coega unlock a 15% tax rate and VAT relief.

03

## Regulatory navigation

The InvestSA One Stop Shop cuts licensing and grid connection times.

04

## Financing structures

Blend IDC development finance with commercial debt and DFI capital.

These four pillars determine how quickly an investment moves from decision to production.

Source: GreenCape analysis, the dtic; South African Renewable Energy Masterplan (SAREM).

# 07

## Sector investment briefs

Four priority components for local manufacturing: power cables, fasteners, solar trackers and mounting, and transformers.



# Power cables manufacturing

**17.7 GW**

renewable pipeline 2026–  
2030 (solar + wind)

**22 860t**

est. annual copper  
conductor demand

**149 602t**

est. annual structural steel  
demand

**15%**

import duty on insulated  
cables (HS 8544)

- South Africa targets 90% localisation of Balance of Plant cabling infrastructure.
- Manufacturing anchored in Gauteng, the Eastern Cape and KwaZulu-Natal, close to copper, aluminium and polymer supply chains.
- SEZ locations such as Coega and Atlantis add a 15% preferential tax rate and VAT relief on capital equipment.
- Priority investment: automated extrusion and vulcanisation lines; expanded NETFA and SABS testing capacity.

Source: GreenCape analysis, IRP 2025, LCCU estimates. Full brief: SAREM VCP Cables manufacturing.

# Fastener manufacturing

**367 406t**

projected fastener demand,  
2026–2030

**~152**

direct jobs per 100 MW  
(wind + solar)

**15%**

uniform import duty on  
steel fasteners

**105+**

downstream jobs per 100  
MW of wind

- Fasteners secure tracker systems, module clamps, tower assembly and cable management across every renewable project.
- An established nuts-and-bolts manufacturing base in mining, construction and automotive gives a direct platform to scale.
- Many firms already have base capacity; the multi-gigawatt pipeline opens room for new entrants and joint ventures.
- AfCFTA and SADC membership extends demand into regional sub-Saharan export markets.

Source: GreenCape analysis, IRP 2025, LCCU estimates. Full brief: SAREM VCP Fasteners manufacturing.

# Solar mounting structures and trackers

**10.3 GW**

utility-scale solar build-out,  
2026–2030

**R16.6bn**

five-year pipeline value  
(R14.8–18.5bn)

**8–12%**

share of total installed  
project cost

**15%**

import duty on  
steel/aluminium structures

- Mounting and tracking hardware is a major share of Balance of Plant cost, and a strong near-term localisation win.
- Manufacturing anchored in Gauteng and the Eastern and Western Cape, linked to the Northern Cape solar corridor.
- Local content rules make locally made module frames, structures and fasteners a tender requirement.
- Priority investment: robotic welding and automated CNC lines for torque tubes; SANS 10160 wind-load certification capacity.

Source: GreenCape analysis, IRP 2025, IRENA 2025. Full brief: SAREM VCP Trackers and mounting structure.

# Transformer manufacturing

**~5 000**

step-up transformer units,  
2026–2030

**3.53 GW**

combined annual solar and  
wind build rate

**70–90%**

local content threshold for  
transformers

**10%**

import duty on units above  
10 000 kVA

- Step-up transformers are a universal requirement for both solar and wind plants, unlike site-specific hardware.
- South Africa has over a century of transformer manufacturing heritage and a skilled high-voltage engineering workforce.
- Local production bypasses today's three-to-four-year global lead times for grid-critical equipment.
- Priority investment: scale class three and four transmission-unit assembly and domestic high-voltage testing capacity.

Source: GreenCape analysis, IRP 2025. Full brief: SAREM VCP Transformers manufacturing.



**Interested in decarbonising your company / industry ? Learn more here:**

