

# GREEN TRANSPORT STRATEGY: 2018 – 2050

## SABOA:

### November 2022



**transport**

Department:  
Transport  
REPUBLIC OF SOUTH AFRICA

## SOUTH AFRICA



## MOVING SUSTAINABLY

# CONTENTS

1. INTRODUCTION
2. POLICY DIRECTIVE
3. TRANSPORT SECTOR EMISSIONS PROFILE
4. VISION, MISSION, & GUIDING PRINCIPLES
5. SHORT TERM STRATEGIC TARGETS
6. STRATEGIC PILLARS
7. ELECTRIC VEHICLES DISCUSSION
8. CLEANER TECHNOLOGY VEHICLES IN SOUTH AFRICA
9. GTS: IMPLEMENTATION
10. GTS: STRATEGIC PARTNERS – IMPLEMENTATION
11. EV STRATEGIC PARTNERS
12. IMPLEMENTATION PLAN
13. CONCLUSION



transport

Department:  
Transport  
REPUBLIC OF SOUTH AFRICA

# 1. INTRODUCTION

- Transport accounts for over 26% of GLOBAL emissions (ITF,2019). Without immediate action, its share could reach 40% by 2030. If the CO<sub>2</sub> emissions from transport activity does not fall, emissions could increase by 60% by 2050 posing a major challenge to efforts in reducing emissions in line with global agreements such as the Paris Agreement.
- It is therefore imperative to conceptualise policy and regulatory regimes that will lead to the decarbonisation of the sector.
- As a response to combating the effects of climate change from the transport sector, the Department of Transport (DOT) developed the Green Transport Strategy (GTS), which was approved in August 2018.

## 2. GREEN TRANSPORT STRATEGY: POLICY DIRECTIVE

### NATIONAL

- The Constitution of South Africa
- National Environmental Management Act
- **White Paper on National Climate Change Response Policy**
- National Development Plan 2030
- The Public Transport Strategy
- The National Transport Master-Plan: 2050
- National Strategy for Sustainable Development
- Electric Vehicles Industry Roadmap
- Automotive Production and Development Programme (APDP), now referred to as the South African Automotive Masterplan (SAAMP 2021- 2035)



### INTERNATIONAL

- United Nations Framework Convention on Climate Change
- Paris Agreement
- Nationally Determined Contributions (COP 21)
- Sustainable Development Goals



**POLICY DIRECTIVE:**  
**GREEN TRANSPORT  
STRATEGY**



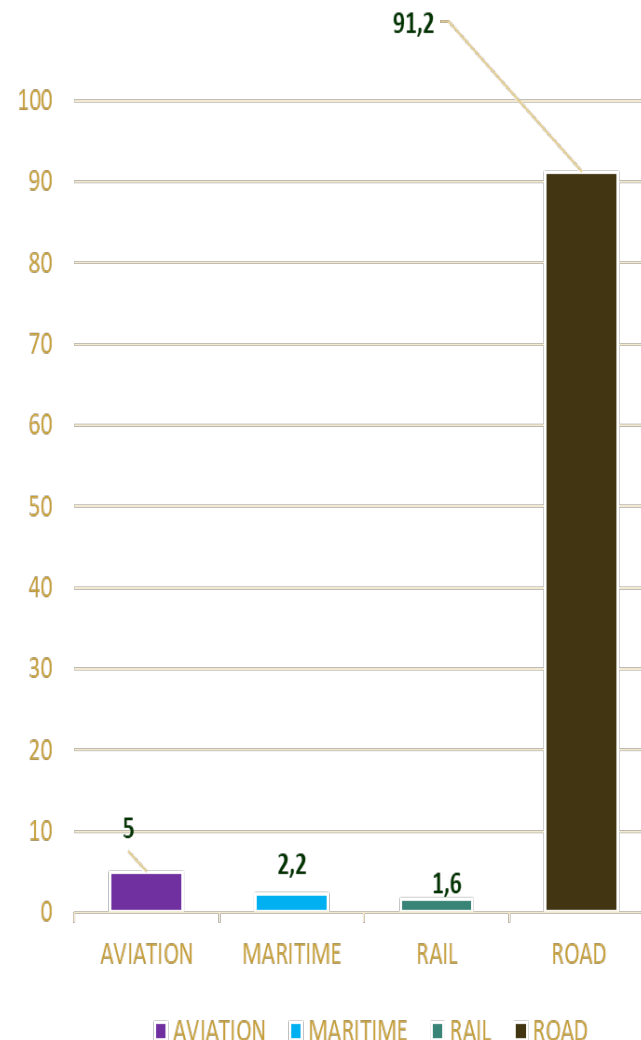
transport

Department:  
Transport  
REPUBLIC OF SOUTH AFRICA

### 3. GREEN TRANSPORT STRATEGY: EMISSION PROFILE OF THE TRANSPORT SECTOR

- According to the South African National Greenhouse Gas Inventory (2018), Transport has been identified as the fastest growing source of greenhouse gas emissions, accounting for around **10,8%** of National GHG emissions.
  - Direct emissions from the transport sector from the **road sector, account for 91,2% – mainly from the combustion of petrol and diesel.**
  - Aviation emissions then account for 5%, followed by Maritime emissions at 2,2% and lastly Rail emissions at 1,6%.

TRANSPORT SECTOR GHG EMISSIONS: CHART 1



# 4. GREEN TRANSPORT STRATEGY: FOUNDING PHILOSOPHY

## Vision

- The vision of the GTS is to **substantially reduce GHG emissions** and other environmental impacts **from the transport sector by 5% by 2050**

## Mission

- The GTS will support the contribution of the transport sector to the social and economic development of the country, while incrementally initiating innovative green alternative transformations in the sector to assist with the **reduction of harmful emissions and negative environmental impacts associated with transport systems.**

## Purpose

- The GTS will be the **cornerstone of policy development within the transport sector for the lowering of GHG emissions**, the contribution of transport to the green economy, **the promotion of green sustainable mobility and the uptake of cleaner and more efficient technologies.**

## Guiding Principles

- The GTS is informed by the fundamental and **substantive principles of sustainable development** articulated in the National Strategy for Sustainable Development.

## 5. STRATEGIC SHORT TERM TARGETS

The short-term strategic found below form part of the “quick wins” for the strategy, will essentially form part of the first phase of the Implementation Plan: (5 to 7 years)

To achieve **modal shifts (road-rail, public transport, single car usage) in the transport sector that reduce GHG emissions and other harmful emissions**, reduce transport congestion and improve temporal, spatial and economic efficiency in the transport sector.

To **convert 5% of the public and national sector fleet in the first seven years** of the implementation of this strategy and **an annual increase of 2% thereafter, to cleaner alternative fuel and efficient technology vehicles (ideally powered through renewable energy) and environmentally sustainable low carbon fuels by 2025, including the use of CNG, biogas and biofuels and the use of renewable energy to provide electricity for transport.**

To **reduce fossil-fuel related emissions in the transport sector by promoting norms and standards for fuel economy and putting in place regulations that promote improved efficiency in fossil fuel powered vehicles** and improved environmental performance of fossil fuels.



transport

Department:  
Transport  
REPUBLIC OF SOUTH AFRICA

# 6. GREEN TRANSPORT STRATEGY: STRATEGIC PILLARS

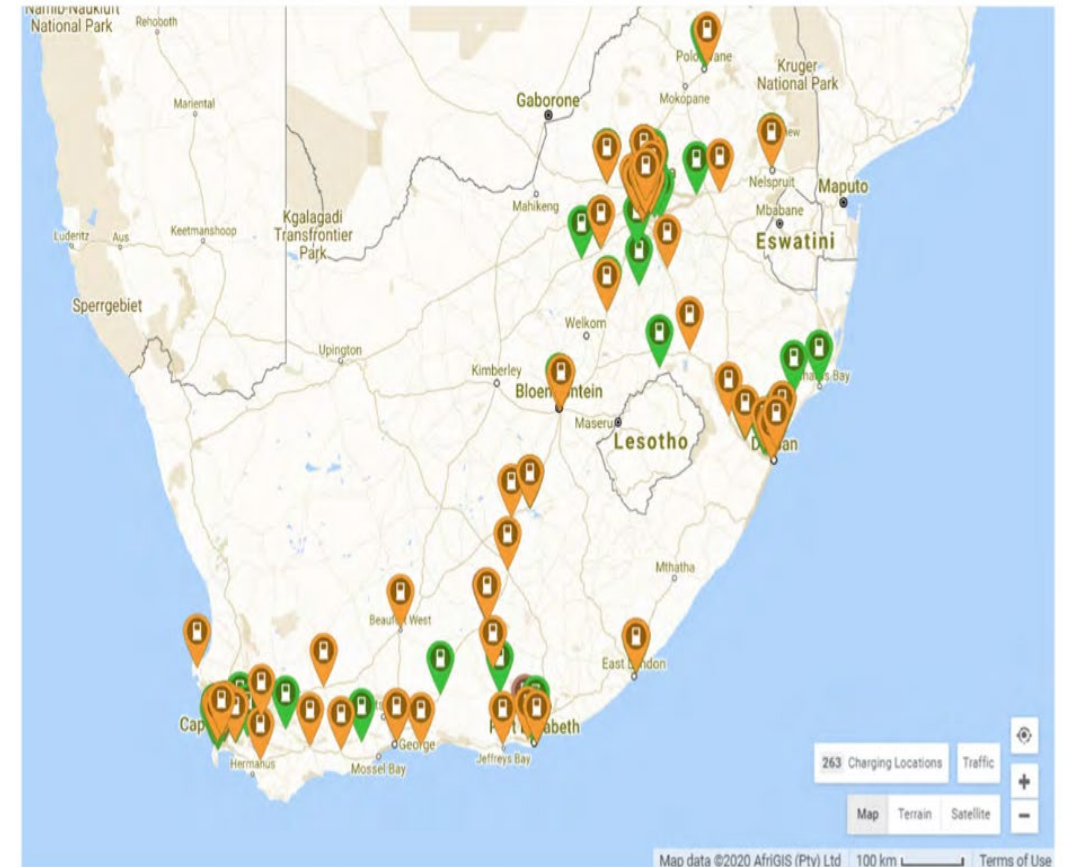
IMPLEMENTATION THEMES	STRATEGIC PILLARS
<p><b>Climate Change Response Norms and Standards</b></p>	<p>1. Develop norms and standards for climate change response at National, Provincial and Local level to ensure that there is consistency in the way climate change responses are implemented across different jurisdiction.</p>
<p><b>Green Roads</b></p>	<p>2. Shift car users from INDIVIDUAL private passenger cars to all forms of public transportation.</p> <p>3. Provide infrastructure to promote NMT and eco-mobility transportation systems.</p> <p>4. Provide transport infrastructure in a manner supportive of the eco-system.</p>
<p><b>Green Rail</b></p>	<p>5. Extend the rail network to provide reliable, safe and affordable high-speed systems while also switching to renewable energy trains.</p>
<p><b>Green Transport Technologies</b></p>	<p>6. Reduce the carbon footprint and over-reliance of petroleum based fuels, by decarbonizing the transport sector</p> <p>7. Promote the use of alternative fuels such as Compressed Natural Gas (CNG) or biogas, and liquid biofuels as transport fuels</p> <p>8. Promote and facilitate the UPTAKE of electric, hybrid-electric, and fuel cell powered vehicles.</p>
<p><b>Green Fuel Economy Standards</b></p>	<p>9. Develop “Green Procurement Guidelines” to promote efficient, and low carbon vehicle technologies</p> <p>10. Provide norms, standards and regulations that promote green fuel economy in vehicles and improve emission standards of fuel in South Africa.</p>



# 7. GREEN TRANSPORT STRATEGY: ELECTRIC VEHICLES - DISCUSSION

1. In October 2021, there were approximately 7000 EVs in SA.
  - With a compilation of traditional hybrids (THEV); meaning that they use battery and conventional energy/petrol or diesel, plug-in hybrid electric vehicles (PHEVs), and full battery EVs.
2. A transition to Electric Vehicles, while charging through the **existing energy mix would reduce emissions by 34%**.
  - **Charged by a zero-carbon mix** electric vehicles would **reduce** South Africa's greenhouse **emissions by 67%**.
3. South Africa has approximately **290 public chargers across the country**, predominantly across specific locations within cities and major highways
  - Faster charging rates are achieved from public chargers and, depending on the vehicle and charger rating, **typical charge times vary from 25 minutes to 6 hours**.
4. As an energy capacity forecast, along a simulated model of energy supply in South Africa and using the average 5% global electric vehicle fleet match in South Africa, it would correlate to approximately 0.5% of peak energy demand. **South Africa's electric vehicle car park currently stands at 0.09%.**

## South Africa's Landscape - Charging Infrastructure



Source: Plugshare



## 8. CLEANER TECHNOLOGY VEHICLES IN SOUTH AFRICA (PT)





# 9. ELECTRIC VEHICLES IMPLEMENTATION: STRATEGIC PARTNERS

In order to promote the mass **uptake of EVs** in South Africa, there needs to be a co-ordinated inclusive approach with the following partners (not limited):

## ELECTRIC VEHICLES STRATEGIC IMPLEMENTATION PARTNERS

### POLICY MAKING DEPARTMENTS

1. DMRE (ESKOM)
2. DTIC
3. DSI
4. NT
5. DEFF
6. SABS
7. MUNICIPALITIES
8. NRCS

### RESEARCH INSTITUTIONS

1. CSIR
2. UNIVERSITIES
3. CIVIL SOCIETY ORGANISATIONS (WWF)
4. INTERNATIONAL ORGANISATIONS/AGENCIES

### UYILO E-MOBILITY PROGRAMME

Technology Innovation Programme initiated by TIA in 2013.

Uyilo is set up to enable, facilitate and mobilise electric mobility technology ecosystem in South Africa.

### ORIGINAL EQUIPMENT MANUFACTURERS (OEM's)

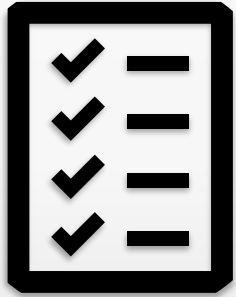


transport

Department:  
Transport  
REPUBLIC OF SOUTH AFRICA

# 10. GREEN TRANSPORT STRATEGY: IMPLEMENTATION

In order to implement some initiatives for the uptake of cleaner and efficient vehicle technologies, the DoT, in conjunction with DTIC and National Treasury, the DoT has proposed to:



Work with national, provincial and local government departments and authorities and the automobile industry to set annual targets for the uptake of electric vehicles and hybrid electric vehicles in the Government vehicle fleet,



Implementation of other government policies for e-Mobility i.e. the EV Industry Roadmap, led by the Dtic and the Auto Green Paper for New Energy Efficient Vehicles



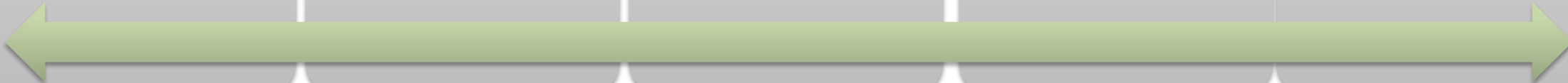
Offer producers of EV vehicle **manufacturing incentives** to both produce and sell affordable EVs in South Africa, for both the local and export markets,



Consider providing **incentives** related to the **beneficiation of using local resources** in the manufacturing of key machineries and or components (e.g. fuel cell). assist in establishing and developing local EV OEMs

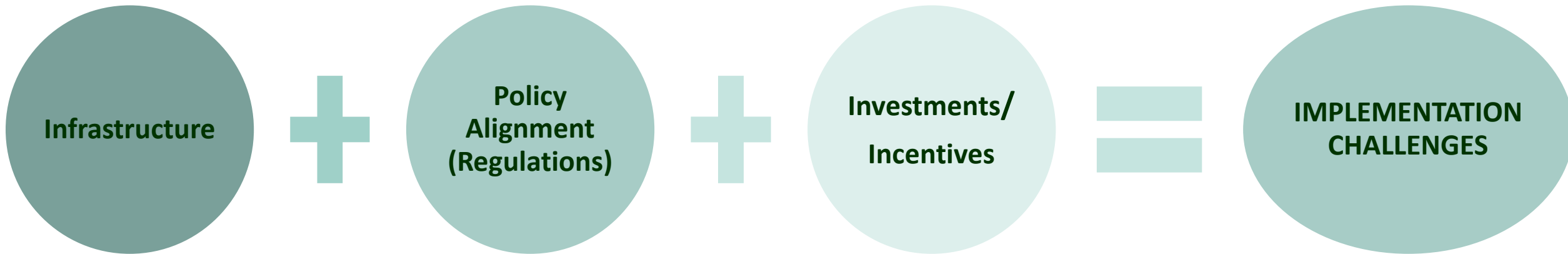


Introduce the conversion of old technology vehicles with higher emission factors to be retrofitted with EV technology and work with local research institutions to conduct research on EV batteries (storage, usage and disposal),



# 11. IMPLEMENTATION OF THE GREEN TRANSPORT STRATEGY

In order to implement some initiatives for the uptake of cleaner and efficient vehicle technologies, the GTS has acknowledged that there are a number of challenges that need to be considered.



# 12. GREEN TRANSPORT STRATEGY: IMPLEMENTATION PLAN

- REFER TO THE IMPLEMENTATION PLAN IN THE GREEN TRANSPORT STRATEGY DOCUMENT (page 52 – 56)



- [https://www.transport.gov.za/documents/11623/89294/Green\\_Transport\\_Strategy\\_2018\\_2050\\_onlineversion.pdf/71e19f1d-259e-4c55-9b27-30db418f105a](https://www.transport.gov.za/documents/11623/89294/Green_Transport_Strategy_2018_2050_onlineversion.pdf/71e19f1d-259e-4c55-9b27-30db418f105a)

# 13. GREEN TRANSPORT STRATEGY: IMPLEMENTATION PLAN

OUTPUT ACTIVITY	MEASURES	LEAD DEPARTMENT	SUPPORTING DEPARTMENTS/INSTITUTION	TIMEFRAME
<b>Fuel Economy Norms and Standards</b>	Develop vehicle fuel economy norms and standards used to label vehicles	DOE	DOT	SHORT TERM
<b>Emission standards</b>	Develop regulatory regime with NT for annual taxing of vehicles based on their emission standards through car licensing renewal system and new car sales	DoT,	NT, DOE, Private Sector, Local Government	MEDIUM TERM
<b>Vehicle Energy Efficiency Programme</b>	Government will procure EV's in incremental steps per annum	DoT	DTI,NT,DOE,DSI,DEA	LONG TERM
<b>Government fleet Procurement Guidelines</b>	Develop guidelines for government procurement to only procure efficient vehicles, using clean technologies.	DoT	NT,DTI,DEA,DSI	MEDIUM TERM

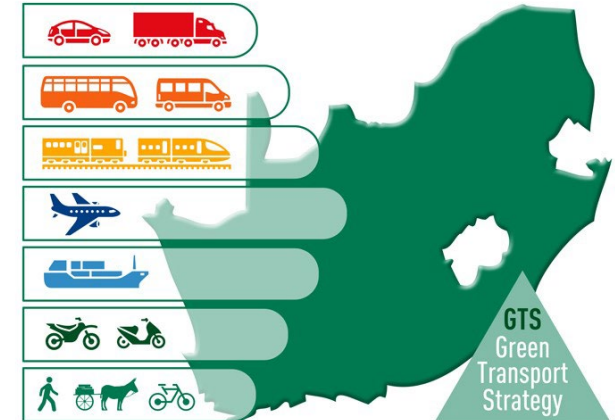
## 14. GREEN TRANSPORT STRATEGY: CONCLUSION

The GTS is envisaged, to minimise the negative effects of energy usage by encouraging sustainable energy development and use through efficient practices while investing heavily in green mobility in order to reduce the carbon footprint of the transport sector.



END.....THANK YOU

# SOUTH AFRICA



MOVING SUSTAINABLY

DETAILS OF PRESENTER