



## The Last Mile

29 JUNE 2021

No; this is not the end of our journey ..... yet!

The discussion is about the proverbial last mile for the Internal Combustion Engine Vehicles (ICEV's) and the first mile of the Electric Vehicle (EV). It is about the opportunity in Electric Vehicles (EV's) and some challenges in the transition pathway.



### Some media statements seen:

South Africa aspire to increase vehicle exports to Europe.

The Gauteng Premier, Mr David Makura, has said that the multibillion-rand Tshwane Automotive Special Economic Zone project in Silverton is described as a game-changer in a community that sorely needs jobs and is well on track.

### Some thoughts on the above:

Both the above media statements are positive news to South Africans during trying times in our current economy. One does have to ask some questions pertaining to the future relevance though:

- Is South Africa correctly gearing to service the EU's vehicle demand of the near future, especially seeing their focussed, and accelerated swing to EV's?

- Will the Automotive Economic Zone in Tshwane continue to deliver, from a medium- and long-term perspective, solutions to serve the social needs in local communities and economical needs in the supporting industries?
- Is our focus reaching into the longer-term vision, taking into consideration how our world will be changing through economic, technology, social and environmental drivers?

## Goal

Our transport, from a public to a private perspective, is a carbon intensive solution and one that the world is working at changing to a lower intensity. China for example is delivering huge numbers of EV's for private use application in their own country, EV's and other "greener" fuelled solutions in the public transport sector is already adopted in the EU and other areas.

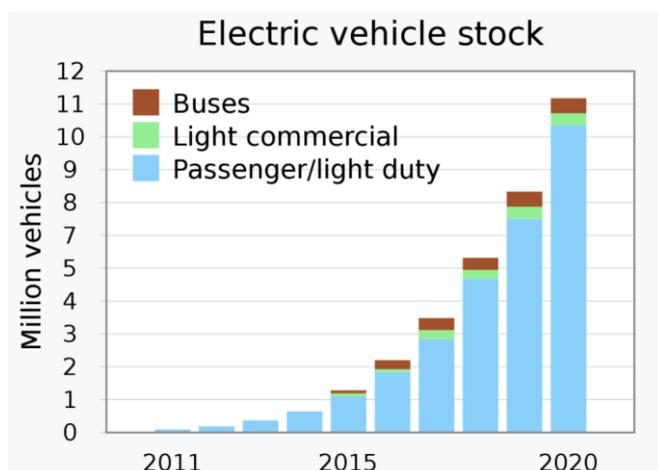


EV's are not new in our public transport sector, we had them in the 1970's already:

An electric bus in the City of Johannesburg in 1974

Source: Flickr: Photo by John Ward

Transport is contributing around 25% of energy related Greenhouse Gas (GHG) emissions globally. The International Energy Agency (IEA) assumes the phase-out of emissions from motorcycles by 2040; rail by 2050; small trucks by 2060; and although emissions from cars and buses are not eliminated until 2070, it expects many regions, including the European Union; United States; China and Japan to have phased-out ICEV's as early as 2040. ([Cars, planes, trains: where do CO2 emissions from transport come from? - Our World in Data](#))



The EV stock growth during the last decade:

Source:

Graph: Wikipedia

Data: [Global EV Outlook 2021 / Technology Report](#).

IEA.org. International Energy Agency (April 2021).

The ultimate goal must be to eliminate GHG emissions from transport completely, and as soon as possible.

# Concern

Our focus is to secure our Social Dimension (in our ESG responsibility) through the likes of a Tshwane Automotive Special Economic Zone which will need supporting industries and training, all this resulting in much needed jobs and economic security for households.

Minister Rob Davies stated on 23 November 2018 that Government remains committed to further support investment and development of the automotive industry in line with the National Industrial Policy Framework (NIPF) and the Industrial Policy Action Plan (IPAP). He went on to mention the following targets from the “SA Automotive Masterplan 2035”:

- Achieve 1% of global vehicle production by 2035 (increase from current 600 000 units to almost 1.4 million units a year).
- Increase local content from current 39% to 60%.
- Double employment in the value chain from current levels to about 240 000.
- Achieve at least level 4 BEE status from 2021 and beyond.
- Support to be based on value addition rather than production sales value.

The concern in this is the planned phase-out of ICEV’s in our export markets outside of Africa. Are we aligned with the markets, and do we have the required alternatives in our strategy with a clear vision of the transition required?

# Opportunity

The reality is that South Africa and Africa at large is a developing country and continent, and our infrastructure will not support the transition pathway adopted by the 1<sup>st</sup> world countries. However, we could acknowledge that pockets of opportunity do exist, and in our cities we might find opportunities in the following that might align or maintain targets identified under the “SA Automotive Masterplan 2035”:

- The COVID-19 pandemic changed how we work for ever and the need for vehicles to commute between home and work is less. This might have dampened the need for a longer-range EV and potentially create an opportunity to introduce a shorter range (and smaller) EV, especially those households and individuals that could afford more than one vehicle. The pricing and potential local content of these vehicles needs to be looked at to achieve more affordability.
- “Last mile” deliveries could be reviewed and logistically planned and set up differently to incorporate low noise EV’s of smaller proportions and payloads. It will necessitate the review of the complete logistical pathway though.
- EV’s could also be considered to replace delivery vehicles doing scheduled daily commutes.
- Public transport, including minibus taxis could also be considered for a transition pathway.

The abovementioned items could act as a catalyst when our electrical generation and transmission and distribution infrastructure could support the switch.

# Transition

The transition has begun, whether we acknowledge it or not. As reported by Irma Venter on 20 August 2020 in the Engineering News, it will require a coherent strategy between stakeholders from the policymakers and automobile manufacturing sector for the shift to EV production to prevent South

Africa from losing its edge on the export market. ([The time for S Africa to shift to EV production is now, says TIPS report \(engineeringnews.co.za\)](https://www.engineeringnews.co.za))

In the early days of the motor vehicle, technology was not supportive of EV's, but is fast evolving into a viable option. The first EV was displayed to the public around 1881 and with modern technology and the rate of innovation, this will soon become the norm.



Gustave Trouvé's electric tricycle:

Source:

[http://academie-de-touraine.com/Tome\\_25\\_files/067-092.pdf](http://academie-de-touraine.com/Tome_25_files/067-092.pdf) (Bibliothèque Nationale de France)

The transition will also support the Environmental Dimension (in our ESG responsibility) and leaves no alternative, but to adapt as the generations after us will know we knew.

We are beyond the first mile for the EV and in the last miles of general use of ICEV's.

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