



FIRST INPUT TOWARDS THE DEVELOPMENT OF THE

AUTO GREEN PAPER

ON THE ADVANCEMENT OF NEW ENERGY VEHICLES IN SOUTH AFRICA

THE SOUTH AFRICAN ROAD TO PRODUCTION OF ELECTRIC VEHICLES (THE ROADMAP):

“delivering for the people, for the planet and for our prosperity”.

PUBLIC CONSULTATION VERSION

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STATUS OF THE DOCUMENT: A Green Paper is normally a **government policy discussion paper** that details specific issues, and then points out possible courses of action in terms of policy and legislation. It articulates possible solutions that are yet to be adopted by government. A Green Paper is a precursor for a White Paper. The White Paper articulates a policy position of government that has been approved by Cabinet. This document has been drafted following initial consultation with industry and constitute **a first input into the development of a sector Masterplan discussion paper**, which is published for comment, following which it will be taken through further evidence-based analysis and policy development, before being formally considered by stakeholders and in Government processes. Dates for each key milestone will be added. To underline: it does not yet set out official policy and will be taken through a process of engagement with stakeholders.

Comments on this document may be submitted to the dtic by email to electricvehicle@thedtic.gov.za

PREFACE

The purpose of this New Energy Vehicle [NEV] paper is to establish a clear policy foundation that will enable the country to coordinate a long-term strategy that will position South Africa at the forefront of advanced vehicle and vehicle component manufacturing, complemented by a consumption leg, and increase our competitiveness in the global race to transition from the internal combustion engine era into electro-mobility solutions and technologies. In August 2019, the Minister of Trade, Industry and Competition set the large auto-makers in South Africa a challenge: to help develop a roadmap to the local production of electric vehicles. The various workstreams of the auto industry's Master Plan were launched shortly thereafter, which included one focussed on technology changes and on deeper localisation. During 2020, the importance of this work was emphasised and more recently, a number of developments in key export markets has helped to step up the pace of work.

This Draft Green Paper seeks to develop a framework upon which a comprehensive and long-term automotive industry transformation plan on new energy vehicles can emerge, with specific focus on:

- creation of a high-yielding business environment, including an appropriate fiscal and regulatory framework, that makes South Africa a leading and a highly competitive location, not only within the African continent but globally, for electric vehicle production;
- support and investment in the expansion and development of new and existing manufacturing plants to support the production of new energy vehicles and components within South Africa and to grow the level of employment in the sector;
- development and investment in new energy vehicle component technology and expansion of the fledgling electric supply chain, by increasing support and investment in a set of unique NEV components;
- reinvestment and support towards reskilling and upskilling of the workforce to ensure the right skills are available for the design, engineering and manufacturing of electric vehicles and related components and systems;
- the transition of South Africa towards cleaner fuel technologies available globally [CleanFuels2];
- adoption of new and sustainable manufacturing processes to significantly reduce greenhouse gas emissions and improve our environmental wealth; and
- ensuring that that Research and Development [R&D] investment is strategically targeted at activities that are likely to give South Africa a competitive advantage.

The Green Paper is released to invite substantive comments from all stakeholders including members of the public. This is the beginning of a crucial public discourse that will define electro-mobility in South Africa. The roadmap to implementing the new energy vehicle policy will entail the following steps:

- Gazetting the draft policy for public comments by the end of May 2021
- Submitting the policy proposals to Cabinet for consideration by October 2021

1. INTRODUCTION

1.1. Setting the playing field

The automotive industry plays a significant role in the economic life of South Africa. Approximately one-third of value addition within the domestic manufacturing sector is derived either directly or indirectly from vehicle assembly and automotive component manufacturing activity, positioning the industry and its broader value chain as a key player within South Africa's industrialisation landscape.

South Africa has invested in a world-class automotive manufacturing base with strong Government support and ongoing re-investment by global Original Equipment Manufacturers [OEMs] and a strong collaborative partnership with local components manufacturers and labour. The shift from internal combustion engine [ICE] vehicles to New Energy Vehicles [NEVs] is a disruptive trend for the automotive industry globally, and South Africa will also be impacted directly by this evolution.

The automotive sector and its public sector partners developed the South African Automotive Masterplan with the vision of becoming a globally competitive and transformed industry that actively contributes to the sustainable development of South Africa's productive economy, expands the industrial and localisation footprint and create prosperity for industry stakeholders and broader society. In order to bring this vision to life, the following key strategic objectives were agreed upon by the auto industry stakeholders to optimally develop the sector through to 2035. The long-term strategic objectives are to:

- grow South African vehicle production to 1% of global output;
- increase local content in South African assembled vehicles to up to 60%;
- double total employment in the automotive value chain;
- improve automotive industry competitiveness levels to that of leading international competitors;
- transform the South African automotive industry through the employment of black South Africans, upskilling of black employees, empowerment of dealerships and authorised repair facilities, and substantially increasing the contribution of black-owned automotive component manufacturers within the automotive supply chain; and
- deepen value addition within South African automotive value chain.

There are seven focus areas envisioned to actively support the realisation of the industry's vision and these are:

- local market optimisation;
- regional market development;
- localisation;
- automotive infrastructure development;
- industry transformation;
- technology and associated skills development; and
- institutionalising the SA Automotive Masterplan

1.2. The global pandemic and its impact on the South African automotive industry

2020 was a tumultuous year for the automotive sector globally and locally. Most obviously, COVID-19 impacted the industry unlike anything ever before. While that was also the case for many other sectors of the country's economy, the impact on automotive has been significant.

As the country's largest manufacturing sector, vehicle and automotive component manufacturing accounted for 18,7% of manufacturing output in 2020, down from the 27,6% in 2019. As an export-oriented industry, total automotive export revenue declined by a significant R26 billion, or 12,9% from the record R201,7 billion in 2019 to R175,7 billion in 2020.

Vehicle exports declined by 115,804 units from the record 387,092 units in 2019 to 271,288 units in 2020 with the export value consequently also declining from a high of R148 billion in 2019 to R121,2 billion in 2020. On the upside, automotive components increased from R53,7 billion in 2019 to its highest level yet at R54,5 billion in 2020, mainly due to record catalytic converter exports to the EU in view of stricter emissions legislation implemented in the region since the beginning of 2020.

The European Union, with exports of R105 billion, or 59,8% of the total export value of R175,7 billion, was the domestic industry's main export region last year. A total of 197,355 vehicles, or 72,8% of total vehicle exports were destined for Europe in 2020. Since three out of every four vehicles exported were destined for Europe, developments in the region have a direct and measurable impact on the South African automotive industry.

1.3. The growing trends of New Energy Vehicles globally

Global sales of NEVs accelerated in 2020, rising by 43% to 3,24 million units compared to the 2,26 million units sold in 2019, despite the overall fall in new vehicle sales in 2020 due to the COVID-19 global pandemic. Europe has superseded China as the centre of NEV growth. For the first time since 2015, NEV sales in Europe have outpaced NEV sales in China. It is clear that the rise of NEVs is an inevitability rather than a possibility.

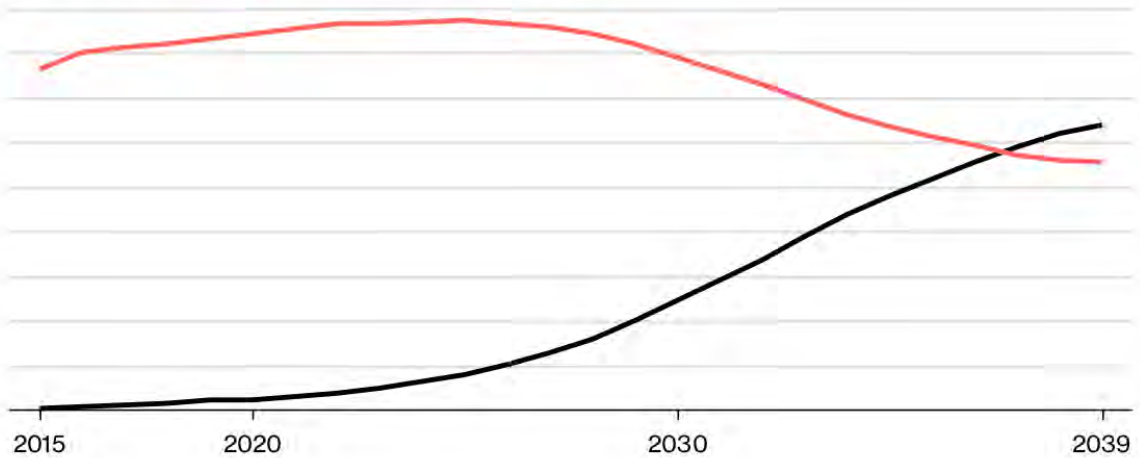
The forecast is for NEV passenger car sales to exceed those of passenger car internal combustion engine [ICE] sales by 2038 globally. In reality, it could reach this milestone even sooner, depending on the speed of regulation across the world, the impact of technological changes on prices and shifting consumer buying patterns. Of significance to the export-oriented South African automotive industry is the forecast that 40% of new vehicles sales in Europe would be electric vehicles by 2030 and for the number to increase to 80% by 2040.

In terms of a regulatory framework, policies are being refined in many countries for greater adoption of NEVs as a sustainable public and private mobility solution.

Overtaking Lane

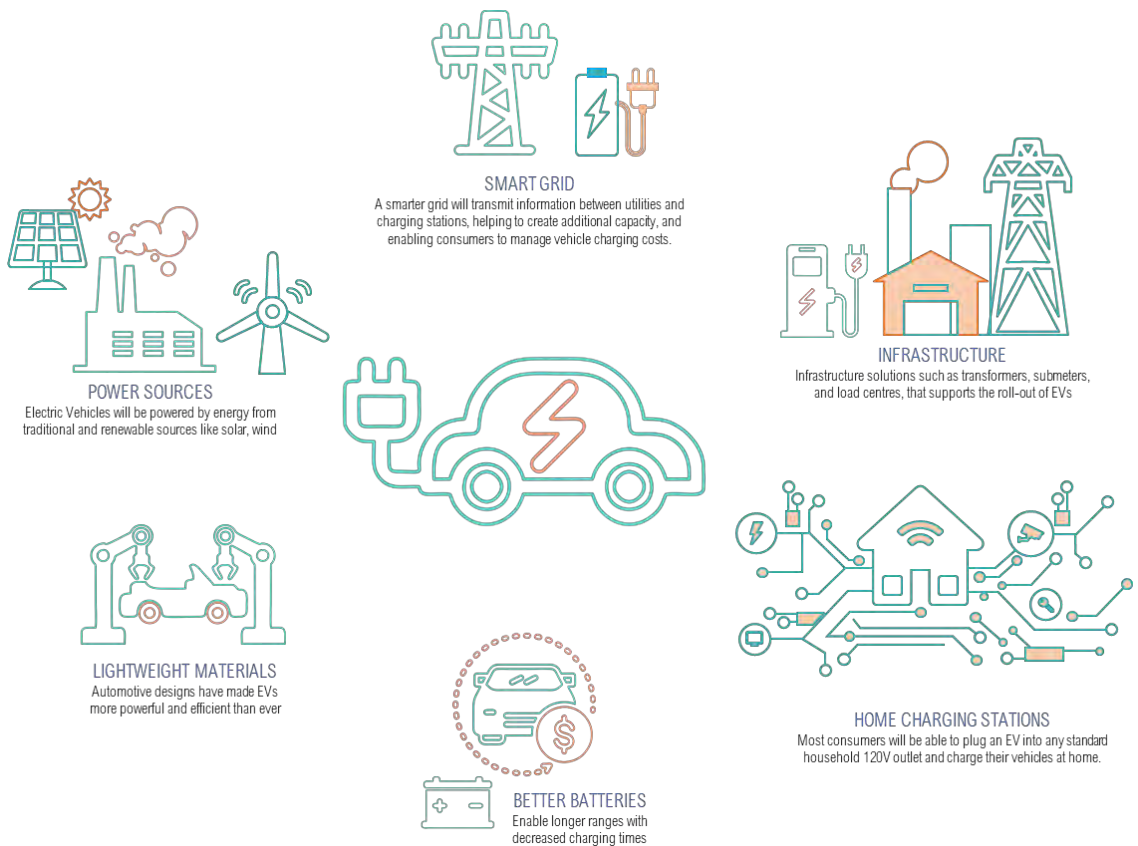
Electric vehicle sales will surpass internal combustion engine sales by 2038

■ Electric vehicles ■ Internal combustion engine



Source: Bloomberg, New Energy Finance, 2019

In response, utilities, NEV manufacturers, operators and technology providers are working towards developing smart and efficient charging infrastructure in order to meet customer needs of security and convenience. An NEV is part of a huge ecosystem of power sources, involving smart grids, infrastructure, home charging stations, commercial charging station and regulatory environment, as illustrated below:



Various countries have and continue to announce their intentions to ban the sales of new ICE vehicles from as early as 2025, such as Norway. The United Kingdom's [UK] - as the domestic automotive industry's top vehicle export destination since 2014 - announced in late 2020 to bring forward the ban of sales of traditional petrol and diesel cars to 2030, five years earlier than previously planned. This means that the South African automotive industry's electromobility discussion will have to be accelerated to ensure its future sustainability.

Country	Ban announced	Status and proposed commencement	Scope	Selectivity
 China	2017	researching a timetable ^[7]	Gasoline or diesel	New car sales
 Canada	2017	2040 (climate plan) ^[10]	Emitting	New vehicle sales
 France	2017	2040 (climate plan) ^[13]	Gasoline or diesel	New car sales
 Sri Lanka	2017	2040 ^[21]	Gasoline or diesel	All vehicles
 Slovenia	2017	2030 (emission limit of 50 g/km) ^[20]	Gasoline or diesel	New car sales
 Netherlands	2017	2030 (coalition agreement) ^[17]	Gasoline or diesel	All cars
 Norway	2017	2025 (tax and usage incentives) ^[18]	Gasoline or diesel	All cars
 Ireland	2018	2030 (private members bill, not passed) ^[15]	Gasoline or diesel	New car sales
 Sweden	2018	2030 (coalition agreement) ^[22]	Gasoline or diesel	New car sales
 Iceland	2018	2030 (climate plan) ^[14]	Gasoline or diesel	New car sales
 Israel	2018	2030 ^[16]	Gasoline or diesel	New imported vehicles
 Costa Rica	2019	2050 ^{[11][12]}	Gasoline or diesel	New car sales
 Singapore	2020	2040 (incentives on electric vehicles) ^[19]	Gasoline or diesel	All vehicles
 United Kingdom	2020	2035 or 2032 (proposed dates) ^[23]	Non-electric	New car sales

Source: Bloomberg, New Energy France

1.4. Reducing the carbon footprint and creating a fertile business environment

Public concerns around the world and in South Africa about air quality, energy security and greenhouse gas emissions are growing. This, coupled with increasingly **stringent emissions regulations and changing trends in car ownership and urbanisation**, has added increasing impetus to the automotive industry's commitment to produce low emission vehicles. This has led to a range of different solutions, including hybrid electric vehicles, plug-in hybrid electric vehicles, and the introduction of zero-emission tailpipe vehicles such as battery electric vehicles [BEV] and hydrogen fuel cell electric vehicles [FCEV]. This changing landscape presents important opportunities for South Africa both to grow its economy and to protect the environment.

Recognising the opportunities, the automotive industry invests billions in developing, manufacturing and bringing to market vehicles that are cleaner and more fuel efficient, yet remain practical and fun to drive. South Africa's electromobility regulatory framework needs to have a long term plan which includes the transformation of the public infrastructure, automotive manufacturing industry, automotive retail sector and mining sectors. Importantly, the long-overdue Clean Fuels roadmap from the current Euro 2 should still be pursued with some level of urgency and intensity in order to offer high technology fuel efficient vehicles to the domestic market, which has many benefits, including less harmful emissions, cleaner air, lower fuel consumption and a beneficial effect on the balance of payments over time.

To secure a truly sustainable future, we need a competitive business environment to anchor and grow manufacturing in South Africa. **Port and rail logistical cost structures requires urgent reforms** in order to reduce prices, improve efficiencies and reliability as part of efforts to strengthen the country's global competitiveness.

This Green Paper explores appropriate levels of **support and infrastructure investment to encourage electric vehicle uptake** - within the context of wider economic recovery efforts through market stimulus and supply chain support measures. An investment and a tax system that helps build a resilient raw material supply chain will support South Africa's efforts to be a global player of new energy vehicle manufacturing. And perhaps most importantly of all, we need to retain preferential trade access with some of our major trading partners that will allow us to maintain our global competitiveness and foster innovation.

The table below confirms the export-oriented South African automotive industry's top export destinations from 2016 to 2020. The table also reaffirms that 63,9% of the industry's annual vehicle production in 2020 was destined for the export market.

Top 10 destinations and regions for light vehicles [passenger cars and light commercial vehicles] exported - 2016 to 2020

COUNTRY	2016	2017	2018	2019	2020
UK	110,356	98,358	119,578	101,401	67,798
Germany	12,297	10,423	25,513	37,152	25,736
Japan	33,296	42,492	44,027	33,435	23,645
France	19,204	19,055	23,400	25,629	13,956
Australia	21,446	23,336	21,594	16,284	13,041
Italy	6,238	5,088	8,870	14,624	10,546
Belgium	8,116	6,902	6,338	11,379	10,048
USA	47,627	40,414	11,440	12,437	8,584
Netherlands	601	397	1,481	12,146	8,321
Austria	2,317	2,105	2,749	12,675	6,376
Other	82,268	88,535	85,013	109,103	82,679
Total [units]	343,766	337,105	350,003	386,265	270,730
Light vehicle production	571,791	574,075	581,469	603,082	423,907
% of production exported	60,1%	58,7%	60,2%	64,1%	63,9%

Source: naamsa Autolytics/Lightstone Auto

For the domestic automotive industry to remain relevant, it needs to be integrated into the global EV value chain as it is clear that the rise of EVs is inevitable. Considering that three out of every four South African manufactured cars are currently exported to the EU, it is clear that the domestic automotive industry cannot ignore EVs if it wants to continue doing business with Europe. In 2019 the majority of internal combustion engine vehicles and related automotive components exports were to the EU. In summary:

- Vehicles - 197,355 vehicle exports to the EU out of a total of 271,288 = 72,8%;
- Automotive components - R26,3 billion exports to the EU out of a total of R54,5 billion = 48,2%;
- Total automotive exports to the EU amounted to R105,0 billion out of a total export value of R175,7 billion = 59,8%.

1.5. The cost of doing nothing vs. clear and timely policy interventions

It is agreed that the future of the SA auto industry will be strongly tied to the extent to which the sector is able to embrace new technologies, particularly electric vehicle production. While the demand for autonomous vehicles (driverless cars) is also important, the pressing need to address climate-change imperatives will result in increased regulatory pressures and consumer demand for electric vehicles. Industry has done initial work on the impact of either doing nothing (ie, retaining the current internal combustion engine focus on the industry) compared to a smart transition to electromobility. Clearly, the cost of doing nothing will impact on export volumes and earnings, with significant impacts on jobs, output and contribution to GDP.

In order for the South African automotive industry not to fall behind global developments and lose its edge in the export market, a coherent strategy by all stakeholders in the country is needed for the shift to the production of electric vehicles. EV sales in South Africa comprised only 92 units, or 0,02% of the total 380,206 vehicles sold in the domestic market in 2020, down from 154 units in 2019. Hybrid vehicle sales accounted for 232 units in 2020.

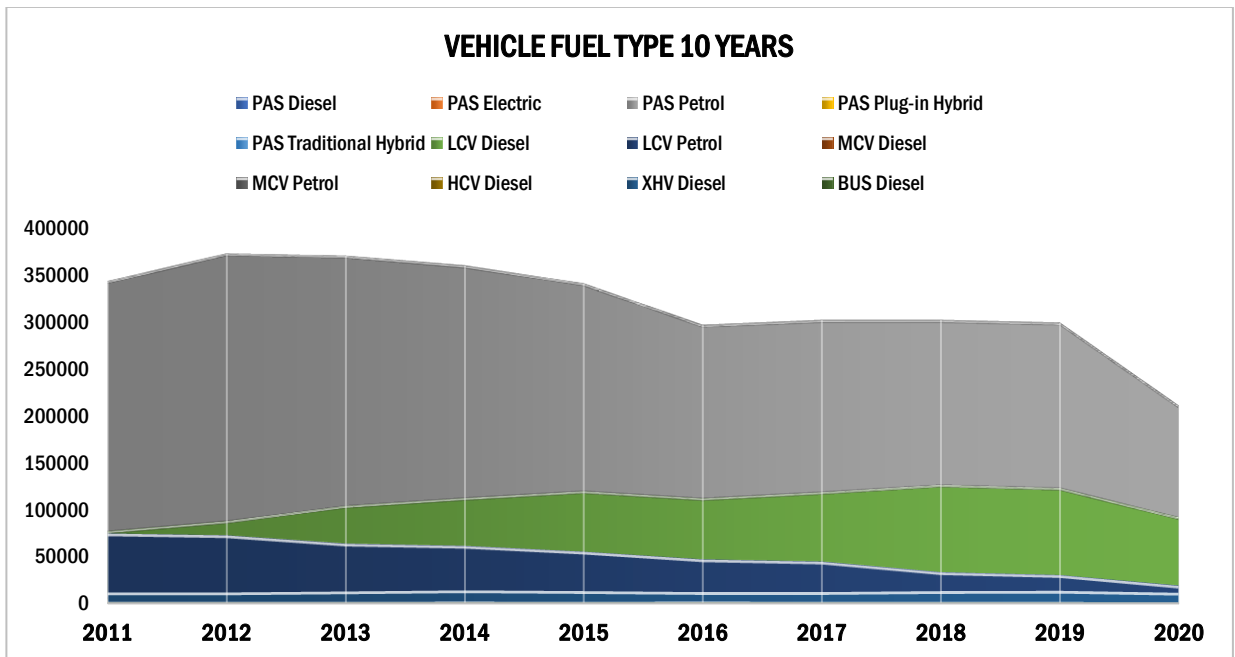
SOUTH AFRICAN MARKET BY FUEL TYPE | Petrol versus diesel passenger cars and light commercial vehicle sales - 2016 to 2020

	2016	2017	2018	2019	2020
Diesel Cars & Diesel Light Commercials	175 853	184 145	188 906	178 409	127 006
Petrol Cars & Petrol Light Commercials	344 247	346 931	335 664	329 784	230 123
Total Cars & Light Commercials	520 581	531 447	524 772	508 600	357 453
Diesel Vehicles as % of Total	33,8%	34,7%	36,0%	35,1%	35,5%

	2016	2017	2018	2019	2020
Diesel Cars	63 765	65 516	62 659	55 551	35 221
Petrol Cars	297 019	302 243	302 386	299 421	210 996
Plug-in Hybrid	168	121	89	72	79
Traditional Hybrid	213	182	55	181	153

Electric	100	68	58	154	92
Diesel Light Commercials	112 088	118 629	126 247	122 858	91 785
Petrol Light Commercials	47 228	44 688	33 278	30 363	19 127

Source: **naamsa** Autolytics/Lightstone Auto



Source: **naamsa** Autolytics/Lightstone Auto

The petrol and diesel fuel types vehicles collectively make up 90% of the overall South African vehicle market. The Electric, Plug-in and traditional hybrid have been below the 1% mark for the past 10 years, with 4,892 Electric, Plug-in and traditional hybrid new vehicle units sold out of the 5 694 860 aggregated market sales since 2011 to date. Sales of EVs could increase significantly if purchases of these vehicles are taken up by government, industry corporate fleet sales and vehicle rental companies considering that in 2020 sales to government comprised 4,2% or 16,126 units of total new vehicle sales of 380,206 units, sales to industry corporate fleet comprises 3,7% or 14,218 units and sales to the vehicle rental companies comprised 6,6%, or 25,015 units [12,7% or 68,310 units in 2019] of total new vehicle sales.

2. THE PROPOSAL AND THE KEY POLICY INSTRUMENTS

On the strength of the above narrative, this section will focus only on the proposals and available policy instruments South Africa can leverage to minimise disruption and transition to EVs seamlessly using a carefully implemented phased approach, which would include in its core:

- creating and stimulating production of electric vehicles to generate industrial and job opportunities for local manufacture of vehicles and related components, both for export markets and to satisfy domestic demand. In other words, the country should do everything possible not to have the existing manufacturing capacity confined to ICE vehicles whilst domestic and export consumption shifts to EVs;
- consideration should be given to further encouragement of the country's transition to electric vehicles: EVs may need to be incentivised additionally, based on a careful analysis of cost

structures, volumes and the effect of technology innovation, to reduce the current price gap as compared to ICE vehicles. Any proposed support should have a soft run-out; and

- increased foreign investment to benefit the country's growth and recovery ambitions, increase employment, create an upskilled workforce, and sponsor interventions that would progressively promote a healthier environment.

2.1. Key principles and challenges

- the delicate balancing support for CKD (Completely Knocked Down vehicles, produced locally) versus CBU (Completely Built- Up vehicles, imported from abroad) to ensure that the country makes a carefully managed and systematic transition to the localisation of NEVs and eliminate any risk of simply becoming an import market for NEV's;
- developing a Technology agnostic framework in a period of rapid innovation, to keep the country's options open;
- create a structured approach to the localisation of NEV components;
- structure the NEV support to take cognizance of the "step-change" [not linear] reductions in battery and other NEV costs that will materialise over time. Consider how to create a realistic projection of the likely timeframes towards ICE and BEV cost parity over the next 8 to 15 years; and
- ensure that the foundations are established to provide the best outcome for securing future exports to Europe while also achieving the Rule of Origin requirements.

In addition to the principles outlined above, five additional considerations must shape the policy framework,

First, the current charging infrastructure in the domestic market should be expanded to incentivise motorists to switch to EVs. The private sector should play a key role in enabling such development, on commercial terms. Government has provided a common standards platform through the work of the SA Bureau of Standards (SABS).

Second, in the domestic market, the full value of carbon-reduction can only be achieved in tandem with a shift in the country's energy-mix: an increased proportion of renewable energy in the national grid will ensure that the electricity used to charge vehicles does not negate the positive effects on the environment of the electric vehicle technologies.

Third, while the principle of a technology agnostic framework has been set out, it is recognised that innovation may provide market-driven advantages to particular technologies, which may require a revised policy approach. In addition, technological development may change the price-gap between EVs and internal combustion engines, impact on whether and the extent to which support-measures will be required.

Fourth, it is widely accepted that, subject to technology developments that can reduce costs, the use of fuel-cell technologies based on platinum-group metals catalysers (green hydrogen

technologies) can play to the country's strengths and provide potentially significant demand for its raw materials. Special attention will need to be paid to this and efforts by the private sector to pilot with such technologies will be encouraged. As the green hydrogen technologies mature, they are expected to become the technology-of-choice in SA and across the world.

And finally, the value-proposition for the country needs to be clearly established in the form of additional jobs, stimulation of local industrial capabilities and expansion of production for new markets. Where changes are required to existing production technologies, appropriate 'just transition' arrangements will need to be put in place.

2.2. Use tax reforms to support industrial policy ambitions

Industry has set out a compelling business case to present before the National Treasury to stimulate greater domestic demand for vehicles in South Africa, by reducing the Ad Valorem duty as well as to address the fringe benefits on vehicles for employees of automotive companies. A standard rate per kWh could be used [e.g. the industry suggests an average rate of 2020 of 137\$/kWh] to reduce the price of an EV in aligning it to be closer to the price of an ICE vehicle for a period of say five years in stimulating market demand for EVs. Government has noted the need to synchronise such reforms with active localisation of production. In this way, the Ad Valorem tax could be used as the instrument to tackle the demand side. This must be balanced with the need for Treasury to maintain a targeted tax collection from the Ad Valorem tax, which may require a restructuring of the tax, with one option to be considered of lower taxes on EV's balanced against higher tax levels for luxury vehicles over a certain price.

2.3. Local Manufacturing

An important pillar of the EV roadmap is the organic focus on the local manufacture of EVs along with the manufacture of electric vehicle components. The industry must reposition itself to invest in EV manufacturing to include an NEV. One of the key focus areas for the policy discussion is whether to further incentivise only fully-electric vehicles or to extend these also to other forms of new energy vehicles such as hybrids. Account will need to be taken of current announcements and commitments to introduce hybrid-vehicles into the SA market, which were not predicated on additional support. In this document, both the term EV and NEV is used and as policy clarity on the scope of any revised measures are finalised, they will identify whether these extend beyond EVs.

As a medium to long-term ambition, Government, industry and labour are in agreement on the need for South Africa to seriously consider electric vehicle battery manufacturing, which can comprise nearly half the cost of the vehicle, as part of the current 60% Rules of Origin requirement under the current free trade arrangements with the EU and the UK required to enter the EU and UK duty-free.

The demand side support provided in the previous section are crucial to stimulate the Electric Vehicle (EV) ecosystem in South Africa. Any potential industrialisation within this ecosystem

has to be complemented by local market growth in this segment, and sales of vehicles in SA overall.

With that noted, the provision of the demand stimulus package will need to be aligned to a committed EV industrialisation strategy. This section outlines a range of policy options that can be considered as part of transitioning the South African automotive sector into EV production, but also recognising the base of production that is currently grounded in ICE (internal combustion engine) technology, and the core localisation supply chain competencies that have been built around that. There still remains global ICE market requirements that need to be fulfilled.

Nascent EV production and value chain development policy should consider that there will initially be a cost premium to OEMs in South Africa based on the higher component import costs needed for EV assembly. Temporary support in addition to what is already known under the SA Automotive Masterplan 2035 and associated APDP, can help bridge the gap and to support the necessary local competency development. The policies are technology agnostic at present.

To that extent a key step would be the identification of a set of unique EV component technologies that are currently not considered feasible for localisation. Appendix A presents an initial OEM view of what those known technologies are. It is within the context of these unique EV components only, that any special APDP or related policy support measures could be grounded. It is recognised that these components would apply to both the passenger car (PC) as well as light commercial vehicle (LCV) segments. A stringent mapping exercise needs to be undertaken to verify that these components cannot be localised by any existing or new SA based supplier, at requisite standard and costs.

Based on discussions at the Executive Oversight Committee of the Auto Master Plan, a number of options have been identified.

Some of these, largely proposed by the industry players, are set out below and are now the subject of further consideration. It should be noted that the options below can be considered as either singular or a combination. Nor should they be seen as the only possible options. Other stakeholders are currently finalising a view on the policy options and considering potential additional ones. **Final choices would be determined out of a detailed research and cost/benefit modelling process as well as policy discussions on the jobs and localisation impact of different options.** Public comment on these - and additional - options will be welcomed prior to a final decision being made. Consideration is also needed of the SA Autos Masterplan 2035 objectives to ensure these are not negatively impacted. The duty rebate mechanism needs to be monitored and balanced to ensure that assembly and localisation objectives are delivered in a way that neither is adversely impacted by overweighting the other.

NEV and EV industrialisation policy options for consideration.

1. Lower or zero rated duty for identified unique EV components
 - a. Under standard APDP conditions components imported under Chapter 98 for CKD assembly attract a 20% duty;
 - b. Lower/zero duties on EV components will reduce the OEM customs account owed to SARS. Careful analysis will be undertaken on the commercial case for such duty reduction.

2. Deem the value of EV component imported content as local for purposes of VALA only
 - a. EV generated VALA credits cannot be traded, and should be used exclusively for the purpose of offsetting a manufacturing OEM's customs account;
 - b. If valuations for this "deemed" content are needed then these should be independently verified and audited to ensure global market related values are being used;
 - c. Production Incentive (PI) generated Production Rebate Certificates (PRCs) to remain calculated on local value addition and no deeming of local content to apply.

3. Sunset clause proposals
 - a. The application of lower/zero duties and VALA deemed local content to be for a short term, ie for a limited number of years only. Consideration should be given on the appropriate period;
 - b. During this period there needs to be a dedicated localisation development plan that is implemented for the EV components. Policy choices will need to be made on the exact timing synchronisation;
 - c. Upon conclusion of the sunset clause timing, and assuming the EV component has been localised, a possible form of continuing to support the EV component production in SA, could be an upward adjusted PI factor for EV components in the same way as the previous APDP "vulnerable sector" policy worked. Industry proposes an appropriate factor to be determined greater than the current 50%.

4. Ringfenced NEV support ecosystem proposals
 - a. An alternative to the independent application of points 2 and 3 above would be to implement a combination of elevated VALA and PI for EVs with the necessary local content deeming as described;
 - b. However, all credits generated should be used exclusively for offsetting duties on imported EVs for sale in SA, or EV unique components used in CKD assembly;
 - c. Should any "surplus" credits be generated, they can be traded with independent importers of EVs only, to support the demand related to market development of the NEV ecosystem in SA, as required to justify local manufacturing.

5. Strengthen value chain investment proposition

- a. Whilst options 1 to 3 look to support OEM incentive positions they do bring the risk of introducing “cheap” assembly credits into the duty pool system that is at the heart of APDP and reducing the demand for South African local content. It is the offsetting of this duty pool by OEM value addition and component localisation, that the architecture of APDP is framed on, and stimulates economic activity and job creation.
- b. An alternative, if duty credits are seen as the necessary mechanism needed, would be to support value chain investments by re-introducing the concept of Productive Assets Allowance, where OEMs previously earned duty credits for the value of investments made into production, and this should include those by suppliers into the list of unique EV components.
- c. When viewed together with the Technology AIS, this would still result in the OEM incentive position recovery, not by subsidising imported content, but rather incentivising local supplier production in the list of unique EV components.

Other options to complement a transition of local automotive manufacturing across technologies

- Non APDP support policies, including beneficiation policies to incentivise the use of regional raw materials especially those used in NEV manufacturing value chains, subject to careful modelling to ensure that the policy goals for the domestic market set out in SAAM are achieved;
- Use of a technology incentive, potentially as a ‘Challenge Fund’ to stimulate competition among OEMs to be the first to produce EVs in South Africa
- Support the transition towards renewable energy supply for manufacturing operations;
- Support measures to recycle/store water;
- Find efficiencies in reliable logistics that decreases the effective costs incurred in domestic EV car production and thus the level of additional industrial measures needed to encourage local production, covering inter alia;
 - Rail
 - Harbours
 - SEZs
- Meet fuel requirements of modern power trains using clean fuels.
 - To ensure the necessary product mixes of ICE production sales and production are maintained.

Consideration will need to be given to the rollout of EV production measures to buses and trucks – their timing and form.

South Africa has many of the materials and structures in place to build EVs, but this will require new and different skills in the industry, as well as mandating that these skills be taught at tertiary education institutions. The increase in demand for EVs creates opportunities for South Africa in several areas as outlined below.

- Transformation from raw material exporter to product exporter;
- Local manufacture of EVs and EV related components and accessories [e.g. Chargers and wall boxes];
- Employee upskilling;
- Fuel retail transformation [From vehicle centric to customer centric offering opportunities to charge, rest, work, etc.];
- New businesses e.g. green tourism, recycling, etc.;
- EV Battery 2nd life – repurpose to supply homes with electricity to mitigate against power outages and a better balance of energy demand and supply-cycles;
- Increased disposable income due to lower cost of operation, can be spent in other sectors of the economy driving job creation in sectors not linked to electric vehicles.

3. CONCLUSION

The future of the automotive industry in South Africa lies in large-scale vehicle production and component exports and there is therefore a general acknowledgement in the domestic automotive industry that it must think differently in the way it perceives the electric evolution. Exporting remains key to generate sufficient economies of scale and achieving improved international competitiveness. If South Africa does not want to lose its major export markets and face significant job losses at plant level, export revenue, as well as a substantial drop in the automotive industry's contribution to the GDP, which currently stands at 4,9%, it must accelerate its EV transformation in the country.