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PCC NEV Dialogue: The Transition to NEVs

Unlocking the market

22 November 2023

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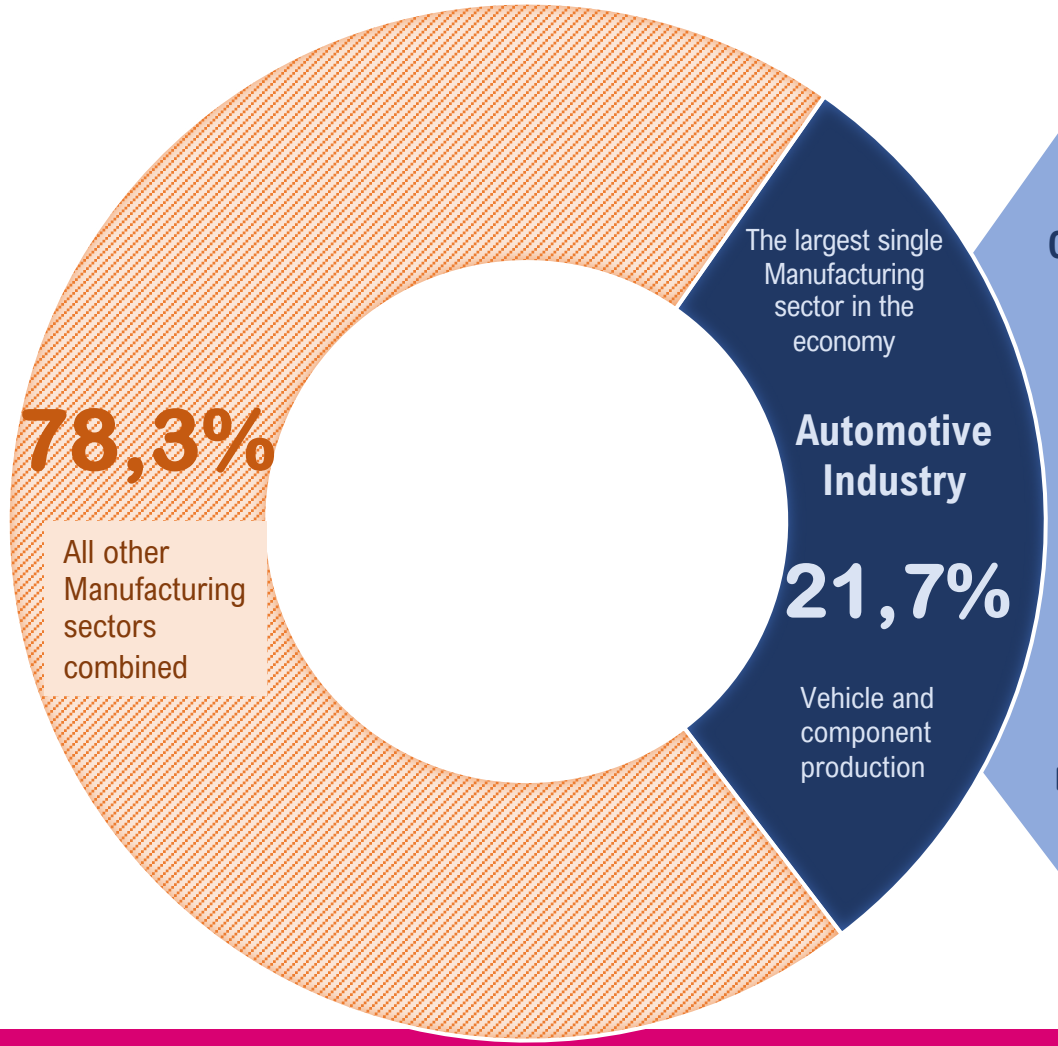
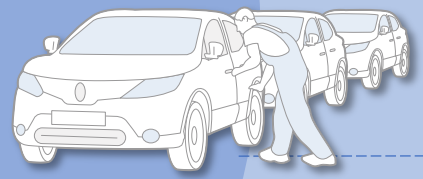
OUR VALUE DRIVERS | AUTO CONTRIBUTION TO THE SA ECONOMY - 2022



Manufacturing
2,9%

Automotive Contribution to the GDP
4,9%



Current Prices
SA's GDP
R6 638,3 billion

Retail
2,0%

PEOPLE | EMPLOYMENT | FAMILIES

33 321 people: Average monthly employment by OEMs

TOTAL DIRECTLY EMPLOYED: FORMAL SECTOR = **497 408**

Auto Manufacturing = 116,683	Auto Sales, Repair & Maintenance = 380,725

The auto sector accounts for **2.9% share** of **16.2 million people** employed in SA

CAPITAL EXPENDITURE | OEMs **R7,1b** | Components **R4,5b**

SA Vehicle Production | **555 889 units**

SA Vehicle Sales | **529 562 units**

SA's production as % of Africa's production | **54,4%**

SA's global vehicle production ranking | **22nd**

SA's global vehicle production market share | **0,65%**

No. of registered vehicles in SA | **13,0 million**

Total automotive export earnings | **R227,3 billion**

No. of export destinations | **152 Markets**

"Automotive industry's extraordinary contribution to South Africa's prosperity on a page"

JOINTLY FUNDED naamsa DTIC NEV RESEARCH STUDY RECOMMENDATIONS

Projected light vehicle sales in the South African market to 2035, per the NEV transition

YEAR	HEV	PHEV	BEV	ICE	TOTAL MARKET
2022	12 855	4 285	4 285	407 066	428 490
2023	22 174	8 870	8 870	403 573	443 487
2024	32 131	13 770	13 770	399 338	459 009
2025	47 507	23 754	23 754	380 060	475 075
2026	49 170	29 502	34 419	378 611	491 702
2027	50 891	35 624	50 891	371 506	508 912
2028	52 672	42 138	68 474	363 439	526 724
2029	54 516	49 064	87 225	354 353	545 159
2030	56 424	56 424	112 848	338 544	564 240
2031	58 399	70 079	128 477	327 033	583 988
2032	60 443	84 620	145 063	314 302	604 427
2033	62 558	100 093	162 651	300 280	625 582
2034	64 748	116 546	181 294	284 890	647 478
2035	67 014	134 028	201 042	268 056	670 140

Based on CAGR of 3.5% to 2035.

In order to quantify the industry's transitional requirements, sales targets were set to calculate the required NEV AIS, charging infrastructure and purchasing subsidy, commencing already on 1 January 2022 up to 2035, subject to approval of all recommendations.

If the South African vehicle market were to transition NEV sales equal to 20% of the total market in 2025, 40% in 2030 and 60% in 2035, the profile of NEVs sold would likely shift quite dramatically over the period. HEVs would likely dominate initially with BEVs projected to dominate the NEV market segment, achieving half of the 40% total in 2030 and 60% of the NEV total in 2035.

NEV project investment for vehicles and automotive components up to 2035 would amount to R342 billion

Public charging infrastructure full country requirements linked to renewable energy up from 305 stations at present to 262 000 stations would amount to R95,5 billion by 2035

Presidential Climate Committee in a meeting indicated that South Africa's Just-transition requirements for the automotive sector to reduce GHG would require 750 000 BEVs on the road by 2030. The projections above reflects over 1 million BEVs by 2035.

JOINTLY FUNDED naamsa DTIC NEV RESEARCH STUDY RECOMMENDATIONS

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Recommendations	Recommended level of support	Fiscal cost
1. Introduce NEV purchasing subsidy	• R20,000 subsidy for the purchase of HEVs [to 31 December 2030]; R40,000 for PHEVs, and R80,000 for BEVs [to 31 December 2035] to drive increased NEV consumption	• R7.6 billion to 2025, R31.9 billion to 2030, and R94.5 billion to 2035. Breakeven point by 2029 for the Fiscus to gain more on vehicle taxes.
1. Align NEV EMA EPA tariffs	• SA based OEMs to secure long-term duty-free access to the EMA [EU and UK] market to secure existing SA vehicle production models	• None, will maintain the industry's status quo in respect of two-way trade flow between the EMA and SA
1. Provide 50% CKD rebate on NEV electrical components	• SA based OEMs to be protected from the adverse impact of 20% CKD duties on expensive NEV components, as they transition to NEV vehicle assembly	• None. Rebate worth R1.5 billion to OEMs annually, but in face of R2.9 billion in additional costs if no local sourcing of NEV components
1. Increase AIS support for NEV investment	• Increase maximum AIS from 30% [OEMs] or 35% [component manufacturers] to 50% for NEV investments	• Additional AIS support of up to R68.4 billion to 2035. NEV for vehicles and components to amount to R342 billion by 2035.
1. Maintain balance of APDP incentives	• Maintenance of existing levels of APDP support	• No change on base APDP benefits

To support the transition of the South African automotive industry to an NEV dominated market, while continuing to develop the domestic industry in alignment with the objectives of the SAAM 2035, are summarised in the table above. It is only through the balancing of both demand and supply-side considerations that the future of the South African automotive industry can be secured.

Importantly, naamsa also highlighted not just the costs of the NEV transitional requirements but also the huge tax benefit to the Fiscus.

naamsa has subsequently also started to focus on the NEV transitional requirements for the heavy commercial vehicle sector where there is currently no dominant solution as is the case with light vehicles where the dominant solution is BEVs.

SOUTH AFRICA NEV VEHICLE PARC AND INITIAL DEVELOPMENTS

Fuel Type	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
Electric	0	0	0	0	0	0	0	0	34	14	117	100	68	58	154	92	218	502	**1 357**
Plug-in Hybrid	0	0	0	0	0	0	0	0	0	0	124	168	121	89	72	77	51	122	**824**
Hybrid	106	204	201	242	292	430	627	766	513	646	266	213	182	55	181	155	627	4 050	**9 756**
	106	**204**	**201**	**242**	**292**	**430**	**627**	**766**	**547**	**660**	**507**	**481**	**371**	**202**	**407**	**324**	**896**	**4 674**	**11 937**

- Toyota Prius (hybrid) was the first NEV sold in South Africa in 2006 and Nissan Leaf was the first battery electric vehicle sold in 2013
- NEV vehicle parc at the end of 2022 was 11 937 vehicles with BEVs totaling 1 357 units
- The South African Joule was the first locally developed electric car and made its debut at the Paris Motor Show in 2008. R300 million was invested to develop the vehicle but the plant was shut down in 2012 as an investment of R9 billion+ was required for a fully fledged plant.
- In May 2013 the Electric Vehicle Industry Road Map was launched by various government departments, including the DTIC , DST as well as the CSIR focusing on the establishment of a domestic EV industry. An inclusive platform was established for government, private sector and academia to oversee initiates relating to EVs through a dedicated Steering Committee with a first meeting held in July 2013. Key action plans included: 5% of government annual fleet requirements to be EVs from 2015 onwards increasing by 5% per annum, AIS investment support for 5 000 units per annum under APDP requirement at the time, purchasing tax incentives, etc).
- In the DTIC's **IPAP** 2015/2016 – 2018/2019, electric vehicles were included as a focus area.
- naamsa established an EV steering committee in 2016 (mainly Nissan and BMW at the time) to focus on commercial and incentive issues initially and then on technical requirements for EV introduction such as charging infrastructure, standards, etc.
- Green Transport Strategy by DoT 2018
- The UK became the domestic automotive industry's top export destination for vehicles since 2014. In 2017, the UK announced a ban on the sales of ICE vehicles from 2040, then brought the date forward to 2035 in February 2020 and again brought it forward by 5 years to 2030 in November 2020.

NEV SALES 2018 TO 2022

	Year 2018	Year 2019	Year 2020	Year 2021	Year 2022	YTD 2023
Plug-in hybrid	89	72	77	51	122	172
Traditional hybrid	55	181	155	627	4,050	4,273
Electric	58	154	92	218	502	720
Total NEVs	202	407	324	896	4,674	5,165
% of total sales	0,04%	0,08%	0,09%	0,19%	0,88%	1,29%

Overall, NEV sales reflected a significant year-on-year increase of 421,7% from 896 units in 2021 to 4,764 units in 2022 but still remain insignificant as a percentage of total new vehicle sales.

Sales of battery electric vehicles breached the 500 units per year mark in South Africa for the first time ever with sales of 502 units in 2022 and for 2023 year to date (Jan-Sep) the 720 BEV sales already exceeded the full year 2022 sales.

VEHICLE EXPORTS AND RISK ASSEMMENT

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Country	2019	2020	2021	2022
Total (R billion)	143,4	117,0	133,2	**154,3**
Ranking of exporters Number 1 to 5	VW MBSA BMW Ford Toyota	VW MBSA BMW Ford Toyota	VW Ford Toyota BMW MBSA	VW MBSA Ford BMW Toyota
UK	101 401	67 798	60 260	67 884
Germany	37 152	25 736	42 671	67 399
France	25 629	13 956	22 130	23 772
Japan	33 435	23 645	15 765	23 750
USA	12 437	8 584	6 821	20 566
Italy	14 624	10 546	18 295	18 914
Belgium	11 379	10 048	11 752	14 812
Australia	16 284	13 041	9 676	11 507
Spain	11 217	7 345	10 876	9 588
Netherlands	12 146	8 321	6 191	7 484
Other	110 561	81 710	93 004	85 266
Total (units)	386 265	270 730	297 441	350 945
Light vehicle production	603 082	422 905	471 433	524 895
% of production exported	64,0%	64,0%	63,1%	66,9%

Region	2019	2020	2021	2022	% change 2022 / 2021
Europe	285 599	197 355	229 672	255 709	+11,3%
Asia	39 879	29 440	24 170	35 154	+45,4%
Africa	23 382	16 987	21 825	22 564	+3,4%
Australasia	17 350	13 698	10 621	12 389	+16,6%
North America	13 540	9 463	7 981	21 684	+171,7%
Central America	5 651	3 156	3 045	2 759	-9,4%
South America	1 691	1 188	706	1 527	+116,3%
Total	387 092	271 287	298 020	351 786	+18,0%

Europe continued to dominate as a region and accounted for 72,7%, or nearly three out of every four vehicles exported in 2022. The future of South Africa's vehicle exports to Europe stands in the shadow of increasingly strict emission regulations. New European emission regulations include the proposed introduction of Euro VII emission standards (2025 for passenger cars and 2027 for trucks), which could add a significant cost to any vehicle produced in the domestic market for exports to the region. Added to this is legislation to ban the sales of new internal combustion engine ICE) vehicles in Europe by 2035 and 2030 in the UK, in favour of new energy vehicles. Domestic vehicle production needs to align with the overall technology shift of the global value chains in which the OEMs operate to safeguard the country's future vehicle exports.

A short-term risk for the South African automotive industry relates to Norway which currently has the most ambitious law yet to ban the sales of all new petrol and diesel cars by 2025. The domestic automotive industry exported 2,639 vehicles and automotive components to the value of R11,2 million to Norway in 2021 [AIEC SA-EU, UK and EFTA Research Report].

A medium-term risk for the South African automotive industry relates to countries that will be banning all new petrol and diesel car sales by 2030, including Belgium [2029], Denmark, Germany, Greece, Iceland, the Netherlands, Slovenia [2031], Sweden and the UK. The domestic automotive industry exported 129,717 vehicles and automotive components to the value of R23,51 billion to these countries in 2021 (AIEC SA-EU, UK and EFTA Research Report).

NEV TRUCK AND BUS TRANSITIONAL REQUIREMENTS

Legislation

a) Legislation needs to be changed to suit the special requirement of the various NEV solutions that they wish to introduced into the South African Market:

b) This covers two aspects, from the overall length, for a tri-axle from 18.5 to 20,0 m and for a interlink 22 to 23,5 m.

c) The weight penalty of a NEV vehicles compared to ICE technology is between 1 & 2 MT (Metric tons) heaver for both the Truck Tractor and Fright Carrier versions, and a special weight dispensation needs to be legislated to support the new technology introduction, with the increase in the GVM or V rating, with adoption of the increase in the axle carrying capacity for NEV's "only" (this excludes biodiesel)

d) A unique colour "number plate" system should be adopted Identify NEV vehicles, which automatically flags the vehicle as a NEV solution for law enforcement & emergency services personal

Import duties

Country of origin of the NEV

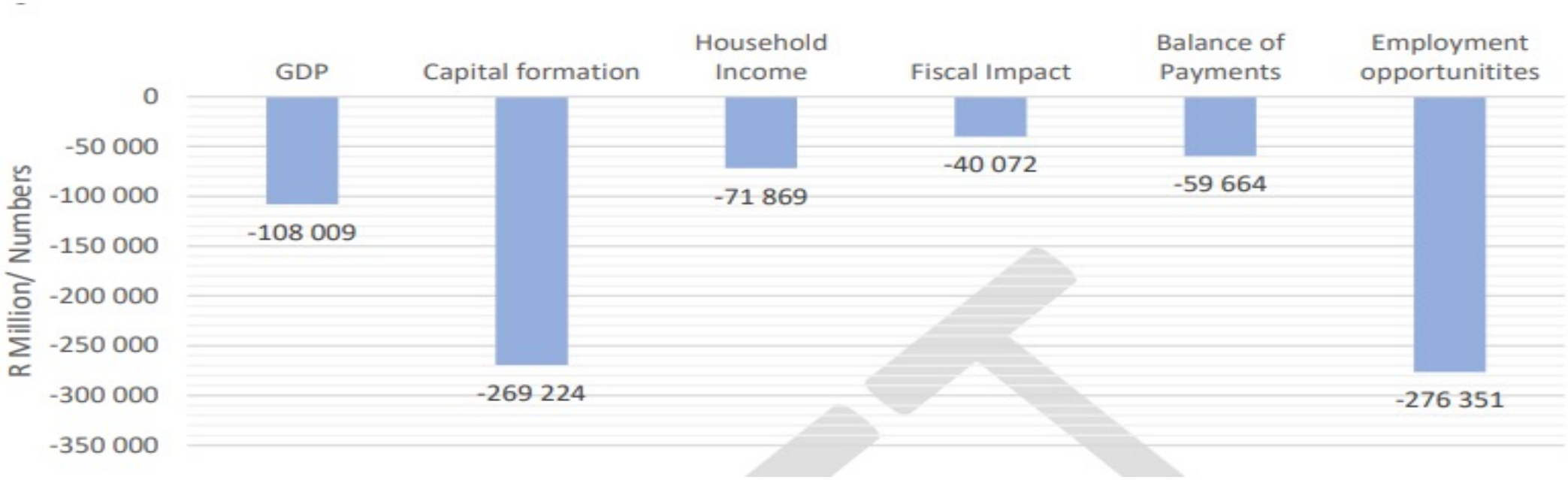
OEM	1	2
Country	Europe	Other
Duty	12%	20%

a) The introduction of a zero-duty window for NEV vehicles
(The zero-duty window should be for 5 to 8 years)

b) Zero-rating is for established companies that have a dealer network across the country

a) The OEM must commit to assemble NEVs in country within the next 8 years, or when volumes justify localization.

POTENTIAL MACRO-ECONOMIC IMPACT WITH THE LOSS OF VEHICLE EXPORTS BY 2030 TO THE UK AND THE EU



Al loss of the South African automotive industry's vehicle exports due to the banning of the sales of new ICE vehicles by 2030 to the UK, Germany, Austria, Brazil, Denmark, Germany, Greece, Iceland, Ireland, Mauritius, Netherland Antilles, Netherlands, Saudi Arabia, and Sweden comprising 58% of total vehicle exports will have a major macro-economic impact on the country's economy. (The impact excludes the component supply chain as well as trucks and buses)

A R122 billion decrease in the value of vehicle exports in 2030 will reduce the country's Gross Domestic Product (GDP) with R108 billion, capital formation with R269 billion, household income with R72 billion, state revenue with R40 billion, balance of payments with R60 billion, and leave 276 351 people jobless

The 2023 Automotive Export Manual publication, the SA-EU, UK and EFTA report and other research reports can be accessed at www.aiec.co.za

THANK YOU