



The Impact of “Green” Technologies on Component Manufacturers in South Africa

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What is a Green Vehicle?

- It benefits the environment and health
- Green vehicles include vehicles types that function fully or partly on alternative energy sources other than fossil fuel.
- A conventional vehicle can become a greener vehicle by mixing in renewable fuels (e.g. Ethanol) or using less carbon intensive fossil fuel
- Public Transit and Personal Rapid Transit Vehicles
- Human Powered Vehicles



Which Green Technologies?

- Lower Emission Vehicles
- New Powertrain technologies
- Recyclable components
- Duraluminium, fibreglass, carbon fibre, and carbon nanotubes may totally replace all steel in cars, improving lightness and strength
- Plastic and foam for the car's shell



Who Will be Impacted?

- OEMs – decisions on new product technologies and which ones for South Africa
- OE Suppliers – investments, technologies and economies of scale will determine localisation
- Replacement Parts – challenge will be to minimise importation and retain local production
- Servicing and repairs – new telematics, diagnostics, powertrains, materials – mechanics will become “mechatronics”, some powertrains need far less maintenance
- Consumers will focus more on total cost of ownership



Challenges for Component Manufacturers

- Different engine technologies (diesel, turbos, flex-fuel, hybrids, EVs, natural gas, fuel cells, ???) will fragment volumes and make it unlikely that engine components can be made in South Africa
- Continuously increasing usage of electronic systems to control various aspects of the vehicle pose challenges for local manufacture
- New body and trim materials could require huge investments for local production



Final Questions

1. Will we continue to be able to produce 1st-world vehicles with latest technologies, including those for export, or will we be forced to revert to extending the model cycle of lower-technology vehicles, or even produce 3rd-world vehicles?
2. In terms of component localisation probably the lower technology model will be the optimal one, but will OEMs recognise the local limitations and adapt their planning to ensure the future success of the automobile industry in South Africa?
3. Or will it just be easier for them to import vehicles?