

The road to sustainable mobility

By <u>Greg Cress</u>, issued by <u>Stone</u>

In 2023, we are standing at the crossroads of significant decisions to be made around the interdependency between our future energy and mobility industries in South Africa. Make the wrong decisions, and we will likely pay the price in terms of devastating economic and social consequences. However, make the right decisions, and our potential to elevate South Africa's relevance on the global mobility stage improves dramatically, with it, the prosperity of our people, businesses and economy.



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We have clear options. Over the next 12-18 months, we collectively make the right choices across all industries to move towards a shared vision for road transportation to be powered by sustainable energy sources and chart our course towards a preferred future. Alternatively, we remain ignorant of this transition – or take too long to execute – and risk missing out on the global electrification, sustainable energy and new manufacturing waves currently sweeping the globe.

State of mobility and energy industries around the world today

The global industry of vehicular people and goods transportation will experience more disruption in the next five years than it has over the entire duration of the past 100 years combined. Trail-blazed by Tesla, the decision is clear: vehicles powered by electrified drivetrains ("EVs") are the future. More than 10.6m EVs were sold worldwide in 2022, up from 6.6m in 2021 to 3.1m in 2020. The year-on-year growth rate of new energy vehicles ("NEVs", which includes EVs and PHEVs (plug-in hybrid EVs) entering world markets is exponential.

We see organisations gearing up for a sustainable, electrified future in all key markets and industries. These are the retail companies building solar-powered

EV charging networks to attract new customers. These logistics companies are developing plans for electric delivery van fleet management and supply chain transitions. Municipalities are reimagining what it means for citizens to move sustainably from one point to another. Crucially, in all areas where successful new eMobility-centric services are emerging, progressive national and local Government policies in the form of supply-side and demand-side incentives have been the catalyst.

South Africa cannot afford to wait

Currently, South Africa is in the very infancy of this energy and mobility transition. But if you know where to look, you will notice the green shoots of change emerging:

- 1. OEMs have started bringing in their flagship NEV models but only for those that can afford it.
- 2. There is a blossoming NEV charging infrastructure but still nowhere near large enough to remove the term 'range anxiety' from the lexicon of EV drivers.
- 3. Some banks have innovations in vehicle and asset finance packages to combine NEV purchases with home solar installations.
- 4. While independent power producers (IPPs) are scrambling to bring additional capacity to a constrained national electricity grid, with the scrapping of the 100MW SSEG cap, large gated communities and estates are looking at solutions to become energy independent together.

It may be tempting, even easy, to dismiss this global electrification trend as 10 years away for South Africa or use the country's current load-shedding challenges as a reason we cannot pursue an industry transition to an e-Mobility and clean fuels-centric future. For these reasons, South Africa can address these challenges by acting now. Organisations across all industries will be affected by this transition – the question is, who will be the winners and who will be the losers?

Reaching the sustainable mobility equilibrium by 2030

To understand the breadth and depth of the industry transformation ahead, we have defined a vision for 2030 called the "Sustainable Mobility Equilibrium" – the full potential of which will only be reached once the intersection of three fundamental industry forces reaches maturity: In-demand and affordable e-Mobility products and services; pervasive and accessible charging infrastructure; and sustainable, decentralised energy generation as well as battery and mineral recycling.

Some of the moves the industry should consider today:

In-demand and affordable e-Mobility products and services: OEMs should consider creating awareness and educational content around the benefits of driving an NEV for their prospective customers and how they will engage them viscerally through a blend of digital and retail to stimulate the demand. Dealerships should bring their customers an immersive new energy vehicle experience, even if they don't have any new or used NEVs to sell yet – they will come. Financial institutions should consider how they look holistically at sustainable energy financing (combining dual EV + residential Solar). Retailers should consider how they are attracting customers with EVs to their location by offering innovative EV charging solutions at shopping centres. Logistics and supply chain companies should consider the positive impact on their bottom line that a transition to an electric delivery fleet will make.

Pervasive and accessible charging infrastructure: Fuel retailers should consider what a reimagined customer experience means at their service stations – even before the inevitable wave of EVs arrives – and their future loyalty strategy around EV charging. Municipalities should consider developing the necessary EV infrastructure support policies for SMEs willing to invest in building sub-urban and rural charging stations. There is also an excellent opportunity for manufacturers of IPP to work with the power utility to ensure that projected high-capacity/high-density EV use areas have the necessary decentralised and diversified energy. Small scale energy generation (Solar) installers should look to become accredited with OEMs and financial institutions to ensure EV owners are set up for vehicle-to-home solutions in their homes.

Sustainable, decentralised energy generation and recycling: As OEMs start to look at NEV manufacturing in South Africa, as part of that transition they should be considering how and where to power as much of their supply chains from renewables. OEMs should also plan for a future 8-10 years from now, where batteries from their used NEVs can be extracted, repurposed and recycled into large-scale battery energy storage facilities.

It's NOW or (NEV)er...

It is becoming more evident how the various industry sectors, particularly energy, retail, financial, logistics and manufacturing, will all have a significant, symbiotic role in SA to reach this sustainable mobility equilibrium by 2030. But we need to start making moves now to avoid being left behind. As positive as the President's SONA announcement was about the 1.5 trillion Rand investment into South Africa's energy transition over the next five years, the opportunity cost to our economy will be equally devastating if we take too long to get this transition underway.

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