

## Asset News Hub

### More electricians and fewer pump attendants – here's how EVs will shake up SA's job market

[Feb 11](#)

The transition to electric vehicles will affect the labour market in South Africa.

- **The shift to electric vehicles will lead to new job opportunities in battery manufacturing and assembly, as well as urban planning.**
- **It will also see a high demand for electricians, with a possible risk of shortages of these technicians in the country, a researcher warns.**
- **But the transition will come at a cost, with the jobs of petrol attendants and diesel mechanics at risk, while even firefighters and welders will need new skills.**
- **For climate change news and analysis, go to [News24 Climate Future](#).**

The shift to electric vehicles in SA should see a high demand for electricians as well as new job opportunities in battery manufacturing, assembly, and even urban planning, according to researchers.

Speaking during a webinar about SA's transition to electric vehicles on Monday, senior economist Lesego Moshikaro-Amani at research institution Trade & Industrial Policy Strategies (TIPS) shared some of the insights from an unpublished study into expected skills gaps if electric vehicles are adopted more widely.

The study highlights that certain jobs are at risk if electric vehicles are fully adopted across the domestic market – such as petrol attendants and diesel mechanics – which is also a concern raised by the government.

But there are opportunities for new jobs as well. Demand for software skills, research and development skills, electronic engineers, cybersecurity and expertise in charging infrastructure and smart grids is expected to increase, the study said.

Along with new potential jobs in battery manufacturing – particularly manufacturing the cells and battery assembly - there are also gains to be made in recycling. Site planners and urban planners would also be needed to scope out locations for electric charging stations, said Moshikaro-Amani.

While only a small proportion of the vehicles on SA's roads, electric vehicles are expected to be more common in coming years, with authorities, such as in Europe and the US, making efforts to ensure their adoption.

The Department of Trade Industry and Competition also published the long-awaited [white paper on electric vehicles](#) in November last year. The paper - which focuses mainly on electric vehicle production - highlights that there is greater demand for vehicles with lower or no emissions due to global commitments to reduce greenhouse gas emissions and combat climate change.

The European Parliament in 2022 approved a ban on the sale of fossil-fuel cars by 2035. The EU also happens to be a major export destination for South Africa's manufactured vehicles, posing a major risk to one of the country's biggest employers.

TIPS analysis shows that roughly 650 000 people are employed in the industry. These are 94 000 direct jobs in manufacturing and assembly and 556 000 indirect jobs that support the use of vehicles and maintenance and repairs.

### **Skills shifts**

Demand for high-voltage electricians will increase significantly, who are normally employed by Eskom, municipalities and mines. TIPS researchers warn that there are not enough qualified electricians for electric vehicles. An increased demand for these electricians could lead to "serious shortages" in the country, noted Moshikaro-Amani.

Demand for auto mechanics with advanced technical skills is also set to increase - for both electric vehicles and those that run on fuel.

Less than half (46%) of mechanics are considered informal workers, and they risk losing out on work opportunities. "Informal mechanics risk losing revenue and losing out on work (and potential customers), but also risk their safety [in the shift to electric vehicles]," the researchers noted.

Unqualified and poorly trained mechanics could negatively affect the quality of repairs, they warn.

The electric vehicle white paper also noted that mechanical repairs for electric vehicles will involve "high-level technology-related work".

"Troubleshooting will be a key constraint, particularly for informal mechanics, who may not possess the skills and training to perform EV-related tasks and/or the tools to undertake such an activity," the paper stated. It recommended that a plan be developed to certify or formalise informal service providers with training and support to work with electric vehicles.

TIPS has identified occupations that will continue to exist but require reskilling and upskilling for electric vehicles.

"Reskilling requires a strong education foundation," said Moshikaro-Amani. As it stands, the majority of the workforce in automotive manufacturing has a matric qualification. "The majority of occupations in EVs are highly technical skilled jobs that require vocational training and, in some cases, a qualification," Moshikaro-Amani added.

Others that require upskilling include salespeople, insurers and those in marketing who will have to understand the specifications of electric vehicles and safety. Even first responders like ambulances or fire fighters will have to know how to deal with accidents involving electric vehicles.

Emerging jobs in the electric vehicles industry.

### **Supplied TIPS**

The electric vehicle white paper also emphasises the need for skills development.

This includes upskilling existing employees for design, engineering, manufacturing and aftermarket services, such as maintenance or repairs. Workers will have to learn to install new components of these vehicles, like charging sockets, batteries and electric

motors. "Welders will also require specialised training for welding aluminium, which is extensively used in EVs as opposed to traditional steel," the white paper read.

Tertiary programmes also have to be adapted by merging both mechanical and electric engineering skills needed for electric vehicles – given higher demand for electro-mechanical engineers.

When it comes to skills training for new jobs - there needs to be collaboration or partnerships between government and industry will be important, Moshikaro-Amani added.

The impact on employment also depends on the pace of adoption of electric vehicles in the domestic market.

In other markets demand for electric vehicles was driven by incentives by governments. South Africa's fiscus is not in a position to offer incentives to consumers to buy electric vehicles, which are also very expensive compared to petrol or diesel vehicles.

Data tracked by TIPS senior economist Gaylor Montmasson-Clair shows that sales of electric vehicles in South Africa rose by 65% in 2023 to 7 693, which is still quite low.

Sales of passenger [#ElectricVehicles](#) in SA rose by 65% in 2023, reaching 7693 vehicles or 2.2% of sales: soft-hybrids dominated (84%), followed by battery EVs (12%) and plug-ins (3%). Still a long way to go but the start of a dynamic to be supported by the NEV White Paper. [pic.twitter.com/AunkdbqPwr](https://pic.twitter.com/AunkdbqPwr)

— Gaylor Montmasson-Clair (@GaylorTIPS) [January 26, 2024](#)

While there are global frontrunners in the electric vehicle space [like China](#) (in terms of sales volume), most countries are also 'grappling' with the transition, said Montmasson-Clair.

"There are a few leaders, yes. But we (South Africa) are not necessarily behind when we compare it on a global basis," he said.

We live in a world where facts and fiction get blurred

Who we choose to trust can have a profound impact on our lives. Join thousands of devoted South Africans who look to News24 to bring them news they can trust every day. As we celebrate 25 years, become a News24 subscriber as we strive to keep you informed, inspired and empowered.