

SA's energy landscape - 2021 insights and the outlook for 2022

 By [Seydou Kane](#)

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As 2021 drew to a close, South Africa's energy landscape was abuzz with discussions around alternative energy, renewables, and the potential that digital - more specifically smart - technology poses for resource optimisation in the short-term future.



Seydou Kane, managing director for Eaton Africa

Load shedding, which is likely to feature throughout 2022, has played a central role in driving these conversations, as has the landmark announcement by President Cyril Ramaphosa to raise the threshold for embedded generation to 100MW last year.

These weren't the only major developments that garnered attention in 2021 – all eyes are on South Africa following the UN Climate Change Conference (COP26) and our historic pledge, along with nearly 200 other countries around the world, to phase down coal consumption by 2030. The \$8.5bn cash injection pledged by the world's rich nations to support South Africa's migration away from coal towards renewables is another helpful push towards wider adoption of green energy.

Developments such as the appetite among private energy providers to supply the country with electricity, the very real need to ease intense strain on the national power grid already bogged down by ageing infrastructure, and the abundance of green funding available in the continent, showcase plenty of incentive to start making the necessary changes that will see a positive shift in the local energy landscape.

So, what can we expect to see in 2022?

Renewable energy adoption on the rise

Considering the success of COP26 for Team South Africa, particularly in positioning the requirement for funding to support an energy transition, private sector players will invest as and when they can over the coming years, to allow for more flexibility with the use of their resources.

We've already seen announcements from the [mining](#) sector and [some](#) of South Africa's biggest companies, among others, and even private households across South Africa, trying to shift away from the grid by making use of renewable energy sources like wind, solar and gas. This will be a trend that will certainly continue well into next year, not least because of the enabling environment for harnessing renewable energy that already naturally exists in South Africa.

From a national utility perspective, there is going to be an intense acceleration towards leveraging the renewable assets that are currently operating in the country. Eskom's recent (albeit controversial) R14bn energy storage procurement project is some indication of this.

Realistically, the deployment is going to take time, as will Eskom's ability to pivot to meet the requirements of renewable adoption. As such, there won't be major change taking place in 2022, but some structural change in terms of splitting Eskom into generation, transmission and distribution entities will more than likely start to take shape.

Overall there will be a continuous shift toward renewable energy going into next year and the coming years. This is the only opportunity for SA and the continent to reach the 1.5 degree climate goal and lower carbon emissions across the board.

Alternative energy: incoming

I will preface these ideas by saying that I don't believe there will be any seismic shifts happening in the next 12 months. There is still groundwork that needs to be done before we will see any real change taking place on the alternative energy front, which includes municipalities sourcing proposals from independent power producers (IPPs) before they will be able to get their large-scale power generation projects off the ground, as well as upgrades to grid infrastructure.

While the new 100MW threshold is certainly a welcomed first step, establishing more significant opportunities to inject as much of the energy generated by IPPs into the grid is crucial. We are still barely scratching the surface in terms of reaching the potential that embedded, distributed and self-generated energy presents.

This necessitates a shift in regulatory frameworks, which is the biggest barrier to accelerated adoption of alternative energy solutions from private providers. There will most certainly be uptake in the coming year, but not at the rate that was expected when news of the raised embedded energy threshold first broke.

What will accelerate uptake is putting infrastructure in place that ensures the opening of bi-directional energy flow opportunities, as well as the setting of more attractive tariffs from Eskom and municipalities. There is an abundance of green funding available to African IPPs, but access to this funding needs to improve by removing some of the red tape surrounding the process.



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Digital intelligence will be key

Supporting the acceleration of new additions to South Africa's energy mix will be achieved through the adoption of digital technologies that increase and optimise available energy. Energy storage opportunities will flourish and abound considering these developments.

Take, for example, the potential of electric vehicles. These can be used to provide power to a person's home during load shedding and can be charged using the solar panels. Surplus storage can then be supplied to one's neighbours or leveraged by the local municipality and directed to the grid. Intelligent algorithms can be employed to identify when to charge and when to push power back into the grid, optimising usage and helping to lower emissions in the process.

This is not a pipe dream – not only is this achievable in South Africa today, but it is completely feasible too, provided that the national utility and private players create the environment that will allow people to aggregate energy and use that technology. All that is required for this kind of grid technology to be realised is the right investment to modernise and maintain.

All in all, the future is bright for South Africa's energy landscape in 2022 and beyond. It's going to require a leapfrog approach in many ways – giving private players the flexibility to not have to go through all the granular steps in the renewable and alternative energy process, but to take a leap and take full advantage of historical opportunities. And I am very bullish about creating opportunities to make these leapfrogs happen. In this way, South Africa has the best possible chance to go from being an overwhelmingly coal-based energy consumer, to having an energy mix that is renewable, diversified, distributed, and smart.

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