

# Working towards a just energy transition

 By [Lethabo Manamela](#)

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South Africa is faced with many formidable challenges, from slow economic growth to increasing unemployment and inequality exacerbated by the continuing battle against the Covid-19 pandemic. Looming large over these issues is the continuing challenge of inconsistent electricity supply brought about by the inability of the national grid to meet electricity demand. Undoubtedly, our biggest immediate challenge is the absolutely critical need to take as much demand as possible off the national grid in order to bring stability to our energy supply.



Lethabo Manamela, interim CEO of Sanedi

The ripple effect of stabilising our electricity supply and enabling Eskom to ease load shedding to provide a more consistent and sufficient energy supply will be economic growth and job creation. That, in turn, will help us to explore new investment opportunities, such as developing our own green hydrogen industry and working towards a just energy transition from a fossil fuel-based economy to a low-carbon, climate-resilient economy and society.

But first, we need to take pressure off the national grid.

## The power of energy efficiency

The most effective, least-costly way in which we can take demand off the electricity grid is by becoming more energy efficient. Many companies and households have already taken measures to save electricity and, of course, a good deal of money for themselves, but unnecessary, wasteful usage is still widespread. And, yet, even the simplest measure that costs absolutely nothing can be hugely effective. As Eskom CEO Andre de Ruyter recently pointed out: "If every household turned off one unnecessary light, that would save about 835MW. That's a huge number ... more than one unit at a big power station

like Medupi produces."

The South African National Energy Development Institute (Sanedi) has first-hand knowledge of the enormous power and cost effectiveness of saving electricity because energy efficiency is one of two major programmes we pursue in our capacity as a government energy research and development agency under the Department of Mineral Resources and Energy (DMRE).

In order to develop our country's capacity to undertake large-scale energy efficiency initiatives, DMRE and Sanedi are supporting a major new study with funding from the World Bank.

The study, which will be undertaken by international experts, will assess ways in which South Africa can develop a nation-wide cohort of well qualified energy service companies (ESCOs) that specialise in energy efficiency and can provide a full range of services to support measures companies can take to save electricity. In addition to saving companies money, implementation of energy efficiency would shield them from rapidly rising electricity tariffs, reduce pressure on Eskom's overstrained grid and ease load shedding. Lower electricity consumption would also help South Africa to reduce carbon emissions from coal-based electricity generation and to meet its international commitments to combat climate change. We aim to have the study completed in nine months, starting early in 2022.

## A just energy transition

While large-scale energy efficiency can help us to bring a measure of much-needed stability to our current electricity generation system, the increasingly urgent need to combat climate change means that we also have to change the very foundations of that system. There are many definitions of the energy transition, a good example being that of the International Renewable Energy Agency (IRENA) which describes it as “a pathway toward transformation of the global energy sector from fossil-based to zero-carbon by the second half of this century”.

However, it has been accepted that we are not focusing on transitioning alone but rather it must be a just energy transition that does not leave anyone behind. The transition must take into account the many people whose lives and livelihoods have for decades been totally dependent on the fossil fuels industry.

This begs the question: what then is just? What is just and equitable in one context, may not be just and equitable in others. There are many issues that need to be unpacked, discussed, and deliberated on in order to develop a vision of what a just energy transition should look like for South Africa.

We should view this as a blank canvas on which all South Africans including communities and ordinary citizens must be able to express their vision of the future and how it can be achieved.



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## Green hydrogen

Green hydrogen has gained momentum over recent years as a critical piece of the puzzle for a just energy transition. From the recently released *South Africa Hydrogen Valley Report* commissioned by the Department of Science and Innovation in partnership with Anglo-American, Bambili Energy and Engie and in which Sanedi played a supporting role, there is merit for a green hydrogen economy in South Africa with possibilities of an export market. The study outlines how the hydrogen economy can be kickstarted by leveraging hydrogen valleys established across three hubs - in Johannesburg, Durban/Richards Bay, and Mogalakwena/Limpopo. The hubs provide a benefit in that cost savings can be realised through shared infrastructure investments, cost competitiveness for hydrogen production through economies of scale, and with hubs acting as incubators for new pilot projects.

So, the scene is set for the energy sector to play an even more pivotal role as our country steps up its moves to make the transition from a fossil fuel-based economy to a low-carbon, climate-resilient economy and society.

## ABOUT LETHABO MANAMELA

Lethabo Manamela took over as interim CEO of the South African National Energy Development Institute (Sanedi) just as the Covid-19 lockdown started in March 2020, but she hasn't allowed the pandemic to get her down. She was recently presented with the South African National Energy Association (SANEA) Premier Award as the energy sector's 2021 Shapeshifter in recognition of the state-owned Sanedi's achievement in meeting 97% of its annual targets despite the pandemic's disruptions.

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