



**Speech by the**  
**Minister of Mineral Resources and Energy**  
**Mr SAMSON GWEDE MANTASHE, MP**  
**at the WINDABA Conference**  
**8<sup>th</sup>, October 2019**  
**Cape Town International Convention Centre (CTICC), Cape Town**

Distinguished Guests

Ladies and Gentlemen

Thank you for inviting us to share our thoughts with you, so we can together find common answers to the challenges that face our energy situation, and our economy.

The responsibility of Government is to ensure that South Africa has a secured, reliable, cost-effective and clean energy supply to grow the economy.

In the first quarter of 2019 the economy contracted by 3.2 percent; with energy making a negative contribution to the GDP. The key factors behind the decline were the load shedding and the high electricity price.

There has been a gradual decline in electricity demand. This, together with low economic activity and increasing electricity tariffs close the supply-demand gap. Faced with an old generation infrastructure and an Eskom in crisis, we must invest in new generation capacity. We must begin an infrastructure build programme to meet the energy demands required for our industrialisation.

Lack of access to energy correlates directly to poverty and lack of economic growth. Development is possible in an environment of a universally accessible sustainable, affordable energy supply.

Through the electrification and universal access programme, and the clean development framework, South Africa shows progress in the indices for energy equity and environmental sustainability.

Our subsidy-based electrification programme is a critical pillar of our energy policy, through which approximately eight million households have access to electricity since the advent of democracy. Yet, approximately three million households do not have access to electricity.

Electrification through grid connections has been effective in providing lighting and small power, but it is inappropriate for providing thermal energy for cooking and space heating. A significant thermal energy load still needs to be provided for, by providing solutions side by side with off-grid technologies, particularly in those areas that are too remote to build grid-based infrastructure.

The energy sector alone, contributes close to 80% towards total emissions, of which 50% are from electricity generation and liquid fuel production alone. We must ensure emission reduction targets are met. At the same time, we must ensure a just energy transition to avoid plunging the majority in destitution. Transition to a low carbon economy must be sensitive to the potential impacts on jobs and local economies.

We should exploit our vast coal deposits through technological innovation. Carbon capture and storage, underground coal gasification and other clean coal technologies are critical considerations that will enable us to continue to use our coal resources in an environmentally responsible way.

Ladies and Gentlemen,

Our energy policy is premised on an energy mix as diverse as coal and wind, amongst others. Coal, imported hydro, nuclear, wind, solar, biomass, storage and energy efficiency are the technology options that have been weighed on their respective merits.

We must disabuse ourselves of the polemic to pit renewables against coal and nuclear, and vice versa.

WINDABA 2019 convenes when the promulgation of the updated Integrated Resource Plan is imminent. Our energy mix is aimed at Improved Energy Security, the diversification of our Energy Sources, increasing Access to modern energy carriers, improving Energy Efficiency, lowering the Cost of Energy, Regional Integration and Skills Development.

The IRP underscores South Africa's continued commitment to invest in renewable energy as part of our energy mix. A share of the new generation capacity will also come from renewables, including wind. Thus, providing opportunity for investment in wind projects.

Early this year we launched the wind atlas of South Africa (or WASA), which includes a database with a large-scale high-resolution wind resource map covering all our nine provinces. WASA will be our repository of knowledge about the scale and location of our wind resources. Through the WASA project, South Africa has developed an excellent wind resource assessment capability hosted at SANEDI and the CSIR. The measurement results of WASA cover an estimated 75% of South Africa's mainland and will be used to extrapolate the prevailing wind conditions for the rest of South Africa.

The move towards renewable energy arises from the challenge of developing countries to meet fast-growing energy demand in a cost-effective manner. In the old paradigm, due to distance, power was transported from the power station to the demand centre.

Today, distributed power generation systems prove to be cost-effective in providing power within the area where it is generated. South Africa's Renewable Energy Independent Power Producers Procurement Programme (or REIPPPP), is testimony to this.

Eight thousand megawatts of new renewable energy capacity have been procured. Solar PV and wind have seen the most rapid decline in costs which are now competitive with conventional power generation sources. Since the inception of the REIPPP programme, Government has successfully increased the contribution of clean energy from zero percent in 2010 to over 4.5 percent within five years. The signing of an additional twenty-seven projects representing roughly two thousand megawatts, in 2018, means that investment in this sector will now exceed two hundred and fifty billion Rands.

The introduction of wind and other renewable energy technologies offers an exciting prospect for the development of our energy-starved rural areas. Isolated communities, where the deployment of grid infrastructure is difficult and costly, can be electrified. Grid security can also be improved simply by diversifying the generation points through smaller generators spread across the South African landscape.

The renewable energy programme must play a significant part in the industrialisation agenda. Climate change rationale aside, wind technologies could create the green economy jobs that are needed. Along with industrialisation is the imperative for transformation. The Black majority must have a significant presence in ownership and supply, and throughout the wind technology value chain. We must ensure that a big portion of the wind allocation in the IRP is localised.

Ladies and Gentlemen,

Embedded generation systems based on solar and wind technologies, given the variability of their energy production, are tricky to manage in a power system. One cannot order the wind to blow, neither can we rely on PV energy on a cloudy day or in the night. Therefore, the need for storage technologies and investment in research and development thereof.

South Africa has focused on the hydrogen economy through the hydrogen initiative (or Hy-Sa) based at the University of the Western Cape. This is a collaborative effort between South African and international research agencies, industry and government. Amongst the Hy-Sa programmes is the development of hydrogen and Fuel Cell systems, prototype development, technology validation and system integration.

Energy storage technology will make wind energy, coupled with storage, a very attractive option going into the future. With our abundant platinum and other mineral resources – rare earth element; we must invest in research and development programmes based on hydrogen fuel cells, and battery storage, amongst others.

It is evident that the traditional power delivery model is being disrupted by technological developments related to new systems. Small scale embedded generation through wind, biomass, biogas and municipal solid waste possess a great potential. We must invest in that space.

In conclusion,

Provision of a reliable, cost effective and continuous supply of electricity is essential to our economy.

In your deliberations at this Windaba 2019, be assured of Government's commitment to collaborate with you. Similarly, come forth and make your own commitment to find energy solutions to drive the economy.

Now is the time.

I thank you.