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Diversifying and fast-tracking South Africa's energy revolution

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When you picture South Africa five or 10 years from now, what do you see? Is it a future with a reliable energy system and if it is, how do we go about getting there? South Africa has a rapidly growing population and currently the demand on the national grid outweighs its supply. South Africa can no longer rely on one primary source of energy. It needs to look at a diversified energy ecosystem, which is critical to the country's development and sustainability.

The creation of a gas economy and the potential of industrialisation could be a major driver of South Africa's economic growth. Let's look at Egypt for a second – last year Siemens broke the world record by completing the largest combined cycle power plant way ahead of schedule. It delivered 14.4 gigawatts (GW) of power in just 27.5 months - enough to supply 40 million people with reliable electricity. Siemens' relationship with the Egyptian government and local were key drivers of the megaproject's success.

The partnerships led to job creation and skills development being significantly boosted, and local talent being nurtured in the energy sector. The collaboration also placed significant emphasis on small and medium-sized enterprises (SMEs) by providing them with a supplier development program

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that ensures greater return on investments and helps develop new business models. The program ensured opportunity for local companies to develop thrive and deepened access to opportunity.

By leveraging Siemens' experience from around the world, this can be adopted and localised in South Africa to bring about meaningful change. Globally, Siemens has been instrumental in rolling out fast-tracked power programmes, through collaboration and partnerships, and is recognised for its understanding of energy dynamics. With the right partners in government, the private sector and labour, South Africa could bear the fruits of economic prosperity.

A picture of SA's future

Tapping into the potential of smaller power stations especially in the Industrial Development Zones (IDZ) would result in quick upgrades which could be run as independent power producers (IPP) or as a function of the new Eskom business model. This would lead to quick power generation and sustainable job creation. Through the Department of Trade and Industry, the IDZ is intended to promote competitiveness of the manufacturing and industrial sectors and encourage the beneficiation of locally available resources.

The first phase in creating reliable energy in South Africa will be to develop a project blueprint detailing the phases, objectives, milestones and timeframes. With a firm background in energy, Siemens has already developed this blueprint that outlines short and medium term goals, along with the kind of partnerships it requires to establish a gas economy and drive industrialisation.

The blueprint highlights that by 2022, load shedding could be eradicated by upgrading existing infrastructure and bringing smaller, locally managed power stations under the national grid. This will not only relieve the exponential pressure but also generate 5GW of fast power by 2022, which could surge to about 11GW by 2024. To drive efficiency, another 8GW of gas power and 3GW of wind power can be produced by 2024.

An initial phase would include an end-to-end solution, strengthening of grid stability and smart metering for security of revenue from defaulting municipalities. Subsequent phases would entail turning waste to energy. Siemens is ready to invest significantly in energy programs of this kind, which has the potential to save the country billions of rands by 2030. This project, if undertaken, could increase job security and economic development, while also reducing carbon emissions through greener energy. South Africa's economy would see a growth in GDP of around 0.9%, and as a good corporate citizen committed to a business-to-society philosophy, Siemens investment would go beyond the monetary and include a contribution to training and upliftment in community initiatives.

How do we mimic Egypt's success in SA

In order to be as successful as Egypt's megaproject, South Africa would need take a more holistic approach to energy development, ensure accountability of contractors, and the localisation of targets and local skills development.

A diversified energy ecosystem would need to be embraced, along with partnerships in government, the private sector and labour. Now is the time to propel the country forward into an energy revolution that sustains our economy, our livelihoods and our people.

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