

# Putting wind in the sails

 By [Nicci Botha](#)

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With Eskom's conventional power infrastructure foundering, alternate sources of energy are looking more attractive. The ground breaking at an 80MW wind farm in the Northern Cape brings the country a step closer to effectively harnessing renewable energy.



The wind farm is located in the Umsobomvu municipal area, 10km east of the town of Noupoot. The facility will comprise 35 wind turbines, which will generate approximately 304,800MW hours per year of clean renewable energy to the national grid.

"When operating at full capacity, it is expected to supply enough green electricity to power approximately 70,000 homes. It will avert approximately 300,000 tonnes of carbon emissions each year when compared to traditional fossil fuel power plants," says Martina Flanagan, project manager for Mainstream - a company specialising in financing, building and operating renewable energy facilities.

## Three of a kind

Noupoot is the first of three wind farms Mainstream is building as part of the third round of the government's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP). It will come online in June 2016, while its sister plants in Loeriesfontein and Khobab will be operational in December 2017. The cost of the entire project is R1.9bn and will produce a total of 360MW of power.

The Noupoot turbines will be supplied by German manufacturer Siemens Wind Power, while the 99m turbine towers will be the first to be manufactured at the new Gestamp Wind Turbine Tower Factory in Atlantis, Western Cape.

The turbine blades, hubs and nacelles (gearbox, rotor shaft and gearbox assembly) will be transported via the N10 from the Port of Ngqura, in Coega, while the towers will be routed along the N1 from Atlantis. Delivery of the turbines is due to start in October this year.

Civil and electrical works will be done by a consortium comprising Murray and Roberts Construction and Consolidated Power Projects.

The Noupoot Wind Farm is owned by a consortium led by Lekela Power, a joint venture between Actis and Mainstream Renewable Power. Other members include Thebe Investment Corporation, IDEAS Managed Fund, Futuregrowth Asset Management, Genesis Eco-Energy in partnership with Lereko Metier Sustainable Capital and the Noupoot Renewable Energy Trust, which was established to carry out public benefit activities to assist the local community through economic development.

## **Renewable energy proves its worth**

The REIPPPP has channelled substantial private sector expertise and investment into grid-connected renewable energy in South Africa at competitive prices. The programme began in 2011, and has procured over 5,000MW of renewable energy from private power producers over the course of four bidding rounds.

Since the first round, wind prices have dropped by over 55% and solar photovoltaic (PV) prices have dropped by a massive 76%. Renewable energy is now the cheapest electricity supply option available to the country - significantly cheaper than Eskom's new coal-fired power stations.

"In short, the renewables programme has been a tremendous success, bringing clean, affordable and much needed electricity into the country's supply system and helping to reduce the impact of loadshedding during this time of power shortages. Energy minister, Tina Joemat-Pettersson, recently announced that the renewables programme will be expanded by a further 6,300MW of capacity which ensures growth for this green industry," Martina continues.

## **Project breathes new life into community**

"In the past, commercial activity in Noupoot was heavily dependent on railway activity. After demand on the rail network dwindled, the town suffered from a significant decline in local business leading to increasingly difficult socio-economic conditions for the local population."

"As the Noupoot Wind Farm is being built on an undeveloped site surrounding a small rural community, it will help boost the local economy and have a positive impact on the community. Already many people are being employed to work on the roads, electrical works and foundations for the wind turbines, a number of which have already been cast. Employing local labour will continue throughout the construction period," says Martina, who also managed the Jeffreys Bay Wind Farm project.

## **Training as part of the package**

During construction, the number of local employees will vary depending on the level of the workload at the time. At the moment, 170 local people are employed on the project - this is expected to increase in the coming months when the wind farm enters its peak building phase.

Employees will also undergo training such as firefighting, first aid, flag person and safety training. In addition, all the wind farm employees will get on-the-job training, thereby developing specific skills in steel fixing, concrete works, cabling and road construction.

Mainstream has a good track record in the renewables field. In addition to its three Round 3 projects, it is involved in the following operating renewable energy projects:

- Droogfontein Solar Power
- De Aar Solar Power
- Jeffreys Bay Wind Farm

The company is also the preferred bidder to build the Perdekraal East Wind Farm and Kangas Wind Farm in the future.

## ABOUT NICCI BOTHA

Nicci Botha has been wordsmithing for more than 20 years, covering just about every subject under the sun and then some. She's strung together words on sustainable development, maritime matters, mining, marketing, medical, lifestyle... and that elixir of life - chocolate. Nicci has worked for local and international media houses including Primedia, Caxton, Lloyd's and Reuters. Her new passion is digital media.

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