



READY FOR NUCLEAR PROGRAMME: Sandisiwe Ncemane, Project Development Manager in Energy at the Coega Development Corporation.

Eastern Cape ready for nuclear roll-out

The scale of the proposed nuclear power plant at Thyspunt Kouga Local Municipality in the Eastern Cape will dwarf anything undertaken before in the province. If successful, it is estimated that the project will add nearly R16 billion to the economy's coffers.

It has the potential to create thousands of jobs and to support existing, new and emerging businesses – but only if there is a concerted effort by all Eastern Cape stakeholders to ensure that the province is given its rightful slice of the pie.

As a region, we need to start gearing ourselves to benefit from the project now, long before the contracts are awarded. Stakeholders need to take caution to not rest on their laurels and miss out on potential investment opportunities, because of the idea that the project will not come off the ground.

Thyspunt may or may not happen. But, preparing for it will put the Eastern Cape in a much stronger position to bid successfully for other mega projects in the energy sector in particular.

Just a few numbers demonstrate the size of the project – and the opportunities: A typical nuclear plant the size of that proposed for Thyspunt will use 523 560 cubic metres of concrete, 66 000 tons of steel, 70 kilometres of piping, 480 kilometres of electric wiring and 130 000 electrical components. These numbers are based on the normalised averages from analyses of the economic and unemployment impact of the construction of 23 nuclear plants in the USA and are calculated per megawatt of installed capacity.

Potentially 23 000 formal sector jobs will be created during the construction phase, which normally takes between five and seven years.

The Coega IDZ – which is just 80 kilometres from Thyspunt and is served by a deep-water port – is one of the strongest trade and investment players in the Eastern Cape.

The Coega IDZ has the space and the infrastructure to support nuclear, conventional and renewable energy projects. It has also established a track record of success which is unrivalled by any other industrial zone in South Africa.

In 2015 the R3,5 billion 335 MW Dedisa Power Peaking Plant (PPP) started feeding into the Eskom grid. Infrastructure and systems put in place and managed by the Coega Development Corporation (CDC) ensured that the first PPP in South Africa to be owned and operated by an independent power producer (IPP) was delivered on time and on budget. Working with the CDC, the project investors ensured that 70% of the jobs on site were given to people from Nelson Mandela Bay.

A skills database, managed by the CDC, will ensure that the nuclear project developers at Thyspunt, and other power projects will be able to recruit locally. The skills database also allows the province to identify gaps which can be filled through training initiatives before the contractors move on site.

Employees of contractors working on the Dedisa site completed around 700 technical training courses facilitated by the CDC. The skills required to build a nuclear plant include some of those that were learned during the building of Dedisa, or those being used to build towers for wind turbines at DCD Wind Towers in the Coega IDZ.

Apart from the nuclear island itself, the components and technology that go into a nuclear power plant is similar to that of industries such as conventional power generation, oil, gas, and aerospace. They all require mechanical, electrical, and instrument and control components, as well as civil works.

The building of Thyspunt would, therefore, put the Eastern Cape in a strong position to establish itself as a centre for advanced manufacturing.

All the elements are in place. Dedisa and the DCD Wind Towers successes feed off the world-class skills and support infrastructure that were already in place for a world-class automotive industry.

Regional universities are able to provide the research support and innovation required, while the regional TVET institutions support the development of apprentice and artisan capacity.

And, as has been demonstrated by the successful transport of thousands of components for wind farms in the region through the port of Ngqura and Coega IDZ, we have the logistics linkages in place.

Opportunities are only translated into actions if there is a plan and a champion. The CDC is championing the positioning of the Eastern Cape as a centre of power generation by working closely with other state-owned enterprises, local and provincial and national government, the business sector as well as industry.

CDC initiated engagements with the Nuclear Energy Corporation of South Africa (NECSA), which resulted in the two organisations signing a Memorandum of Agreement in 2012. The MoA seeks to progress engagements and developments in a range of areas, which include local manufacturing, skills development and collaboration on educating the public and business about nuclear energy.

CDC is part of the ongoing discussions within the Nuclear Industry Association of South Africa (NIASA). As a NIASA member it is represented in various subcommittees, with a focus on supply chain development, education and training as well as public relations.

The CDC also sits on the Eastern Cape Provincial Nuclear Readiness Forum, an initiative led by the regional Department of Economic Development, Environmental Affairs and Tourism (DEDEAT).

Within the IDZ itself the aim is to maximize the synergies and symbiotic linkages across investor activities. For example, the DCD Wind tower facility has an 80 ton crane, which could be used to move other energy and advanced manufacturing-related components.

CDC has prepared the IDZ for Thyspunt and other advanced manufacturing and power-related projects by developing a bouquet of services. They include environmental management, recruitment, training, labour management, safety health and quality management, and the provision of municipal services and of bulk infrastructure.

Add to that the incentives now being offered through the government's Special Economic Zone (SEZ) programme and the Eastern Cape – and the Nelson Mandela Bay Metro in particular – are on the brink of an industrial boom.

Coega is ready for it.

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