



Eskom Holdings: Primary Energy Division

Coal Supply on Rail to Camden Power Station



Background

Project Value: R100m | May 2008 – May 2010

The return to service of previously mothballed power stations resulted in a number of generation plants coming on-line without rail linkages or dedicated (tied) mine supply sources. In this regard, the removal of high hazard coal transportation by road has been a priority on Eskom's agenda. Camden Power Station, situated on the Coal Line

south of Ermelo is one such plant where a previous tied mine supply has been replaced by rail facilities. Camden Power Station requires coal on rail at tonnages between 3 and 4,5 million per annum. Due to the urgency, a short term solution with a minimum lead time using modified containers was developed.

Key Features

Key features of the project include:

- Transport system analysis and optimisation;
- Innovative short term solutions in train design and materials handling: coal in containers transshipped between transport modes;
- Detailed design of short term off-loading layouts: track and reach stacker operating slab;

- Phased expansion plan combining train design and bulk offloading facilities: progressing from containers to 50 and 100 wagon trains;
- Establishing of user requirements, financial estimation/approvals and detail design and documentation to Tender stage.

Services Provided

The purpose of the studies and services is to provide short, medium, and long term rail-based coal supply services to Eskom's Camden Power Station. Services provided range from concept feasibility to detail design and implementation assistance. To date services are focused on the short term container handling facility, combined with a road haul leg to the stockpile. During the next phases a tippler and conveyor operation is envisaged with a facility designed for 50 wagon trains.

Services provided:

- Transport system assessment, planning and reporting;
- Exhaustive site selection, suitability evaluation and quantified risk assessment procedures;
- Rolling stock suitability studies and container handling research to provide a customised solution on a scale not attempted before, in respect of coal in bulk;
- Management of the applicable EIA processes;
- Professional Services: track, earthworks, structural design, buildings and railway engineering inputs.

Outcome

Due to the urgency to migrate from road to rail transportation, a short term solution with a minimum lead time was developed and implemented. The solution comprises modified rail containers hauled by road from a new rail facility at the power station to stockpile. Planning for

short, medium, and long term facilities are being provided, ensuring the phased creation of autonomous off-loading facilities flowing seamlessly. Phase changes have to take place under operational conditions and over an extended timescale, whilst ensuring optimal investment levels per phase.