

PUBLIC OPEN DAY & FOCUS GROUP MEETINGS DECEMBER 2012



**ENVIRONMENTAL IMPACT ASSESSMENT (EIA)
PROCESS FOR THE PROPOSED 400/132kV
HOUHOEK ESKOM TRANSMISSION SUBSTATION,
INCLUDING BACCHUS-PALMIET LOOP-IN AND
LOOP-OUT LINES, WESTERN CAPE**

Dec 2012

PROJECT DESCRIPTION

- Eskom Holdings SOC Limited, as the Applicant, has appointed BKS (Pty) Ltd to undertake the EIA process on its behalf
- The Southern Cape customer load network of the Western Grid, Western Cape Province requires further strengthening
- Eskom thus proposes to construct the 400/132kV Houhoek Eskom Main Transmission Substation (MTS), linking to the existing 132kV Houhoek Eskom Distribution Substation, and, loop-in and loop-out (LILO) connecting power lines into the existing Bacchus-Palmiet 400kV Transmission power line
- Existing 132kV Houhoek Eskom Distribution Substation is 4.5ha in area – located approx. 1km south-west of Botrivier, Theewaterskloof Local Municipality, Western Cape

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PROJECT DESCRIPTION cont.

- Houhoek MTS project requires the following activities:
 - 2x500MVA, 400/132kV MTS of approx. 12ha in area near the existing 132kV Houhoek Eskom Distribution Substation site
 - A LILO Transmission power line that connects the existing Bacchus-Palmiet 400kV Transmission power line to the proposed Houhoek Eskom MTS – entails a double-circuit 400kV Transmission power line (power line length will depend on where the LILO power line intersects the Bacchus-Palmiet 400kV Transmission power line)
 - A 132kV Distribution power line, connecting the proposed Houhoek Eskom MTS to the existing Houhoek Eskom Distribution Substation (length of these Distribution power lines depend on the final MTS site location)
 - Construction of the LILO 400kV Transmission power line could require the construction of related access roads

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PROJECT DESCRIPTION cont.

Pylon types being considered for the linked power lines



Self supporting Tower

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Guyed Vee



PROJECT DESCRIPTION cont.

Typical Air Insulated Sub Station



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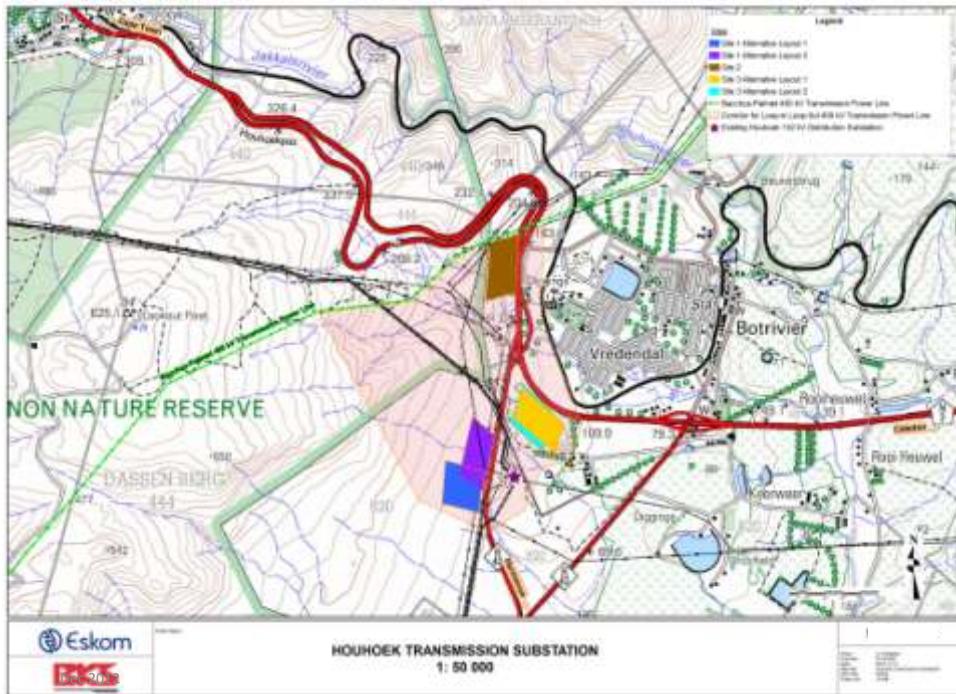


ENVIRONMENTAL AUTHORISATION PROCESS

- The EIA Regulations (2010) published in terms of Section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), requires that Eskom SOC obtain environmental authorisation from the National Department of Environmental Affairs (DEA) for the proposed development
- In order to obtain environmental authorisation for the proposed development, an independent EIA process must be undertaken in accordance with the EIA Regulations
- The EIA application was submitted to the DEA in terms of the 2010 EIA Regulations, as listed in Government Gazette No. 33306 of 18 June 2010 (GNR 543, 544, 545 and 546, of 18 June 2010, as amended)

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EIA PROCESS

- EIA process requires identification and analysis of alternatives (various alternative types)
- Macro alternatives:
 - No-Go Alternative
 - Demand-side Management
- Design alternatives:
 - Pylon Tower Structure Types
 - Optimisation of Existing Servitudes
 - Underground Site and layout alternatives
 - Transmission power lines



BKS

EIA PROCESS cont.

- Site and layout alternatives:
 - **Site Alternative 1** (2 layouts)
 - 350x320m (**blue**); 450x250m (**purple**)
 - Located ± 200 m west of existing Houhoek Eskom Distribution Substation, across R43 road
 - **Site Alternative 2** (1 layout)
 - 350x320m (**brown**)
 - Located ± 1.6 km north of Site Alternative 1, north-west of existing Substation
 - **Site Alternative 3** (2 layouts)
 - 350x320m (**turquoise**); 450x250m (**yellow**)
 - Located north of but adjacent to the existing Substation
 - An additional layout option (320x720m = 23.04ha) will also be considered during the EIA phase

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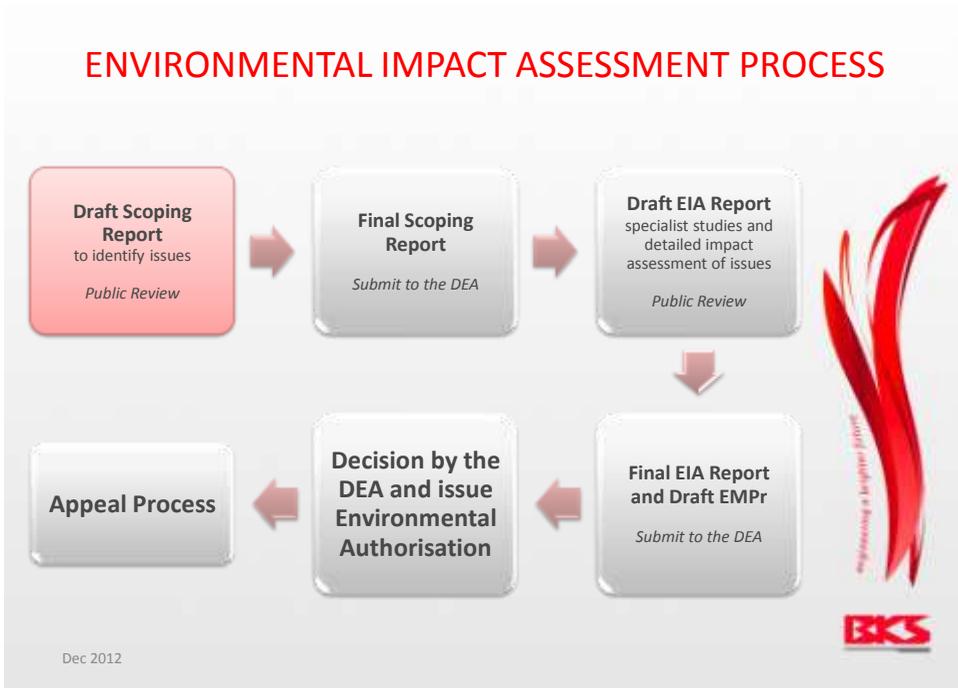
EIA PROCESS cont.

- Detailed specialist studies to be undertaken for study area
- Subsequently, EIA Report will be compiled and will include:
 - Description of the project, together with a motivation for the project and details of the alternatives investigated
 - Description of the general environment that may be affected
 - Details of the public participation process (PPP) conducted
 - Impacts and issues that were identified
 - Identification and analysis of alternatives
 - Assessment of the significance of identified impacts according to standard assessment criteria (nature, extent, duration, intensity, probability and significance)
 - Summary of findings and recommended mitigation measures
 - PPP report, draft Environmental Management Programme (EMPr) and required Specialist Study reports collated as appendices

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ENVIRONMENTAL IMPACT ASSESSMENT PROCESS



PUBLIC PARTICIPATION PROCESS



PROPOSED SPECIALIST STUDIES

- Need for specialist studies has been identified during the Scoping Phase for consideration in the EIA Report:
 - Geotechnical Investigation
 - Soil and Agricultural Assessment
 - Wetland Delineation and Assessment
 - Ecological Assessment
 - Avifaunal Assessment
 - Social Impact Assessment
 - Visual Impact Assessment
 - Heritage Impact Assessment
- Preliminary findings into the Scoping Report, full detailed reports into the EIA Report

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PRELIMINARY ISSUES IDENTIFIED

- **Construction**
 - (a) Construction site office and worker camp, (b) Access to site, (c) Vegetation clearance, (d) Dust, and (e) Noise
- **Road infrastructure**
 - (a) Increased traffic especially by large construction vehicles, (b) Potential crossing of major roads by power lines
- **Air quality**
 - Minimal implications during construction – dust, diesel fumes
- **Waste Issues**
 - (a) Possible relocation of infrastructure, (b) Demolition of structures, and (c) Storage of waste on-site
- **Soil & agriculture**
 - (a) Loss of agricultural potential – including potential loss of economic value, and (b) No specific concerns with respect to soil characteristics at this time

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PRELIMINARY ISSUES IDENTIFIED cont.

- **Wetlands & watercourses**
 - (a) Infilling of wetlands and other freshwater ecosystems, (b) Loss of vegetation in or adjacent to freshwater ecosystems, (c) Localised impacts to surface and groundwater quality as a result of contamination during construction, (d) Long-term, localised, operational-phase changes in drainage patterns, and (e) Ongoing disturbance to fauna associated with freshwater ecosystems
- **Biophysical Issues**
 - (a) Loss of current ecological connectivity across the site, (b) Habitat fragmentation, (c) Possible disruption of optimal fire regime, (d) Possible introduction or facilitated spread of alien invasive plant species
 - Direct impingement on adjacent Conservation areas (Houwhoek)
- **Avifaunal Issues**
 - (a) Electrocutations, (b) Collisions, (c) Displacement due to habitat destruction, and (d) Displacement due to disturbance

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PRELIMINARY ISSUES IDENTIFIED cont.

- **Socio-economic**
 - (a) Limited employment opportunities during construction and operational phases, (b) Inflow of outside workers, (c) Potential safety and security impacts, (d) Visual impact of the additional power infrastructure, (e) Maintenance of infrastructure could result in intermittent intrusion impacts on private properties, (f) Decrease of property values, (g) No direct economic spin-offs to the local economy, and (h) Possible negative impact on tourism
- **Visual Impacts (from following activities)**
 - (a) Construction Phase: Site/access roads, Cut and fill areas, Material stockpiles, Staging areas, Construction camps, equipment and plant, Engineering support infrastructure, Parking, on-site accommodation and working areas, Temporary screening measures, Protection measures, and Lighting

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PRELIMINARY ISSUES IDENTIFIED cont.

- **Visual cont.**
 - (b) Operational Phase: Access, Infrastructure, buildings/structures, Delivery, maintenance, Outdoor activities, Materials storage, Utilities, Lighting, Car parks, Vehicles, Landform, structure planting, and hard landscape features; Entrances, signs and boundary treatments; and Areas of possible future extension.
 - (c) Decommissioning and Rehabilitation Phase: Access; After-use potential; Residual buildings and structures; Disposal of waste and rubble; and Rehabilitation activities, including movement of material and construction plant
- **Heritage**
 - (a) Palaeontological impacts, (b) pre-Colonial and Colonial impacts, and (c) Cultural Landscape impacts



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WHEN DOES AN I&AP GET INVOLVED?

- **Register and be involved:**
 - Respond to the relevant newspaper advertisements
 - Complete and submit the comment sheet included in the BID
 - Provide us with your contact details
 - Attend the public participation events (if possible)
 - Review project documentation when made available for comment (if possible)
- **Timeline for remainder of EIA process:**

Activity	Date
Public Review of comprehensive Draft EIA Report	1 April 2013 – 10 May 2013
Anticipated dates of public meetings	15 – 18 April 2013
Submission of Final EIA Report to the DEA	22 May 2013
Authority Acceptance/Rejection of EIA Report	30 May 2013 – 18 June 2013
Environmental Authorisation Issued	22 August 2013
Appeal Notification Process	22 August 2013 – 11 September 2013
Service Negotiation Process (appeals dependent)	30 September 2013



QUESTIONS AND COMMENTS

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