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Department of Environmental Affairs - Ref no: (12/12/20/1871)

FIRGROVE MTS SUBSTATION UPGRADE AND PALMIET STIKLAND LOOP IN LOOP OUT LINES

□ INTRODUCTION

The National Environmental Management Act, 1998 (Act No.107 of 1998) and National Environmental Management Waste Act, 2008 (Act No. 59 of 2008) "NEMWA requires Environmental Impact Assessment (EIA) process to be conducted for activities that may have the potential impact on the receiving environment. The proposed project is a listed activity which falls under the following listings:

Listing Notice No.R.387 of 21 April 2006 in terms of NEMA (Act no 107 of 1998), with the following description:

1(i) The construction of facilities or infrastructure, including associated structure or infrastructure, for the transmission and distribution of above ground electricity with a capacity of 120 kilovolts or more.

1(c) The above ground storage of dangerous goods, including petrol, diesel, liquid petroleum, gas or paraffin, in containers with a combined capacity of more than 30 cubic meters but less than 1000 cubic meters at any location or site.

Listing Notice No.R.386 of 21 April 2006, with the following description:

7 The above ground storage of dangerous goods including petrol, diesel, liquid petroleum gas or paraffin, in containers with

a combined capacity of more than 30 cubic metres but less than 1000 cubic metres at any location or site.

14 The construction of masts of any material or type and of any height, including those used for telecommunication broadcasting and radio transmission, but excluding: **a)** mast of 15 meter and lower exclusively used (i) by radio amateurs; or (ii) for lighting purposes ;**b)** Flag poles and lightning conductor poles.

12 The transformation and removal of indigenous vegetation of 3 hectares or more of any size where the transformation or removal would occur within a critically endangered or an endangered ecosystem listed in terms of section 52 of the National Environment Management Biodiversity Act, 2004(Act No. 10 of 2004).

16 The transformation of underdeveloped, vacant or derelict land to **a)** establish infill development covering an area of 5 hectares or more but less than 20 hectares; or **b)** residential, mixed, retail, commercial, industrial or institutional use where such development does not constitute an infill and where the total area to be transformed is bigger than 1 hectare.

1(p) The construction of facility or infrastructure, including associated structures or infrastructures for the temporary storage of hazardous waste.

15 The construction of a road that is wider than 4 meters or that has a reserve wider than 6 meters, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 meters long

This project will require the full EIA Process which is a comprehensive assessment comprising of a scoping phase and EIA phase

The following activity has been identified:

- a. Create a substation with footprint to accommodate 4x500MVA 400/132kV at transformers Firgrove (Firgrove MTS).
 - Find the site for place the MTS next to the existing 132kV Firgrove Distribution substation
 - Establish the Firgrove MTS as Follows
 - Install 400kV double busbar to accommodate end-state of 9x400kV bays
 - Install 2x500MVA 400/132kV Transformers (as phase 1)
 - Extend the existing 132kV busbar to accommodate the new 2 transformers and to allow connection to the existing Distribution busbar.
- b. Loop in loop out of the existing Palmiet-Stikland 400kV line:
 - Establish a servitude for approximately 200m of 400kV double circuit line
 - Cut the existing Palmiet-Stikland line at approximately 20km from Palmiet and
 - build approximately 200m of 1x400kV line on a double circuit tower to establish:
 - 1x400kV Firgrove – Stikland line (approximately 31km)
 - 1x400kV Figrove – Palmiet line (approximately 21 km)

In addition to that, Eskom (the applicant) proposes professional services relating to the intended development. EIA investigation for the proposed development will result in complying with the Regulations in terms of Chapter 5 of the National Environmental Act, 1998 (Act No.107 of 1998) . In order to comply with this Regulation, Enkanyini Projects as an Independent Environmental Practitioner EAP), have being tasked to conduct the Environmental Impact Assessment (EIA) process for the proposed development project.

❑ **PROJECT LOCATION**

Firgrove MTS substation upgrade and Palmiet Stikland loop in loop out projects is situated in the farm Zandvleit 664 portion 93 along the R102 Van Riebek road

Figure 1: Locality map is attached

❑ **BACKGROUND AND MOTIVATION**

The project is implemented to improve the current electricity supply. The 2x500MV, 400/132 kV transformers at Stikland are now existing N-1 firm limit of 500MVA during peak demand. The 132kV networks currently supplying Firgrove are running at the thermal limit during peak demand. It is also difficult to carry out maintenance work on the 132Kv networks as the existing networks no longer comply with N-1 criteria.

The benefits are:

- Less electricity cut offs during maintenance periods.
- Increased electricity supply
- Limited business opportunities during construction

❑ **DESCRIPTION OF THE PROJECT**

The following activities will be implemented in the process of upgrading the substation;

- Establishment of a 4x500MVA, 400/132kV MTS at the existing

Firgrove S/S, with 2x500MVA transformers installed initially.

- Loop-in loop-out on the Palmiet/Stikland 400kV line to Firgrove proposed MTS.
- Establish 132kV busbar to supply existing Firgrove 132kV bus and future feederbays.

□ **WHAT IS INVOLVED IN THE EIA PROCESS?**

Section 24(2) of NEMA empowers the Minister and any MEC, with the concurrence of the Minister, to identify activities which must be considered, investigated, assessed and reported on to the competent authority responsible for granting the relevant environmental authorisation.

The purpose of these procedures is to provide the competent authority with adequate information to make decisions which ensure that activities which may impact negatively on the environment to an unacceptable degree are not authorised, and that activities which are authorised are undertaken in such a manner that the environmental impacts are managed to acceptable levels.

The Environmental Assessment Practitioner is also responsible for ensuring that a public participation process is undertaken in accordance with the requirements of the Regulations (regulation 56) and for taking into account any comments that are made during this process in the compilation of the reports that will be submitted to the competent authority.

The Regulations require that the public be given an opportunity to comment on applications for environmental authorisation. Members of the public who want to participate in an assessment process are registered and called Interested and Affected Parties (I&APs).

□ **HOW CAN YOU GET INVOLVED?**

You are invited to participate in the above process. An important part of the EIA process is the public consultation, which will

assist with the identification of issues and concerns and help the authorities make an informed decision.

If you or your organisation would like to participate in the study and / or if you know of any other organisation or person interested in or affected by the proposed project please contact Enkanyini Projects, represented by **Calvin Maweela**

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