SUB-STATION: ENVIRONMENTAL IMPACT ASSESSMENT STUDY

Project	Type
Construction of Conversion of 220KV Switching substation at Landeihill into a 2X 100MVA 220/33KV Grid substation with 220KV 100 MVA Trf bays-02 Nos., 220 KV Spare bay-01 No.,33KV Fdr. Bays- 5 Nos, I/C Tfr.Bays-2 Nos, B/C bay-01 No. and 33 KV spare bay-01 No. scope of work in Odisha State of India on turnkey basis.	220KV switchyard at Sub-station.

Description of Scheme

a. Supply of 2X100MVA Power transformer.
b. Construction of 220KV Power transformer bay 2 numbers.
c. Construction of 220KV Spare (unequipped) bay 1 number.
d. Construction of 33KV power transformer (Incomer) bay 2 numbers.
e. Construction of 33KV feeder bay 5 numbers.
f. Construction of 33KV Bus Coupler bay 1 number.
g. 33KV Spare (unequipped) bay 1 number.

Number and type of transformers : 220/33KV, 2X100MVA Power Transformer.
Type of breakers : SF_6

Existing Environment

Site location : Not located in forest area.
Any special features about the site: No

Land Acquisition

Total area of site N.A.
Area of government land N.A.
Mauza: N.A
Tehsil: N.A
Area of private land N.A

Land Use

Land in agricultural use Nil
Uncultivated or wasteland Nil.

Social Effects

Number of families whose part holding acquired: Nil
Number of families whose total holding acquired: Nil
Number of families whose homestead acquired: Nil
Basis for compensation: N.A

- The scale of resettlement required is Nil and therefore, the issue of impact on host communities does not arise.
- There will be no loss of access to communities' common resources and facilities.

Public Safety

The sub-station will be surrounded by a wall and it will be manned at all times, thereby reducing the risk and danger to the public from unauthorized trespass. The scheme will comply fully with the public safety requirements specified in the Indian Electricity Rules. The Rules cover the clearances required between power lines and roads, safety with regard to transporting materials near overhead lines, accessibility of bare conductors, precautions to be adopted by Electrical contractors and workmen.

In addition, the Rules address safety and protective devices, such as distance relays and ground fault protection.

Hazardous Substances

The project will not involve the use of hazardous substances.

Electromagnetic Field

Phase-to-phase and circuit-to-circuit clearances are consistent with practices used for line clearances worldwide. The conductor-to-ground clearances are within the limits and meet the requirements of the National Electrical Safety Code.

The Project will comply fully with the vertical and horizontal clearances specified in the Indian Electricity Rules.

Noise

Because of the location of equipment within the site, any audible hum from transformers or noise from cooling fans will not be discernible at the substation perimeter.

Historic and Cultural Sites

Construction of the sub-station does not involve interference with any known historic or cultural sites.

Proximity to Airports

Not applicable.

Comment

The chosen site was selected following a comparative examination of two alternatives.

The chosen site was selected due to the reason that its overall impact on the environment is Nil.

This project does not have any adverse environmental impacts and the Project Environmental Assessment concluded that the overall impact of the project was highly positive.