

Haitar-Sitalpati (Arun Corridor) 400 kV Transmission Line Project



राष्ट्रिय प्रसारण ग्रिड कम्पनी लिमिटेड

Rastriya Prasaran Grid Company Limited

(An Undertaking Company of Government of Nepal)



Background

This Transmission line project is one of the biggest power carriers of Province 1-Zone 5. This TL project is proposed to evacuate around 2500 MW of power from several hydropower projects in the Arun River basin. The Haitar Substation is expected to facilitate the transmission of power from sixteen hydroelectric plants, with a combined capacity of 2,507.80 MW and an annual generation of about 12,161.81 GWh. These projects will be commissioned between 2028 and 2045.



Sector:
Energy



Location:
Makalu Rural Municipality,
Khandbari Municipality,
Sankhuwasabha district



Land Required:
8.5 hectares for
Haitar substation

LOT 1:

Haitar-Sitalpati (Arun Corridor) 400kV Transmission Line

Objectives

This project is an evacuation scheme for the power generated at various hydropower stations which are under implementation.

Salient Feature:

- Length: 35 Km
- No of circuit: 2
- No of Tower: 98
- Conductor: ACSR Moose (Quad)
- Starting Point: Haitar Substation
- Ending Point: Sitalpati substation at Sankhuwasabha district

LOT 1:

Construction of Haitar Substation and Sitapaila Substation

Objectives

This project involves construction of two new substation 400/132 kV GIS Haitar substation and 400/220 kV GIS Sitapaila substation.

Salient Feature:

- GIS
- Reactor Bay

Features/Components

- Towers
- Conductor
- Insulators
- Gas Insulated Switchgear
- Substation
- Outdoor equipment
- Indoor Equipment
- Earthing, lightning protection on the extended area

Project Outcome



Encourage power producers to invest in this corridor for hydroelectricity generation.



Reduced transmission and distribution loss



Improved reliability and quality (Voltage/Frequency) of power supply



Job creation and economic development

Financial Indicators



Project Modality & Requirement

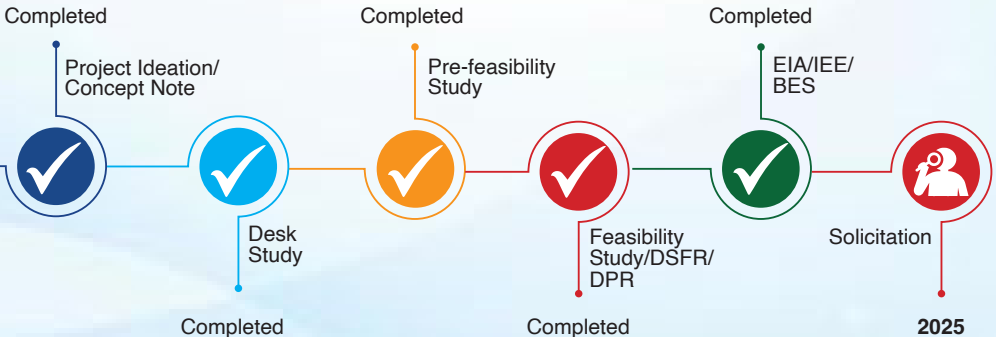


Public Private Partnership (PPP model)

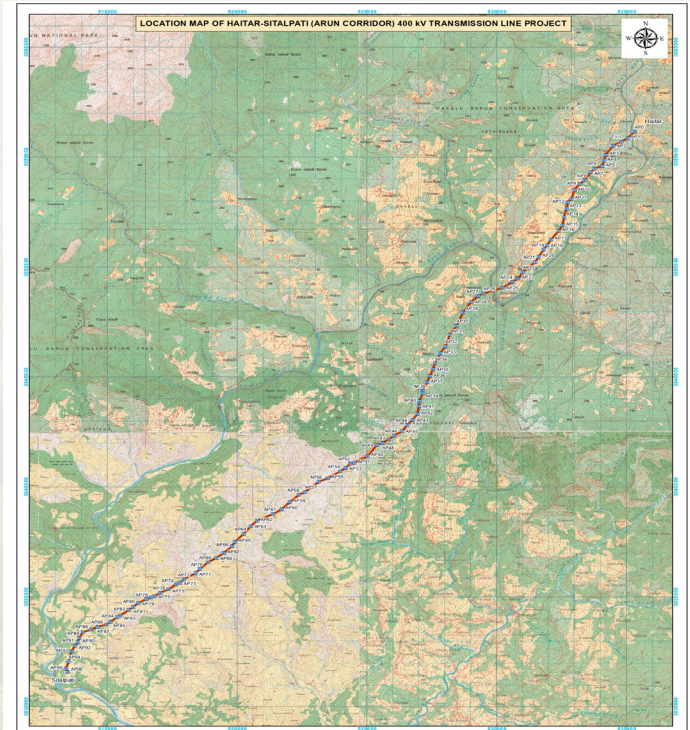
Build Own Operate Transfer (BOOT)

The RPGCL will form Subsidiary Company as Special Purpose Vehicle (SPV). The Subsidiary Company will be private entity, responsible for raising fund (equity and debt). The Subsidiary Company will be operated in BOOT Model i.e build, own, Operate and transfer the assets after 25 years to the RPGCL)

Project Implementation Timeline



Project Layout



Relevant Agencies

- Ministry of Energy, Water Resource and Irrigation (MoEWRI)
- Rastriya Prasaran Grid Company Limited (RPGCL)
- Nepal Electricity Authority (NEA)

About the Agency

Agency: Rastriya Prasaran Grid Company Limited

Rastriya Prasaran Grid Company limited (RPGCL) is dedicated to building and managing the national power grid infrastructure. Their vision is to establish a reliable grid network that supports the country's energy needs sustainably. Their mission includes constructing and maintaining an efficient grid, minimizing transmission losses, and promoting technological innovation. RPGCL aims to collaborate with stakeholders to improve grid efficiency and reliability. Their objectives involve expanding and upgrading transmission infrastructure, integrating renewable energy, ensuring regulatory compliance, developing workforce capacity, and facilitating regional energy cooperation.

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