



# Inaruwa Anarmani 400 KV

Transmission Line and Associated Substation Project



## Background

This 400 kV double circuit line starts from the Inaruwa substation in Sunsari district and connects the proposed new substation at Anarmani at Jhapa district in Koshi Province. Nepal's average grid-linked capacity has surplus energy during the wet season which must be transmitted to energy-hungry countries such as Bangladesh and India. This line will be critical in transporting power supply to the New Anarmani substation, which is close to India and Bangladesh's major substations and hence plays an important role in power trading between the two nations.

### LOT 1:

Inaruwa Anarmani 400 kV Transmission Line

### LOT 2:

- Expansion of Inaruwa 400 kV GIS Substation at Sunsari district
- 400/132 kV New Anarmani (Substation) at Jhapa District



#### Location:

Sunsari, Morang and Jhapa districts



#### Land Required:

419 hectares



#### Sector:

Energy



#### Location:

Sunsari, Morang and Jhapa districts



#### Land Required:

7 hectares

### Objectives

The Inaruwa–Anarmani 400kV Transmission Line intends to boost the electricity supply in Nepal's eastern industrial corridor while also facilitating trade with India, Bangladesh, and other Southeast Asian countries.

Inaruwa Substation is in the Sunsari district where bay extension will be carried out while New Anarmani Substation is located at Jhapa district where new 400/132 kV substation will be constructed.

### Salient Feature:

- Length: 89.613 km
- Number of Circuits: :2 (Double)
- Conductor: Moose Conductor (Quad)
- No. of Towers: 236
- Average Span: 389.27 m
- Starting Point: Inaruwa Substation at Sunsari
- Ending Point: New Anarmani (Haldibari) Substation at Jhapa District.
- Inaruwa 400 kV GIS
- Anarmani 400 kV GIS and 132 AIS
- GIS building
- Control Room Building
- Gas Insulated Switchgears
- Outdoor equipment
- Indoor equipment
- Fire prevention system, Illuminations, Earthing, substation lightning protection

## Project Outcome



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



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



Reduced transmission and distribution loss



Job creation and economic development

## Financial Indicators



## Financing Requirements

### Project Seeking Finance (Debt Finance)

Project Financing Plan		
Source	Amount (Million USD)	Share of Total (%)
Equity (GoN and NEA)	30.25	20.00%
Remaining for Lending	121	80.00%

Seeking lenders to finance 80% of the total project cost as a debt.

## Project Implementation Timeline



# Project Layout

Figure 3: Route Alignment of Inaruwa Anarmani 400kV Transmission Line



## Relevant Agencies

- Nepal Electricity Authority (NEA)
- Ministry of Energy, Water Resource and Irrigation (MoEWRI)

## About the Agency

### Nepal Electricity Authority (NEA):

The Nepal Electricity Authority (NEA) is Nepal's government-owned utility overseeing electricity generation, transmission, distribution, and sales. It aims to provide reliable, affordable, and sustainable energy solutions, fostering national development and enhancing citizens' lives. Its mission is to ensure reliable electricity supply, promote renewables, and maintain environmental sustainability. Its objectives include expanding access, improving infrastructure, promoting renewables, driving economic growth, ensuring equitable distribution, and fostering transparent operations. It is pivotal in Nepal's energy sector for sustainable development.

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