

# Geotechnical Investigation for Bunakha Hydroelectric Project in Bhutan

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## Project Overview

THDC India Ltd. proposes to develop Bunakha Hydroelectric Project in Bhutan (installed capacity of 180MW) in association with Druk Green Power Corporation, Bhutan. The proposed Bunakha Hydroelectric Project envisages construction of about 188m high Roller Compacted Concrete (RCC) Gravity Dam across the narrow gorge of river Wangchu near village Bunakha in Chukha District of Bhutan. The proposed dam site is located about 3.25Km upstream of existing Chukha Diversion dam and 24Km downstream of the confluence of Thimchu and Parochu.



<b><i>Facts &amp; features</i></b>		
<b>1</b>	<b>LOCATION</b>	
	Country	Bhutan
	River	Wangchu
	Dam Site	Near Buankha village (3.25 km u/s of Chukha H.E. Project)

<b>2</b>	<b>DAM</b>	
	Type	Roller Compacted Concrete
	Top width	12m
	Height of Dam above deepest foundation level	197 m
	Length of Dam at the top	429.5 m
<b>3</b>	<b>POWER HOUSE</b>	
	Type	Dam Toe Surface
	Type of Turbine and no. of units	Vertical Francis, 3 units of 60MW each
	Installed Capacity	180 MW

### Scope of Services provided by IGS

- Drilling of vertical / Inclined boreholes up to a maximum depth of 150m
- Dilatometer tests (up to 200 bar) in boreholes
- Lugen test
- Laboratory testing on core samples
- Construction of drift (1.8 m x 2.1 m size)
- In – situ Shear test (Rock – Rock and Concrete Rock tests) in drift
- Preparation and submission of report