

TINAU HYDRO POWER PROJECT (L MW):

Undertook the design of dam and intake rehabilitation works as well as supervision of construction for the project.

Client: Nepal Electricity Authority

Place of Work: Rupandehi district, Western Nepal

ANDHIKHOLA HYDRO ELECTRIC & RURAL ELECTRIFICATION PROJECT (5.1MW):



This project has recently won the prestigious 'Blue Planet Award'. Himal Hydro was civil contractor of this project including the works of transmission line. This exemplary hydro project diverts the water from Andhikhola River to the Kaligandaki River through 1.28 km long headrace tunnel, 250 m deep drop shaft and 1.08 km long tailrace tunnel to generate 5.1 MW power.

Project	Andhikhola Hydel & Rural Electrification Project (5.1 MW)
Location	Galyang Bhanjyang, Syangja District, Central Nepal
Client	Butwal Power Company (BPC) Limited
Consultant	BPC Hydroconsult (BPCH), Kathmandu
Intake River	Andhikhola
Dam	Ogee 60m x 6m, 3,200 m ³ Reinforced Concrete
Tunnels	Headrace 1,284 m, 7.5 m ² , Drop Shaft 245 m x 4.5 m dia, Tailrace 1,080 m x 8.5 m ² , fully Lined.
Powerhouse	Underground, 37 m x 7 m x 10 m, Support Shotcrete I Rock-Bolting

Geology	Phyllite
Period of Construction	1982 – 1990

JHIMRUK HYDRO ELECTRIC AND RURAL ELECTRIFICATION PROJECT (12MW)



This is a run-of-river scheme with 300 m long curvilinear dam, the first of its kind in Nepal, across the wide Jhimruk River. Himal Hydro as the main civil contractor completed all works of this project including the works of transmission line. The 280 m long inclined pressure shaft of this project was the first inclined tunnel built by a Nepali construction company.

Project	Jhimruk Hydro-Electric & Rural Electrification Project
Location	Pyuthan District, Mid-Western Development Region
Client	Butwal Power Company (BPC) Limited
Consultant	BPC Hydroconsult (BPCH), Kathmandu
Intake River	Jhimruk Khola
River Training	2 km Canal, Gabion Mattresses
Dam	300m Curvilinear with desilting basin and intake, 10,000 m ³ Concrete
Tunnels	Headrace 1100 m x 8.5 m ² , 280 m x 3.5 2 Inclined Shaft (45 degree), fully lined with steel and concrete

Powerhouse Semi-underground, Steel Trusses, 8 m x 20 m x 18 m
Construction 1989- 1994

KHIMTI HYDROPOWER PROJECT (60MW)



This project has an installed capacity of 60 MW and uses a gross head of 684 m through a total waterway length of 10 km at the rated flow of 10.75 m³/s, producing 350 GWh units of energy annually.

Construction works for the project was started in 1993, although the work gained momentum only after financial closure in June 1996. The project was completed in May 2000, ahead of schedule despite tremendous geological, logistical and other local problems.

The environmental impact of the project is very minor and the project has been praised for its excellent compliance with strict health, safety and environmental standards. Cooperation of workforce during construction of the project was also extremely good throughout the project period.

Project	Khimti I Hydropower Project (60 MW)
Location	Ramechhap/Dolakha District, Central Nepal
Financed by	Asian Development Bank, IFC/World Bank, NORAD, Nordic Development Fund, Exportfinance
Owner	Himal Power Limited (HPL)
Independent Engineer	Morrisson Knudsen Co.

Project Management	Statkraft Engineering (Norway), Butwal Power Company
Civil Contractor	Consortium of Statkraft Anlegg AS, Norway (now NCC) and Himal Hydro
Electro-Mechanical	ABB Kraft (now Alstom), Kvaerner Energy (now GE), Nepal Hydro & Electric
Intake River	Khimti Khola
Dam/Intake	Gravity Concrete, Excavation 28,000m ³ , Rip Rap 14,000m ³
Desilting Basin	30 m x 120 m with 4 nos. of serpent sluicing system in two chambers. Excavation 85,000m ³ , Concrete 22,000m ³ (Including Intake)
Tunnels	Headrace 14m ² x 8km, Inclined 4.5 – 6m ² x 937m, Access 24m ² x 890m, Tailrace 15.5m ² x 1,400m
Highest Head Project in Nepal	Gross Head 684 m, Longest Headrace Tunnel (8000 m), Longest Penstock Tunnel (1000 m)
Underground Powerhouse	70 m long, 11 m wide & 17 m high cavern
Total Cost of Project	US\$ 140 Million
Cost of Civil Works	US\$ 56 Million
Period of Construction	1996 – 2000

KHUDI HYDROPOWER PROJECT (4.2MW)

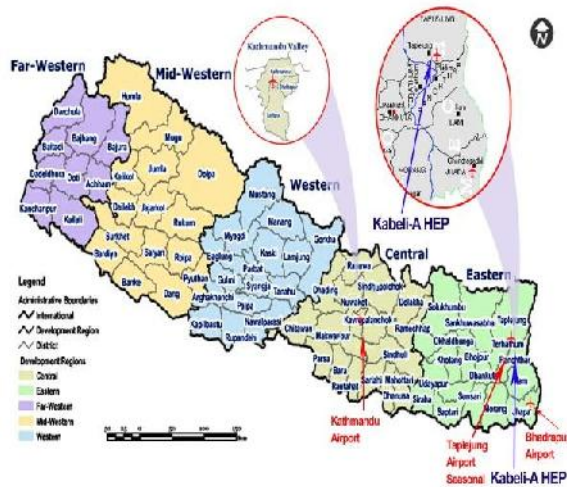
Khudi Hydropower Plant is located in Lamjung district in Western region of Nepal. The project achieved its commercial operation in December 30, 2006. The power plant has two units of 2 MW each.

Salient Features

Location	Lamjung District
Type	Run-of-River
Capacity	4 MW
Annual Energy Generation	24.28 GWh

In operation since: December, 2006

IMPLEMENTATION OF KABELI - A HYDROELECTRIC PROJECT (37.6 MW)



Kabeli A Hydro Electric Project ;KAHEP is located in the border of Panchthar and Taplejung districts in Eastern Development Region. All the project structures are situated in Amarpur VDC of Panchthar District. Kabeli Energy Limited (KEL), a Special Purpose Vehicle (SPV) is established to develop the project by Butwal Power Company Limited (BPC) along with Gurans Energy Limited.

The Government of Nepal has awarded the project to KEL under Build Own Operate and Transfer (BOOT) model with 35 years of generation license. Project Development Agreement (PDA) to this effect was signed on January 31, 2010 & its amendment was signed in 2013.

40% of the Project cost is to be financed by the World Bank and disbursement to be made to KEL through International Finance Corporation (IFC) to provide remaining debt finance and 20% will be invested by the promoters as equity.

Subsequent to PPA in 2010, survey license was awarded to KEL to update feasibility study and carry out IEE, ESIA. Accordingly, updating of feasibility study and IEE was carried out and got approval from GoN. The documents were reviewed by panel of experts and International Consultants. As per the PDA and its amendment, connection agreement and PPA have been signed in 2015. Contracts for civil and hydro-mechanical works have been signed and for EM is in final stage of signing. Loan agreement with IFC signed in 2015, and on lending agreement of IDA/WB loan is in processing of signing with HIDCL.

Fact Sheet

Project Location	Head Work site - Panchthar district, Amarpur VDC-5, Dhuseni Power House site - Panchthar district, Amarpur VDC-9, Pinasi
Project Type	Daily peaking Run-of River
Installed Capacity	37.6 MW with Q40
Annual energy generation	205 GWh
Design discharge	37.73 Cumec
Gross Head	118 m
Head Race Tunnel	4327 m, Inverted D-shaped
Power Evacuation	Inter-connection at Kabeli Power House to Kabeli Corridor 132 kV transmission line under construction by NFA
Access to site	Power house site is 12 km away from Mechi Highway which is about 45 km away from Phidim (District HQ). Headwork site is at about 7.5 km away from Mechi Highway which is about 55 km away from Phidim (District HQ) Kakabhitta is the nearest border town to India and Bhadrapur is the nearest town for Aeroplane service.

IMPLEMENTATION OF NYADI HYDROPOWER PROJECT (30 MW)



The Project was first identified in 1993 as part of the Small Hydropower Master Plan. The initial capacity of the Project was 2.8 MW which was later optimized at 20 MW. BPC acquired this project from LEDCO in

December 27, 2006. A Special Purpose Vehicle (SPV), Nyadi Hydropower Ltd has been incorporated for development of the project. Currently, with further investigation, The Project has been optimized at 30 MW for which a new feasibility study has been carried out. Initial Environmental Examination (IEE) has been completed and approved by the government. The Power Purchase Agreement (PPA) and Connection Agreement with Nepal Electricity Authority (NEA) has been concluded in 2015. Out of 11 km length, track opening of 9 km has been completed and a bridge over Marsyangdi River has been constructed. Major construction of the Project has been planned to start from the mid-2016 and expected to be commissioned at the end of 2019.

Fact Sheet

Project Type	Run-of River
Project Location	Head Work site - Lamjung district, Bahundada VDC-2, Naiche village Power House site- Lamjung district, Bahundada VDC-7, Thulobeshi village
Installed Capacity	30 MW
Annual Energy Generation	168.5 GWh
Design Discharge	11.08 Cumec
Gross Head	347.5 m
Head Race Tunnel	4000 m
Power Evacuation	Inter-connection will be made to the Marsyangdi Corridor Transmission line planned by NEA at Khudi Hub.
Access to site	Power house site is at Thulobeshi village which is about 6 km away from Thakanbeshi point at Besisahar-Manang Highway. Headworks Site is further 5 km away from power house. The site can be reached within 6 hours drive from Kathmandu or Birgunj. Birganj (Raxaul) or Bhairahawa (Sunauli) is the nearest border town to India having broad gauge railway link.