



COMPANY PROFILE

*Empowering Sustainable Resources
Through Engineering Excellence*

1. Vision, Mission & Core Values



Vision

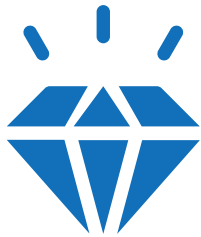
To be a leading Engineering organization in the study, development and management of energy and infrastructure sector with excellence in providing cost-effective, innovative and quality services maintaining high efficiency, reliability and accuracy.

Missions

- To be a competitive engineering service provider, delivering cutting-edge solutions.
- To provide innovative engineering solutions and superior project supervision.
- To be committed to protecting the environment and promoting sustainable practices.
- To maximize value for all stakeholders and foster long-term partnership.
- To adhere to government rules & regulations, ensuring compliance & ethical practices.



Core Values



- Customer-oriented: We prioritize understanding our customers' needs and strive to exceed their expectations.
- Transparent: We are transparent in our business.
- Committed to Deadlines: We strive to meet all deadlines without exception.
- Proactive: We explore and look for every possibility for solutions to improve our business by improving our customer's business.
- Team Work: We foster a collaborative work environment based on mutual respect, trust, and effective communication to achieve remarkable results.

2. History

A group of professional Engineers with extensive experience in the field of design, construction and operation of hydropower projects, came together in 2005 to study and design hydropower projects with a intense on small and medium size projects. Later, as the energy need of the nation grew for the construction of larger projects, we went on expanding our group. To match the pace of the development, TAC Hydro Engineers was established, which then expanded into TAC Hydro Consultancy.



3. Why Choose Us?

At present, our team's expertise extends beyond hydropower projects to encompass tunnel, transmission line, road, environment, irrigation and water resources projects. With a customer-centric approach, we deliver tailored solutions that prioritize innovation, sustainability, and cost-effectiveness. Our technical expertise, careful attention to detail, and commitment to exceptional outcomes make us the ideal choice for your engineering and infrastructure needs. Trust TAC Hydro Consultancy Pvt. Ltd. to be your reliable partner, dedicated to achieving outstanding results in every project we undertake.



4. Sectors

01 Hydropower

02 Tunnel

03 Transmission Line

04 Road

05 Environment

06 Irrigation & Water Resources

5. Services



Project Development

- Project Identification
- Desk Study
- Topographical Survey
- Discharge Measurement
- Feasibility Study
- Environmental and Social Studies (IEE/EIA)
- Due Diligence
- Engineering Support During Development



Project Engineering

- Detailed Engineering Design
- Bidding and Contract Documents Preparation
- Bid Evaluation & Selection



Project Management

- Construction Supervision and Quality Control
- Project Monitoring and Bill Verification
- Contract Management and Time Control
- Lenders Technical Consultant



Specialized Works

- Fabrication Design of Hydromechanical Components
- Installation and Supervision Support
- Design of Electromechanical Component



Research and Development

- Structural Analysis (FEA)
- Hydraulic Analysis (CFD)
- Innovative Design



6. Projects

N



INDEX

- Feasibility Study
- Detailed Engineering Design
- Hydromechanical Design
- Construction Supervision
- Due Diligence Study
- Project Monitoring & Bill Verification



We have contributed to
1300 MW
of Hydropower Projects all over Nepal.

Harnessing the Power of Team Work:



LIKHU -1 HYDROPOWER PROJECT (77 MW)

Due Diligence Study, Project monitoring & Bill Verification. Likhu-1 Hydropower Project is a run-off-river scheme located in the Ramechhap and Solukhumbu Districts of Bagmati Province in Nepal. It is being constructed by PAN Himalaya Energy Ltd. The project has an installed capacity of 77 MW. The Likhu Khola, a left tributary of the Sunkoshi River, is the primary river utilized for generating hydroelectric power. Additionally, the project also utilizes the Nupche Khola and Bikhe Khola through conventional side intakes. Currently, the Likhu-1 Hydroelectric Project is in the final stage of construction.

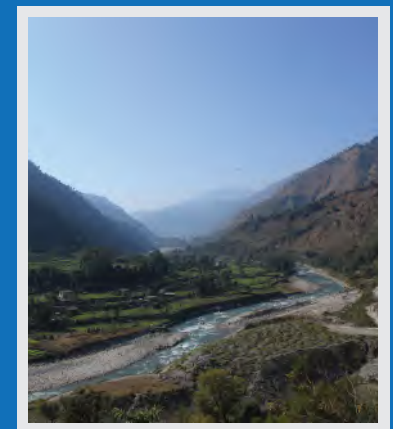


MATHILLO INKHU HYDROPOWER PROJECT (33.20 MW)

Topographical Survey and Feasibility Study. Mathillo Inkhu Khola Jalbidhyut Aayojana is situated on the Inkhu River, in the Solukhumbu district of Koshi Province in Nepal. This project is a cascade project of Super Inkhu Khola Jalbidhyut Aayojana. The total installed capacity of the Mathillo Inkhu Khola Jalbidhyut Aayojana is 33.20 MW. The design discharge is 7.24 m³/sec. The project has 4015 m length of waterway tunnel of diameter 2.8m and underground circular surge shaft of diameter 6m. Two units of Pelton Turbine each of capacity 16.75 MW is housed in underground powerhouse.

LOWER CHAMELIYA HYDROPOWER PROJECT (20.0 MW)

Feasibility Study and Initial Environment Examination (IEE) Study. The LCHP (Lower Chameliya Hydropower Project) is located on the Chameliya River in the Darchula and Baitadi Districts of the Sudur Paschim Province in Nepal. It is a peaking run-off river project and is cascade project of NEA's (Nepal Electricity Authority) Chameliya Hydroelectric Project (CHEP). The project's headworks are situated at a catchment area of 1084 km². With a gross head of approximately 67.35 meters and a design discharge of 36.38 cubic meters per second, the installed capacity of LCHP is 20.00 MW. The design discharge and turbine discharge for LCHP are the same as in CHEP, as it receives diverted tailrace water from CHEP.



OTHER PROJECTS (CUMULATIVE 200 MW+)

DUE DILIGENCE STUDY

- Upper Irkhuwa HPP
- Midim-1 HPP
- Madhya Super Daraudi HPP
- Upper Piluwa Hills Small HPP
- Upper Gaddigad HPP
- Leguwa Khola HPP
- Lower Dudhkunda HPP

TOPOGRAPHICAL SURVEY AND FEASIBILITY STUDY

- Super Mai HPP
- Rawa Khola HPP
- Ghatte Khola HPP
- Sailun Khola HPP
- Nupche Likhu Cascade HPP
- Super Inkhu HPP

KASUWA KHOLA HYDROPOWER PROJECT (45 MW)

Detailed Engineering Design of project including Design of Access Road, Tender Document Preparation and Bid Evaluation. The Kasuwa Khola Hydropower Project is a Peaking Run-of-River (PRoR) type project situated in the Makalu Rural Municipality of the Sankhuwasabha District, Koshi Province, Nepal. Located in the pristine Makalu Barun National Park, it utilizes the Kasuwa Khola, a tributary of the Arun River, and receives significant water inflow from the Hinsu Khola. With a gross head of 560 meters and a design discharge of 9.9 m³/s, the project covers a catchment area of 85.97 km². Its 45MW capacity and PRoR design enable it to supply additional power to the grid during peak demand, contributing to a reliable electricity supply.

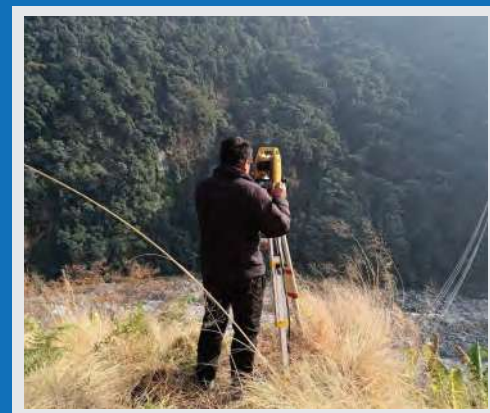


MIDDLE CHAMELIYA HYDROPOWER PROJECT (28 MW)

Detailed Engineering Design, Tender Document Preparation and Bid Evaluation. The Madhya Chameliya Hydropower Project (MCHP) is a Run-of-River type project located in the Chameliya River in the Darchula district of Sudur Paschim Province, Nepal. It has an available gross head of approximately 136.26 m and a design discharge of 25.17 m³/sec diverted into two horizontal axis Francis units via 3.8 m diameter of buried steel pipe. With these parameters, the project has an installed capacity of 28.00 MW, aiming to harness the river's energy potential for sustainable electricity generation.

MADKYU KHOLA HYDROPOWER PROJECT (13MW)

Detailed Engineering Design, Tender Document Preparation and Bid Evaluation of Transmission Line. The Madkyu Khola Hydropower Project is a run-of-river hydroelectric plant situated in the Kaski District of Nepal. It harnesses the flow of the Madkyu River to generate 13 MW of electricity, with a design discharge of 3.71 cubic meters per second. The plant is owned and developed by Sikles Hydropower Pvt. Ltd. It commenced electricity generation on the Nepali calendar date 2074-12-19 BS. The power station is connected to the national grid and the electricity generated is sold to the Nepal Electricity Authority.



OTHER PROJECTS (CUMULATIVE 100 MW+)

DETAILED ENGINEERING DESIGN, TENDER DOCUMENT PREPARATION AND BID EVALUATION.

-  Rawa Khola HPP
-  Lohore Khola HEP
-  Ghatte Khola Small HPP
-  Upper Puluwa Khola-3 HPP

-  Dwari Khola HPP
-  Sano Milti Khola HPP
-  Kalinchowk Small HPP
-  Upper Gaddigad HPP

NUPCHE LIKHU HYDROPOWER PROJECT (57.5 MW)

Project Monitoring & Bill Verification. The under-construction Nupche Likhu Hydropower Project in Ramechhap District, Nepal, is being developed by Vision Energy & Power Ltd. It has an installed capacity of 57,500 kW and utilizes the Nupche Khola and Likhu Khola streams. The project follows a run-of-river approach with a design discharge of 7.11 m³/s, divided between the intakes. Machhapuchre Bank Ltd. leads the financing, supported by consortium banks, emphasizing their commitment to sustainable energy development. The project will enhance electricity supply, drive economic growth, and reduce dependence on fossil fuels.



UPPER CHAMELIYA HYDROPOWER PROJECT (40 MW)

Project Monitoring & Bill Verification. The Upper Chameliya Hydropower Project, developed by API Power Company Ltd., is currently under construction in Darchula district, Sudur Paschim Province, Nepal. With an installed capacity of 40 MW, it is located on the Chameliya River, a tributary of the Mahakali River. The project's design discharge is 23.47 m³/s. Financed by Himalayan Bank Ltd. and other institutions, it aims to boost electricity generation, support economic growth, and reduce reliance on fossil fuels in the region. Once completed, the project will play a crucial role in the sustainable development of Sudur Paschim Province and Nepal.

KARUWA SETI HYDROPOWER PROJECT (32 MW)

Project Monitoring & Bill Verification. The Karuwa Seti Hydropower Project is a run-of-river hydropower scheme located in the Kaski District of Gandaki Province, Nepal. It is situated within the Machhapuchhre Rural Municipality, which is a part of the Annapurna Conservation Area Project (ACAP). The project has an installed capacity of 32 MW. On an annual basis, the Karuwa Seti Hydropower Project is expected to generate approximately 167.56 gigawatt-hours (GWh) of energy. The project operates with a gross head of 248.45 meters. The design discharge of the project is 15.3 cumecs. The financing for the Karuwa Seti Hydropower Project has been provided by the Nepal Infrastructure Bank Limited (NIFRA) and other financial institutions to support its development and contribute to the generation of clean and renewable energy in Nepal.



MIDDLE MODI HYDROPOWER PROJECT (18 MW)

Construction Supervision and Quality Control. The Middle Modi Hydropower Project (MMHP) is a 15 MW Run-of-River scheme located in Kaski and Parbat Districts, Gandaki Province, Nepal. It harnesses the flow of the Modi Khola, a major tributary of the Kaligandaki River. With a design discharge of 25 m³/sec and net head of 70 m, it generates electricity without the need for a large reservoir. The power is connected to the National Grid via a 4 km transmission line. Annually, it produces 79.12 GWh of clean energy, contributing to Nepal's renewable energy goals.

9. Project Management

LIPING KHOLA HYDROPOWER PROJECT (16.2 MW)

Detailed Engineering Design and Construction Supervision & Quality Control. The Liping Khola Hydropower Project, developed by Him River Power Limited, is a 16.26 MW Run-of-River project located in Sindhupalchowk District, Bagmati Province, Nepal. It utilizes a design discharge of 2.45 m³/s from the Liping Khola River. With a gross head of 817 meters, the project aims to generate 94.40 GWhr of net annual energy output. It will contribute significantly to Nepal's energy generation capacity and meet the region's growing electricity demand once completed.



GHATTE KHOLA SMALL HYDROPOWER PROJECT (5 MW)

Construction Supervision and Quality Control. Manakamana Engineering Hydropower Pvt. Ltd. has developed the 5.00 MW Ghatte Khola Hydroelectric Project in Dolakha District, Bagmati Province, Nepal. It operates as a run-of-river scheme, utilizing the flow of Ghatte Khola, a tributary of Khare/Khani Khola. With a design discharge of 1.78 m³/s and a net head of 322.5 meters, the project has successfully connected to the national grid line, contributing to Nepal's renewable energy infrastructure and promoting sustainable development while reducing reliance on fossil fuels.

OTHER PROJECTS (CUMULATIVE 350 MW+)

PROJECT MONITORING & BILL VERIFICATION

- Likhu-1 HPP
- Bhote Koshi-1 HPP
- Lower Erkuwa Khola HPP
- Midim-1 HPP
- Madkyu Khola HPP
- Dordi-1 HPP
- Tallo Khare Khola HPP

- IWA Khola HEP
- Upper Naugad gad HEP
- Naugad gad HEP
- Upper Mardi Khola HPP
- Rukumgad HPP
- Upper Chhandi HPP
- Chhyangdi HPP

CONSTRUCTION SUPERVISION & QUALITY CONTROL

- Upper Piluwa Khola-3 HPP
- Theule Khola HPP
- Lohore Khola HPP

- Mailun HPP
- Jhyari Khola HPP
- Milti Khola HPP

10. Specialized Work (Hydromechanical & Electromechanical)



MIDDLE MEWA HPP (73.5 MW)

Detailed Hydro-Mechanical Design. Mewa Developers Limited has developed the 73.5 MW peaking (daily peaking of 6 hours) run-of-river type Middle Mewa Hydropower Project in Taplejung District, Koshi Province, Nepal. Project Salient features include: gross head of 471.47 m, 5,341m headrace tunnel of 5,341m length, design discharge of 19.32 m³/s. The project is expected to generate 436.08 GWh of electricity.

NILGIRI -1 HPP (38 MW) & NILGIRI – 2 HPP (71 MW)

Detailed Hydro-Mechanical Design. Nilgiri Khola Hydropower Company Ltd has developed 38 MW Nilgiri-1 and 71 MW Nilgiri-2 hydroelectric projects located in Annapurna Rural municipality-4, Naryang of Myagdi district, Nepal. The electricity generated from the Nilgiri River will be connected to the Dana substation at a distance of 8.5 km through a 220 kV transmission line.



UNITED MEWA KHOLA HPP (50MW)

Detailed Hydro-Mechanical Design. Mewa Khola Hydroelectric Project has developed by United Mewa Khola Hydropower Pvt. Ltd is a run-of-river type project using design discharge of 33.0 m³/sec and gross head of 198.78 m located in Taplejung district of Koshi- Province of Nepal. Three units each of 16.7 MW capacity are proposed to generate the designed output of 50 MW. The Mewa River is the tributary of Tamor River. The project is expected to generate 317.47 GWh of electricity.

SIKTA IRRIGATION PROJECT, BANKE

Design Review and Erection Supervision of Gates. Sikta Irrigation Project is one of largest irrigation Project of Nepal and the National Pride Projects of Nepal. The project aims to irrigate about 43,000 hectares of land in Banke district. The intake is in the Rapti River in western Nepal. There are two canals with the capacity of 50 m³/s each. The length of canal is 45.25 kilometers in the western section and 53 kilometers in the eastern section.



10. Specialized Work (Hydromechanical & Electromechanical)

OTHER PROJECTS (CUMULATIVE 650 MW+)

DESIGN AND FABRICATION DRAWING OF GATES, STOPLOGS, TRASHRACK AND ACCESSORIES

- Upper Chameliya HPP
- Upper Solu Khola HEP
- Upper Rahughat HEP
- Rahughat Mangale HEP
- Seti Nadi HPP
- Lower Hewa HEP
- Upper Chaku-A HEP
- Arun Kabeli HEP
- Maya Khola HEP
- Lower Modi-1 HEP
- Aankhu Khola HEP
- Sikta Irrigation Project

- Mailun Khola HEP
- Sabha Khola HEP
- Phawa Khola HEP
- Charanawati Khola HEP
- Sani-Veri Uttar Ganga Mini HPP
- Upper Chhandi HPP
- Pikhuwa Khola Small HEP
- Puwa Khola HEP
- Tungun Thosne/Khani Khola HEP
- Naugad Gad HEP
- Mai Khola HEP
- Irrigation (Kamala, Rani Jamara, Jamuni etc.)

DESIGN AND OPTIMIZATION OF PENSTOCK PIPES AND ACCESSORIES

- Khimti-2 HEP
- Langtang HEP
- Baramchi Khola HPP
- Upper Rahughat HPP
- Upper Solu HPP
- Lower Modi HPP
- Mailun Khola HPP
- Naugad Gad HPP
- Upper Naugad Gad HPP
- IWA Khola HPP
- Chhandi Khola HPP

DESIGN AND NUMERICAL ANALYSIS OF BIFURCATIONS

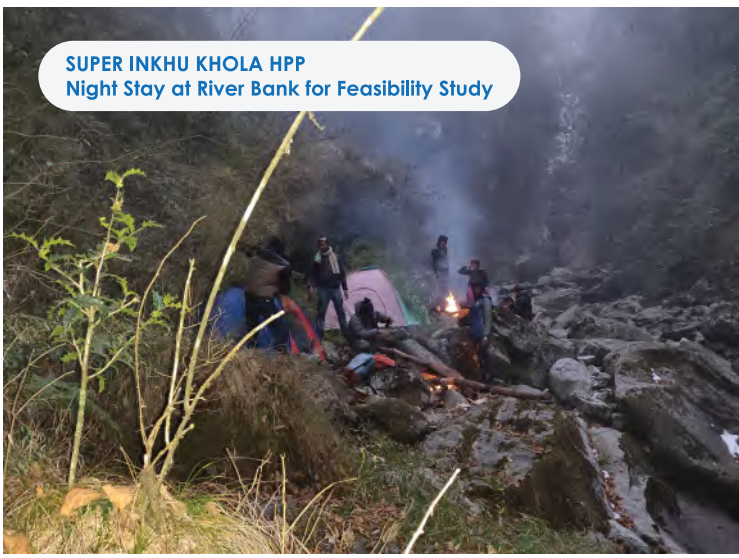
- Mai Khola HEP
- Kulekhani III
- Siprin Khola HPP
- Upper Naugad Gad HPP
- Kabeli B1 HPP
- Upper Chameliya HPP
- IWA Khola HPP
- Middle Mewa HPP
- United Mewa HPP
- Khimti-2 HEP
- Langtang HEP

DESIGN OF CABLE CRANE

- Siprin Khola HPP
- Upper Chaku HEP A
- Suri Khola HEP

DESIGN REVIEW

- Nupche Likhu HPP
- Seti Nadi HPP
- Rele Khola HPP



SUPER INKHU KHOLA HPP
Night Stay at River Bank for Feasibility Study



LIPING KHOLA HPP
Study of geological conditions of powerhouse cavern



Best solutions to toughest problems are possible...
Through brainstorming and team-discussions...



LIPING KHOLA HPP
Installation of Penstock Pipe



SAILUN KHOLA HPP
Project site visit for Feasibility Study

“

Experience Exceptional Engineering Solutions with TAC Hydro Consultancy - your trusted partner for hydropower, infrastructure and environmental projects. Together, we foster a collaborative team environment to deliver innovative, sustainable and cost-effective results.

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