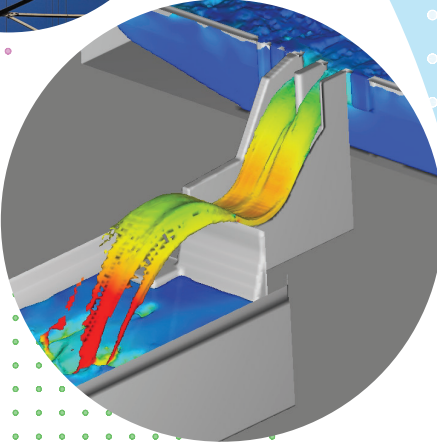
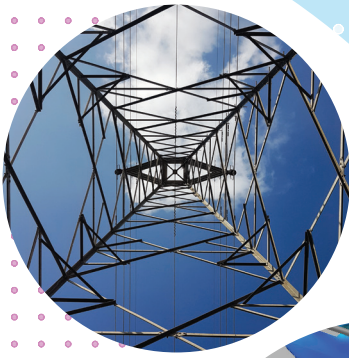




NEA Engineering Company Limited



Company Profile
2020

"THE FUTURE IS ELECTRIC"



NEA Engineering Company Ltd is established to provide complete engineering services and solutions to hydropowers and infrastructures. Our services include feasibility, hydropower planning, hydrology and hydraulic analyses, energy analyses, efficiency testing, assessment of equipment and facility condition, automation design, dam engineering, dam safety inspections, hydro mechanical engineering, civil/structural/electrical design, operations/maintenance, project management and construction services.

FIND US ON, www.neaec.com.np

NEA Engineering Company Limited
Kathmandu, Nepal



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About NEC

NEA Engineering Company (NEC) Limited was constituted as a public company by a consortium of four government entities, viz., Nepal Electricity Authority (NEA), Vidhyut Utpadan Company Limited (VUCL), Rastriya Prasaran Grid Company Limited (RPGCL) and Jalvidhyut Lagani tatha Bikas Company Limited (HIDCL) pursuant to the Companies Act of Nepal. The Articles of Association of NEC provides it with a mandate to work in all the sectors of energy from generation and transmission to distribution and associated services.

The need for a government sector engineering consultancy company was enumerated in the National Energy Crisis Reduction and Electricity Development Decade Action Plan-2072. The vision within the Action Plan was later realized in the form of NEA Engineering Company spearheaded by NEA investing 51% of the share and VUCL, RPGCL and HIDCL making up the remaining.

NEC has its vision enshrined to be the epitome of Nepalese engineering institutions providing quality, efficient and sustainable engineering solutions in the energy sector. It seeks to lead the indigenous effort in engineering and design capability in large hydropower, high voltage transmission, smart economic distribution and services, while also grooming the local national efforts. It seeks to not only achieve natural excellence and self-reliance but also to establish itself regionally and internationally.

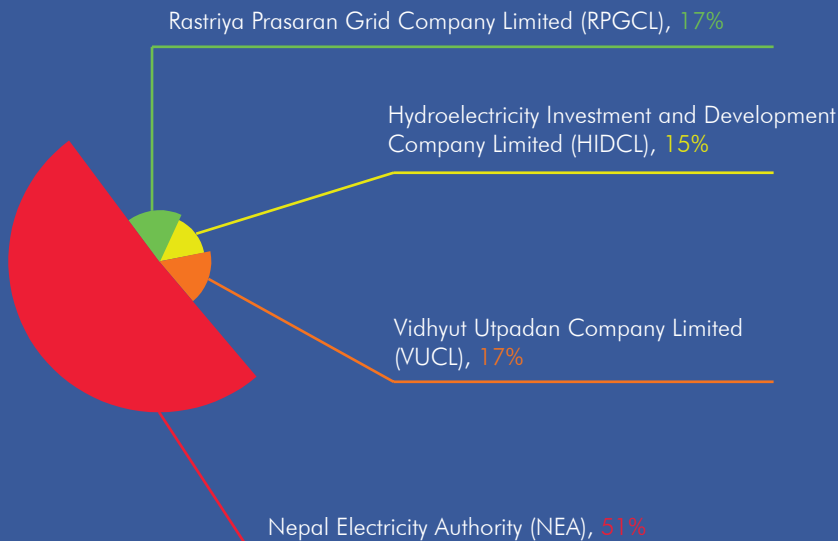
Within the third year of its operation, NEC is already providing an array of services, which can be categorized as a) Detailed Feasibility as well as Engineering Study of large hydropower projects from run-off river to peaking pondage to large storage b) Planning and Study of National Electricity Distribution, Transmission and Distributed Generation Master Plan c) Design Analysis and Supervision of High Voltage Transmission Line and Substations d) Design and Analysis of transmission towers e) Research Study and Design of engineering service production such as e-mobility, floating solar etc. f) Environmental and social study of the concerned projects g) Design, analysis and supervision of power plant or substation, operation and maintenance etc.

The company has gained in strength and momentum from project to project within this period and its human strength has reached more than a hundred with an active roster of national experts and international experts as resource persons that can be called upon as the engineering challenge demands. The MoU signed with the Nepalese technical diaspora in Australia and United Kingdom as well as international consulting companies in Canada, USA, China and India bears evidence to its widening reach and ambitions, whereas the MoU of cooperation signed with the two flagship universities of the nation KU and TU exemplifies one of its core values, the Panchasheel, of research and innovation.

Presently, NEC has completed five design and engineering contracts while more than two dozens design contracts are ongoing while many more are in the offing. The company seeks to contribute by its efforts in the energy engineering sector to the overall economic growth and the wellbeing of the nation.

SHAREHOLDING

Capital
 Issued capital: 1000 Million Rupees
 Paid-up capital: 100 Million Rupees



Registered in Office of Company Registrar (OCR)	March 3, 2017
Permission to operate from OCR	July 13, 2017
Registered in VAT	September 20, 2017
First Annual General Meeting (AGM)	June 14, 2018
Second Annual General Meeting (AGM)	January 13, 2019
First year (FY 074/75) Revenue	Rs 15,78,07,741.61
Second year (FY 075/76) Revenue	Rs 29,51,68,282.79



1 First Annual General Meeting dated 2076

Board of Directors



Mr. Kul Man Ghising

Chairman
Managing Director,
Nepal Electricity Authority



Mr. Mohan Raj Panta

Member
Managing Director,
Vidyut Utpadan Company Ltd



Dr. Netra Prasad Gyawali

Member
Chief Executive Officer,
Rastriya Prasaran Grid Company Limited



Mr. Chhabhi Raj Pokharel

Member
Chief Executive Officer,
Hydroelectricity Investment and
Development Company Ltd



Mr. Hitendra Dev Shakya

Managing Director
Deputy Managing Director,
Nepal Electricity Authority



Vision

An epitome of Nepalese engineering institutions spearheading and grooming the indigenous engineering efforts

Mission

Quality, Efficient, Sustainable and Quick engineering solutions for economic growth of the Nation

Goal

To be at the forefront of providing engineering solutions;

- by investing on institutional capacity
- by stressing on quality engineering and expansion in respective sector, and
- by striving for technical innovation and reliability

Core Values - Pancha Sheel

A. Institutional Capacity Building

- We value collaboration and team work and we build the institutional capacity for local and international solutions

B. Quality and Excellence

- We apply best practices and excel in knowledge and services provided

C. Research and Innovation

- We invest in research for novel engineering solutions

D. Good governance and Integrity

- We are trustworthy, transparent, reliable

E. Care

- We care for Social and Environmental aspects as well as Employee well-being

Corporate Spirit

"Together we excel for the betterment of self, company and the nation"

Working Approach

Differentiated responsibilities but a common goal

The scope of the work requires involvement of experts from a diverse range of fields. To ensure that all parts/components of the service is properly and adequately addressed, all the experts and team members are assigned specific responsibilities with timeline. But, the works of all experts and team members are geared and focused towards the common goal as defined by the scope of the services.

Combination of good practices to achieve optimum result

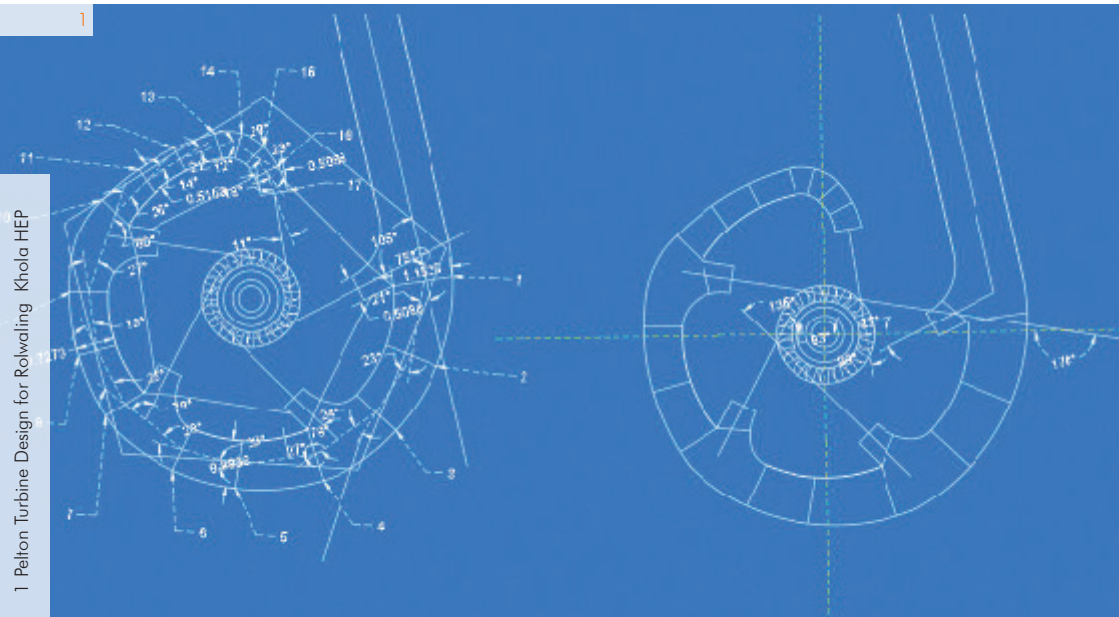
Our experts carefully review and judge the proven techniques and practices against the requirement of the assignment based on their past experience and other secondary sources. We focus on producing optimum result with the combination of good practices which are in harmony among different sectors.

Facilitation and integration

As the assignments require input from the experts of diverse background and also stakeholders with diverse interest, the role of facilitation especially for co-ordination and integration of work and results is highly important to produce timely and quality result. Respective Team Leaders and the general management team of NEC pay due attention to this aspect.

Adaptive and responsive to local norms and changing situations

Normally, the duration of services is more than one year. So, there might be changes which have positive or negative impact to planned service delivery. The management team constantly watches over such situations and responds adaptively in consultation with the client, as needed. Nepal, being a country of wide range of traditional and cultural practices, sometimes we might face different situation in the field than expected. In such cases, our priority will be to respect the local norms and culture while carrying out our task.



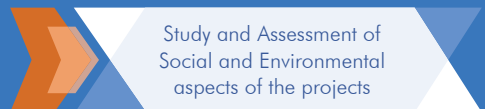
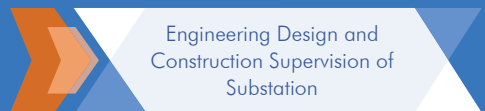
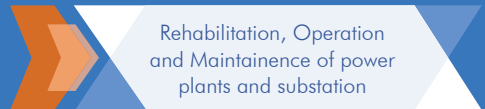
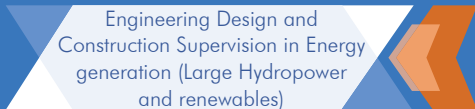
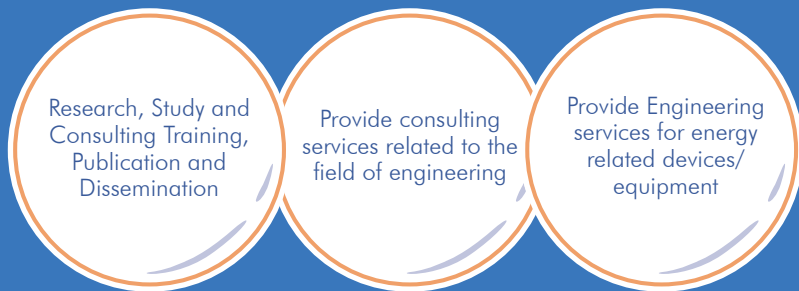
Scope of Services

Memorandum of Association of the Company has set the following scope of services:

(A) Research, Study and Consulting, and Training, Publication and Dissemination on:

- Energy (especially hydropower) generation,
- Transmission line, sub-station design,
- Quality testing of energy related devices/ equipment
- Social and Environmental aspects of hydropower development

(B) Provide consulting services related to the field of engineering.



Workforce

NEC has over a hundred employees on board, with teams of senior professionals, including prominent experts, of international and national repute in their respective fields. These professionals have proven track records of successfully designing and implementing flagship projects of Nepal. In addition to this team of professionals, NEC also has beginner to intermediate level professionals with dedicated technical minds, and an aptitude to groom themselves into senior professionals, who can lead engineering solutions to energy sectors in the future.

Department	Senior Professional	Mid-Career Professional	Early-Career Professional	Total
Engineering -Hydropower	5	3	4	12
Engineering - Civil	-	4	8	12
Engineering -Electrical	2	3	18	23
Engineering - Geotechnical	2	1	3	6
Engineering -Mechanical	-	1	11	12
Engineering - Structural	-	3	11	14
Environmental and Social	1	-	4	5
Geology	1	2	4	7
Survey and Drafting	2	4	9	15
Management and Logistics	-	-	-	27
Total	13	21	72	133

In addition, for short term and specific requirements, we have a roster of Technical Specialists Group (TSG) and International Specialists Team (IST) to backup the core team who provide intermittent inputs which ensures quality performance and excellence in output.

25+ International Resource Pool-
International Experts or NRN

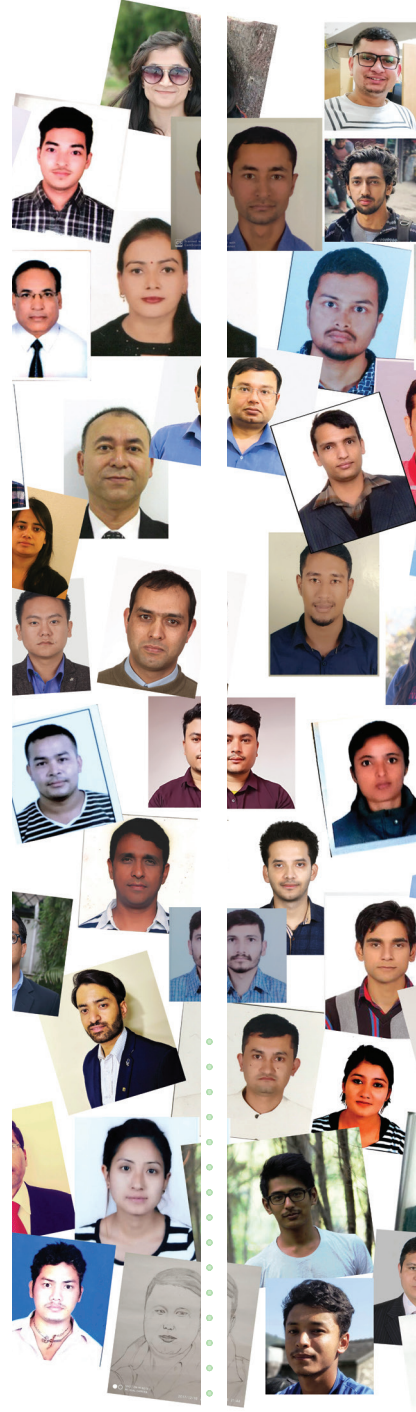
35+ National Resource Pool-
National Experts with International Experiences



MEET THE WORKFORCE



100+ STRONG & STILL GROWING



Completed Projects

1. Study and Analysis of Optimal Distributed Generation for Access to Grid Electricity for all in Five Years with Participation from Local Government

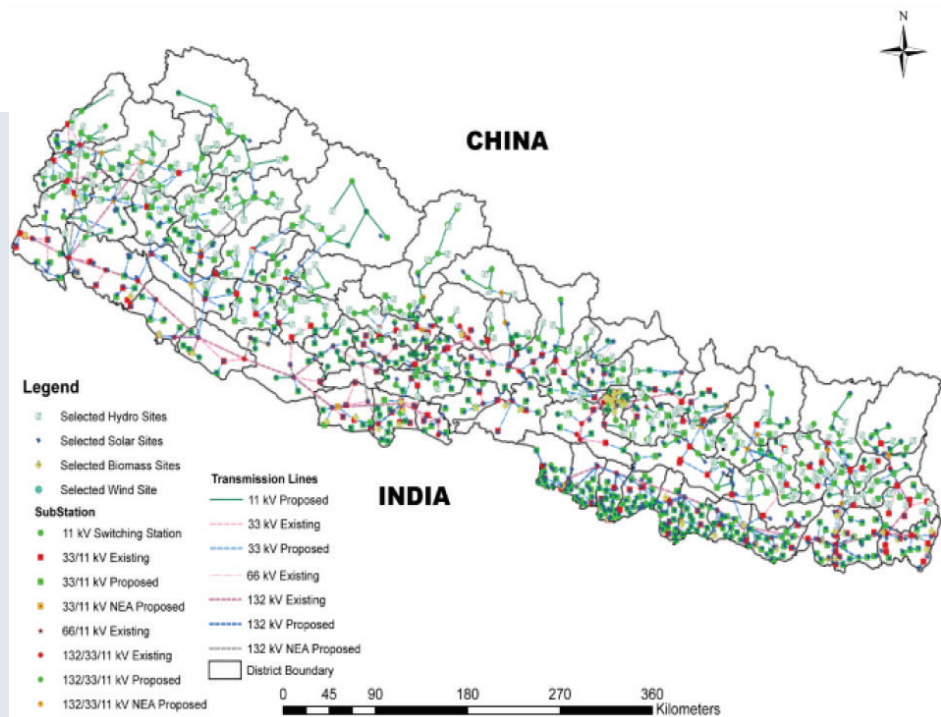
Duration: September 2017 to February 2018

Client: National Planning Commission (NPC) Secretariat

Scope of Service: Optimal Distributed Generation (DG) development in tandem with an optimized distribution network extension pathway to provide access to electricity to all 753 municipalities of Nepal by 2023.

Key Results:

- 694 MW of Distributed Generations (especially hydro and solar) were identified.
- 7,828 km of transmission, sub-transmission and distribution lines were recognized.
- Total of 530, 132/11 kV, 33/11 kV and 11 kV substations/switching stations were spotted.
- Estimated total cost: NPR 148 billion for Distributed Generation & NPR 53.80 billion for Grid Expansion.



2. Comparative Study between Sunkoshi Marin Diversion Multipurpose Project and Sunkoshi Kamala Diversion Multipurpose Project

Duration: December 2018 to March 2019

Client: Department of Water Resources and Irrigation (DWRI), Government of Nepal

Project Highlights

- Cost and benefit assessment of the two competing alternatives
- A comprehensive review of the existing agreements and water treaties between the governments of Nepal and India relevant to the present study
- Identification and assessment of other relevant factors that needs consideration for comparison
- Comparison and ranking of these project after considering the cost/benefit and viability of implementation with regards to technical, social, environmental and geo-political aspects



3. Consultancy Services on Upgradation Design of Existing Bhaktapur-Baneshwor-Patan-Siuchatar 66kV Transmission Line for HTLS Conductor

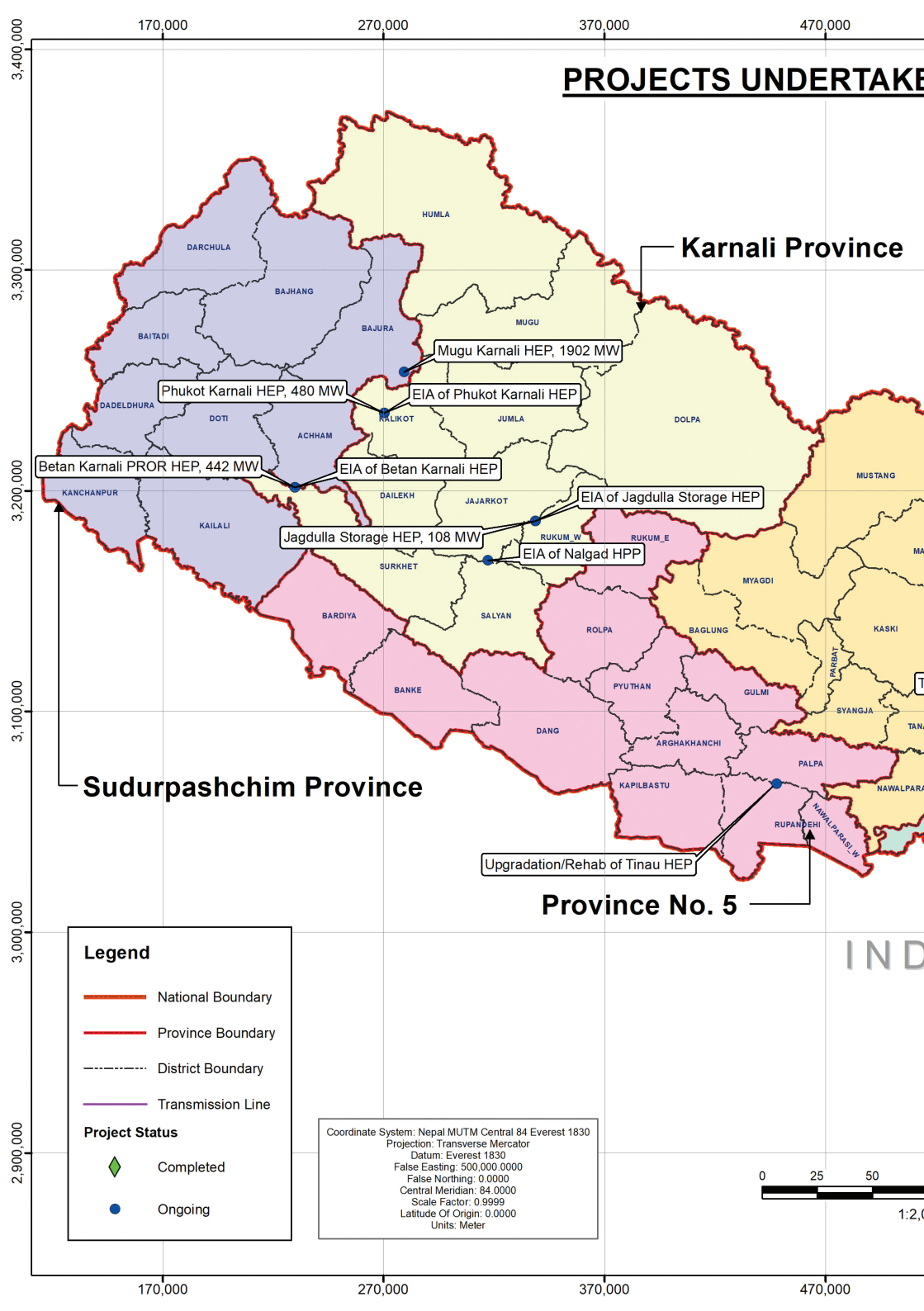
Project Duration: October 2018 to July 2019

Client: Nepal Electricity Authority (NEA)

Project Highlights

- Detail survey of the complete line
- Sag measurement and sag tension analysis for different HTLS conductors
- Techno-economic analysis
- Thorough study of ratings of substation components and recommendation for upgradation of ratings of current transformers, disconnecting switches and circuit breakers
- Recommendation of an installation plan for upgradation works







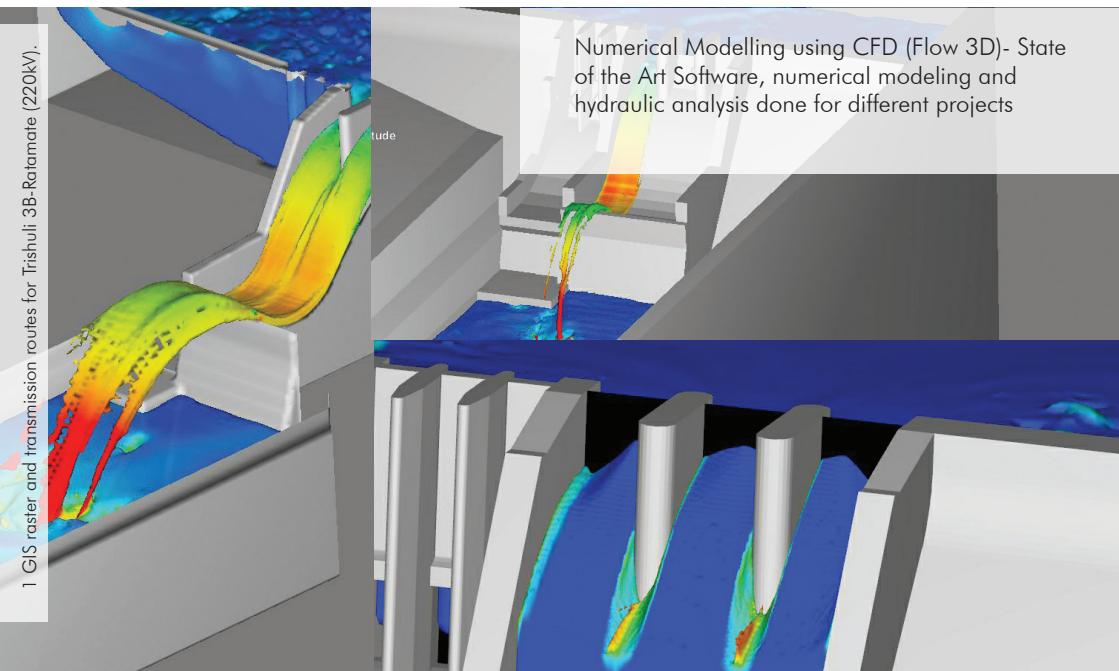
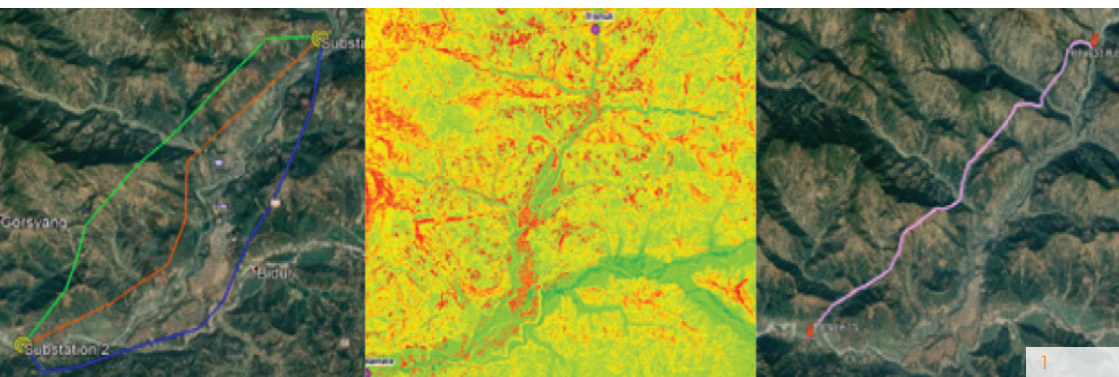
4. Detail Feasibility Study of Trishuli 3B– Ratmate 220 kV Transmission Line Project

Project Duration: November 2018 to September 2019

Client: Nepal Electricity Authority

Project Highlights

- Routing of 220kV Transmission Line Using GIS Tools of Spatial Sciences. The routing methodology provided a much better route than that obtained from the conventional (manual) method of routing in terms of objectivity, router biasedness as well as shorter line length, lesser number of towers, inclusion of special cases such as cross-over with other high voltage lines.
- Detail Survey of the Transmission Line between two Interconnecting Substations
- Transmission Line Design including Transmission Line Tower Spotting and Scheduling along with the BOQ, Cost Estimate, Technical Specifications of the Transmission Lines and associated equipment and structures.
- Line Bay Extension for two circuits at the under-construction 220/132/33kV Trishuli 3B Hub and proposed 400/220/132 kV Ratamate Substation: Substation Drawings, Technical Specifications and Cost Estimate.
- Load Flow Studies and Financial Analysis of the project to evaluate its feasibility.



Ongoing Projects

Detailed Engineering Study of Hydro Electric Projects (HEPs)

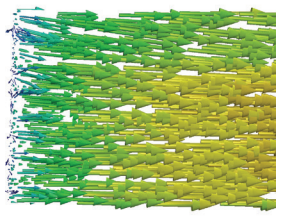
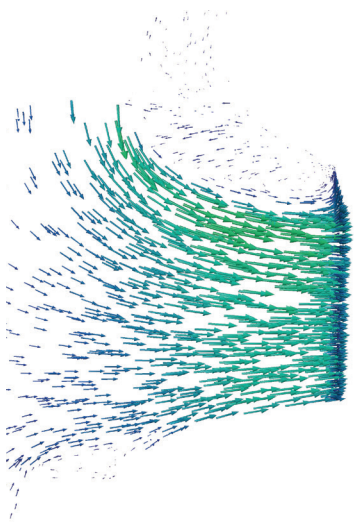
Phukot Karnali PRoR HEP
Client: Vidhyut Utpadan Company Limited
Location: Kalikot district, Karnali Province
Type: Peaking Run-of-River
Design Discharge : 348 m3/s
Dam Height: 109 m (From riverbed)
Power: 474+6 MW
Turbines: 6nos*79 MW+ 2nos*3 MW
Gross Head: 168.62 m
Total energy: 2452 GWh

Betan Karnali PRoR HEP
Client: Betan Karnali Sanchayakarta Hydropower Company Limited
Location: Achham and Surkhet Districts
Type: Peaking Run-of-River
Design Discharge : 535.33 m3/s
Dam Height: 93 m (From riverbed)
Power: 434+8 MW
Turbines: 6nos*72.33 MW+ 2nos*4 MW
Gross Head: 99.95 m
Total energy: 2318 GWh

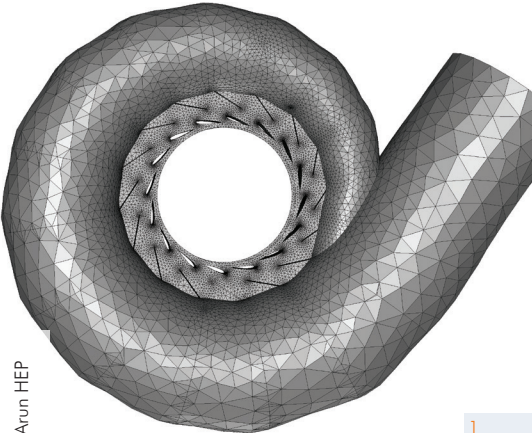
Currently, we are undertaking detailed engineering study of six HEPs ranging from 20.2MW to 1902 MW. The main objectives of these studies are:

- To carry out detailed technical and financial assessment in order to assess the attractiveness of the project for investment and its development,
- To evaluate the project’s viability in terms of its technical, financial, socio-economic and institutional aspects based on detailed field surveys, field and laboratory investigations, engineering analysis, design and financial analysis,
- To carry out relevant baseline investigations, alternative analysis and optimization studies,
- To prepare assessment reports and plans, specially a bankable report meeting all the criteria required for the approval by concerned government authorities of Nepal as well as potential financing partners.

Rolwaling Khola HEP
Client: Upper Tamakoshi Hydropower Limited
Location: Dolakha
Type: Run-of-River
Design Discharge: 11.8 m3/s
Dam: Weir Type
Power: 20.2MW
Turbines: 2 units, 10.1 MW each
Gross Head: 206 m
Total energy: 100GWh



1 Betan intake velocity triangles using ANSYS



1



2



3

Jagadulla PRoR **HEP**

Client: Jagdulla Hydropower Company Limited

Location: Dolpa District

Type: Peaking Run-of-River

Design Discharge : 16.7 m³/s

Dam Height: 22 m (From riverbed)

Power: 107.4 MW

Turbines: 3 units

Gross Head: 789.6 m

Total energy: 635.52 GWh

Mugu Karnali Storage **HEP**

Client: Vidhyut Utpadan Company Limited

Location: Humla, Mugu and Bajura Districts

Type: Storage

Design Discharge : 795.55 m³/s

Dam Height: 275 m (From riverbed)

Power: 1902 MW

Turbines: 10 units, 190 MW each

Gross Head: 285 m

Total energy: 5883.1 GWh

Kimathanka Arun PRoR **HEP**

Client: Vidhyut Utpadan Company Limited

Location: Bhotkhol Gaupalika-2, Sankhwasbha

Type: Peaking Run-of-River

Design Discharge : 143 m³/s

Dam Height: 70m

Power: 450 MW

Turbines: 6 units, 75 MW each

Gross Head: 380 m

Total energy: 2498.9 GWh

Environment, Health, Safety and Social Division (EHSSD)

The scope of EHSSD is to provide consulting, supervision/monitoring, research and capacity building services in the field of environment, public health, safety and socio-economic issues especially to energy sector projects. Currently, we are undertaking the following projects:

- Environmental assessment - Environmental Impact Assessment (EIA), Initial Environmental Examination (IEE)
- Independent review of environmental assessment reports

S.N.	Project Name	Client/Proponent
1	Environmental Impact Study of Phukot Karnali Peaking RoR Hydro Electric Project (HEP)	Vidhyut Utpadan Company Limited (VUCL)
2	EIA of Kimathanka Arun HEP	Vidhyut Utpadan Company Limited (VUCL)
3	Environmental Impact Study of Jagdulla HEP	Jagdulla HEP Company Limited
4	EIA Study of Betan Karnali Peaking RoR HEP	Betan Karnali Sanchayakarta Hydropower Company Limited (BKSHCL)
5	Environmental Study of Kimathanka Arun - Arun Hub 400 kV Double Circuit Transmission Line Project	Rastriya Prasaran Grid Company Limited
6	IEE Study of Helipad (3.09 MW) of 25MWp Grid Tied Solar Farms	Nepal Electricity Authority, Grid Solar and Energy Efficiency Project
7	IEE Study of Mewa-Change 132 kV Transmission Line Project	Rastriya Prasaran Grid Company Limited
8	Review of EIA reports of Nalgad Hydropower Project	Nalgad Hydropower Company Limited



Transmission Line and Substation

Design Check and Site Supervision Consultancy
Services for 400 kV Dhalkebar Substation

Effective Start Date: February 2018

Client: Nepal Electricity Authority

Project Highlights

- First 400 kV Substation in Nepal
- Installation of 3*315 MVA, Three Phase, 400/220/33 kV Autotransformers
- Installation of 1*80 MVAR, 420 kV Reactor
- Connection point of cross border transmission line with India

Design Check and Site Supervision Consultancy
Services for 400 kV Inaruwa and Hetauda Substation

Effective Start Date: February 2019

Client: Nepal Electricity Authority

Synopsis:

This project comprises of 400 kV substation construction in two locations viz. Inaruwa and Hetauda. NEC is working as owner's engineer for both the substations and has completed 65 % of Design Review works. Construction Supervision works is going on parallel in both the locations.

Detailed Engineering and Environmental study of
Kimathanka Arun- Arun Hub 400kV Double Circuit
Transmission Line Project

Project Duration: December 2018 to April 2020

Client: Rastriya Prasaran Grid Company Limited

Project Highlights

- Project Inception and Design Basis Memorandum
- Detail Survey of Transmission Line
- Environment and Social Assessment
- Detail design of 400 kV Double Circuit Transmission Line
- Detail design of 400/132 kV GIS substation
- Project Cost Estimate and Economic/Financial Analysis
- Preparation of construction planning / schedule, Bidding Documents of Transmission Line and Substation



Construction Supervision of 25 MWp Grid Tied Solar Farms Project

Project Duration: October 2019 to April 2020

Client: Nepal Electricity Authority

Project Highlights

- Largest Solar Power Project of Nepal
- Review of design documents, construction drawings, schedules, acceptance test proposal, grid impact study, grid connection proposal, detail substation design including SCADA and Communication, O&M Manual prepared by contractor and recommend the approval of the same for the client
- Review, approve and monitor Quality Assurance Plan (QAP) of the Contractor and installation works at the site
- Witness energy output test to verify annual acceptable performance up to 5 years of defect liability period of EPC Contract.

Consulting Services of Tender Document Review and Recommendations, Assistance in Tender Evaluation, Design Review and Erection and Commission Supervision under Rehabilitation and Modernization of Trishuli HEP

Project Duration: April 2019

Client: Medium Generation Operation and Maintenance Department, Nepal Electricity Authority

Project Highlights

- Review of Tender Document prepared by Generation Directorate, NEA
- Prepare Tender Documents review report
- Assistance in evaluation process of tender
- Design review and recommendations of design and drawings submitted by main contractor
- Erection and Commission Supervision of rehabilitation works
- Verification of as built drawings and operation and maintenance submitted by main contractor

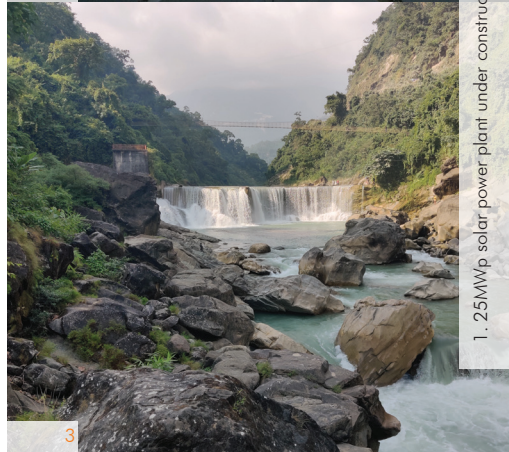
Detail Feasibility Study of Upgradation/ Rehabilitation of Tinau Hydropower Plant

Project Duration: Dec 2018

Client: Nepal Electricity Authority

Project Highlights

- First Underground powerhouse of Nepal
- Contract period 12 Months
- Upgradation and Rehabilitation of Tinau Hydropower Plant.



1. 25MWp solar power plant under construction at Forebay, Trishuli Khola. 2. Turbine floor of Trishuli HEP. 3. Dam site of Tinau Hydropower Plant



Topographic Survey of Kusaha - Biratnagar 132 kV Transmission Line Project

Project Duration: September 10, 2019-
October 20, 2019

Client: Nepal Electricity Authority, Kharipati,
Bhaktapur

Project Highlights

- Drone Survey has been carried out as part of the detail survey encompassing the entire area and the data obtained from it has been used to create Digital Elevation Model (DEM), Digital Terrain Model (DTM) and consequently, the detail topographic map
- Total 54 control points have been established throughout the project area through DGPS for the purpose of control station/point establishment for further survey works.
- In order to georeference the drone images, 89 benchmarks have been established and DGPS survey has been carried out in each of them

Consulting Services of Technical Compliance Monitoring of Arun-III Hydroelectric Project

Project Duration: November 2019

Client: Office of the Investment Board

Project Highlights

- Review, Monitor and Report
 - Construction of headworks and catchment management arrangements
 - Headworks excavation and protection, slope stabilization, tunnel excavation and supports

Detailed feasibility Study of Chandrapur- Sukdev Chowk 132 kV Transmission Line Project

Project Duration: October 2019 to April 2020

Client: Nepal Electricity Authority

Project Highlights

- GIS based routing technology for transmission line alignment
- Detail design of 132 kV Double Circuit Transmission Line
- Detail design of 132/33 kV distribution substation
- Preparation of BoQ, detailed cost estimate and financial analysis of the project
- Preparation of construction planning / schedule of Transmission Line and Substation

Study of Kusaha- Biratnagar 132 kV Transmission Line Project ,Verification of line route survey and tower design review of 33 kV double circuit (D/C) Transmission Line

Effective Start Date: September 2019

Client: Nepal Electricity Authority

Project Highlights

- Verification and recommendation of the transmission line route for 33 kV Double Circuit Transmission Line from under construction Biratnagar Substation to Rani Substation and Tanki Substation, which is approximately 22 km in total.
- Verification and recommendation of the tower spotting and tower scheduling for both sections of 33 kV Transmission Line using lattice towers.
- NEC team has submitted a report incorporating possible solutions to the difficult sections along with tower locations and has proposed a different tower family of reduced span limits which could be a practical solution for compact and limited corridor.

Research and Development

Electric Vehicles



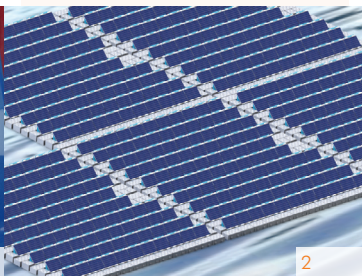
Initiative on the data observation and analysis of battery discharge patterns for different Electric Vehicles and international co-ordination on the research work for locating Electric vehicles charging station around Kathmandu Valley.

Design of 400kV Lattice Tower

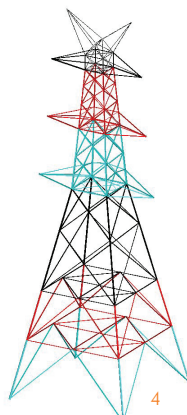
NEA Engineering Company Ltd. is currently engaged in design of 400kV Double Circuit Transmission Line Towers, a complete tower family, in coordination with Rastriya Prasaran Grid Company Ltd. and Trucon Power Engineers Pvt. Ltd, India.

As a part of first phase, two types of towers – “DB” and “DD” type towers are being designed. The scope of design includes finalization of design parameters, climatic conditions, loading diagrams, modeling in PLS-TOWER software, foundation design, preparation of Bill of Materials and finally the structural drawing and workshop drawing of towers.

Adaptation of Floating Solar on Highly Fluctuating Water Level Areas



Innovation on floating solar system suitable for application on high water level fluctuation areas with the objective to capitalize on the unused water body surfaces to develop highly efficient systems and counteract high evaporation rate during summer.



The designed towers are to be used in 400kV Transmission Lines for elevation level of up to 2400m and are first of its kind, being designed in Nepal.

Route Optimization System for Transmission Line (ROST)



ROST, a transmission line routing system, given a set of start and end coordinates of the proposed transmission line, calculates the most economic path – based on the type of land, elevation of the places, placement of objects – between the two given points. Both the cost of running the line through an area and placement for the foundation of the tower are taken into consideration while calculating the least cost path. This system has been already used and has given reasonable paths for the projects it was used in.

Memorandum of Understanding with Different Institutions

Building Solutions Together

Industry-Academic Energy



Kathmandu
University



Tribhuvan
University

Nepalese Diaspora

Engineer's Solidarity for Nepal's Development Inc
(ESFNDI Australia)



Society of Nepalese Engineers in UK

Registered UK Charity no. 1177501

International Cooperation

HATCH

HATCH Ltd., Canada



Power China Guiyang Engineering
Corporation Ltd. (PGEC China)



NHPC Limited, India



MWH Global, USA

Our Clients



नेपाल विद्युत प्राधिकरण
Nepal Electricity Authority



राष्ट्रिय प्रसारण ग्रिड कम्पनी लिमिटेड
Rastriya Prasaran Grid Company Limited



विद्युत उत्पादन कम्पनी लिमिटेड
Vidhyut Utpadan Company Limited



Government of Nepal
National Planning
Commission



Government of Nepal
Ministry of Energy, Water Resources and Irrigation



Government of Nepal
INVESTMENT BOARD NEPAL
PARTNERSHIP FOR ECONOMIC TRANSFORMATION



बेतन कर्णाली सञ्चयकर्ता हाइड्रोपावर कं. लि.
Betan Karnali Sanchayakarta Hydropower Co. Ltd.



Jagadulla Hydropower Company Limited



Upper Tamakoshi Hydropower Limited
अपर तामाकोशी हाईड्रोपावर लिमिटेड

..... to be continued

What We Say

"Even a thousand mile journey is made with a first step."

The year 2020 marks the third year of "engineering the energy sector" by NEA Engineering Company. Having registered in 2017 as an engineering consulting company with the Company Registrar and obtained permission for business from the Tax Offices in fiscal year 2017/18 (2074-75 BS), and from its first board meeting on 11th May 2017 that elected its Chairperson and appointed its first Managing Director, the one-man company that gathered momentum after having its full time managing director from 2074-04-22 (6th Aug 2017) and got signed its first consulting contract with Honorable National Planning Commission within two months. The whole Master Plan study of pan-Nepal distribution expansion with distributed generation for all 753 municipalities was completed to great satisfaction and pride within the stipulated 17 weeks, recruiting necessary manpower, equipment and working space simultaneously.

Emboldened by the first success, the company went from strength to strength, from designing large hydropower projects such as Phukot Karnali(initially 426 MW later upgraded to 480 MW) and Betan Karnali(688 MW later downgraded to 442 MW) in the west and 4 other projects totaling more than 3400 MW of capacity including Mugu Karnali Storage(1902 MW). Growing from half a dozen staff in September 2017, the company strength reached 70+ in its first year (2074/75), crossed 100+ in second year (2075/76) and presently employs 150+, while enlisting very experienced and competent man-power available within Nepal, including many who had returned from jobs abroad preferring to work in own country.

During my journey of "do it yourself" in Nepalese energy sector since the 1990s ranged from our own design, software and commissioning of mini-SCADA in Marsyangdi and national load dispatching center in 1995 or the recommissioning of Kulekhani I and Kulekhani II power plant in 1994 or the recovery of Trishuli powerhouse from submergence in 1998 on



our own efforts or the hallmark of Nepalese Hydropower engineering, Chilime power project, it has always been a dream, a shared dream with similar minds in this sector, to build a capable and competent engineering institution of local texture and break the dependency on foreign agencies for the whole range of small to the largest energy projects in Nepal. NEA Engineering has become the realization of the shared dreams of all the professionals working in energy sector. The expectation from NEC is therefore equally challenging and huge.

We, as a team, have been striving to sustain this expectation by diligently applying the engineering knowledge, cultivating local knowledge and capacity and fostering cooperation and learning from experts internationally and being competitive and lean as the private sector spirit while observing all codes and procedures of accountability and probity of the public sector. The journey, however short, has been no less eventful. By recruiting the best and competent, managing with modern IT technologies for productivity, investing in software, hardware and training, the company is trying to be what its vision is -an epitome of the Nepalese engineering institutions spearheading and grooming the indigenous engineering efforts. NEC is consciously supporting local consulting companies allocating jobs that are best done by specialized units and steering clear of the small and midsize projects for which Nepalese private sector has built enough competence.

At the same time, NEC has sprung into the field whenever called upon by the government sector, be it NEA for rehabilitation of Trishuli, Tinau and Gandak hydropower projects or workshop building or be it Department of Irrigation for Sikta and Sunkoshi-Marine projects. It is one of our motto and mission, to provide quality, efficient and QUICK engineering solutions wherever we are called to.

Till date, NEC has worked in distribution planning, sub transmission level redesign, HV transmission line and substation design, construction supervision and review. NEC has worked with nine client companies till date all of which have been in public sector. A total of 25 project contracts till date have spread from Inaruwa and Kimathanka in the east to Betan Karnali and Mugu Karnali in the west. The turnover has increased from around 100 million in the first year to more than 300 million in the second year and is expected to cross half a billion in the third year. Having gained strength and competitiveness, NEC is now venturing out to private sector large projects and even abroad to deepen its experience base.

NEC has made innovation and research one of its primary focus area from the beginning. Innovative methods were used in distribution planning, and it was coined as 'SUDIGGAA' (Sustainable Distributed Generation and Grid Access to All). Another innovative method is developed and used in GIS-Intelligence guided transmission line route selection. Similar research is going on in designing indigenous Floating Solar Plant while study continues on economic charging multiplex compact for e-mobility. The story of NEC and its people is in resonance with its spirit, "Together we excel for the betterment of self, company and the nation".

I am confident that with all the support from my team and backing of our stakeholders we shall march ahead with positive attitude establishing this company at the forefront of providing engineering solutions to the energy sector, whilst promoting research and innovation, and together we can undoubtedly achieve what we strive for. Yes, NEC has strived and NEC will excel.



Hitendra Dev Shakya
Managing Director

