NUPCHE LIKHU HYDROPOWER PROJECT (57.5 MW)

Ramechhap, Nepal

Project Progress Report

Baisakh to Ashad, 2082

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Executive Summary

This Progress Report has been prepared to provide an update on the progress of the Nupche Likhu Hydropower Project (NLHP), Ramechhap (57.5 MW). It includes details about project activities and progress made from **Baisakh to Ashad, 2082.** The key achievements during this period are as follows:

A. Forest and EIA/IEE Related Works

1. Completion of tree cutting and stamping in Transmission line alignment along ROW. Also, tree plantation is in progress.
2. Agreement between the landowner along the Transmission Line alignment has been 98% completed.
3. Frequent Site visit from GCAP representative and providing training for Army personals and the Contractors representative at site for the protection of wildlife as well as the safety related trainings.
4. Implementation and follow-up of environmental and social management plan throughout the construction phase to achieve good environment.
5. Under the Community Support Program, financial support was extended to five government schools in Chuchure-1 of Gokulganga Rural Municipality, one health post, and two sports clubs. Furthermore, assistance was provided for the construction of a Gumba and a community hall (Aama Samuha), as well as the supply of medical equipment to the health post in Kyama, Gokulganga Rural Municipality. In addition, gabion retaining walls were constructed to protect a government school from landslide at Gumdel, and fencing works were carried out for the Gumdel Drinking Water Supply Project.

B. Preliminary/Preparatory Works

1. The road strengthening and routine maintenance of project's access road are ongoing for this season.

C. Civil Works

As of this quarter, **91%** of the physical progress has been achieved.

C.1. Underground Works

1. The total Tunnel of **7,474.172 m** (**98.27%**) has been completed out of **7,605.972 m**;
2. 3,657.38m (**61.16%**) of tunnel finishing works (shotcrete lining) out of 5,979.92m has been completed.
3. 1,312.0m (**21.94%**) RCC Invert concrete lining has been completed at HRT till this period.

C.2. Surface Works

C.2.1. Nupche Headworks

1. As of this quarter, **89%** of the physical progress has been achieved.
2. Rebar, Formwork and M25 RCC works at Settling Basin (panel-01) is completed.
3. M25 concrete works in settling basin flushing is in progress.
4. Rebar, Formwork and RCC works for staircase at headworks area is in progress.
5. Structure protection works with boulder laying upstream of intake is completed.

C.2.2. Nupche Headrace Pipe

1. As of this quarter, **99.62%** of the physical progress has been achieved.
2. Rebar, Formwork and concrete works of AB 1, AB2, AB3, AB4, AB5, AB6, AB7 and AB8 is completed.
3. Kholsi casing works at AB 4 is completed.
4. Manhole works at AB 3 D/S is completed.
5. Kholsi crossing works at AB 8 is completed.
6. Backfilling works from AB3 to AB4 and AB 6 to AB 8 is in progress.

C.2.3. Likhu Headworks

1. As of this quarter, **99.52%** of the physical progress has been achieved.
2. Desander protection works on River side is in progress.
3. Construction of control building is in progress.
4. All River training and protection works is in progress.
5. Kholsi protection works has been completed.

C.2.4. Likhu Headrace Pipe

1. As of this quarter, **99.62%** of the physical progress has been achieved.
2. Kholsi protection works at AB 19 and AB17 are completed.
3. Backfilling works in HRP Alignment is in progress.
4. Gabion wall for protection of knife gate valve is completed.

C.2.5. Penstock Pipe

1. As of this quarter, **84.48%** of the physical progress has been achieved.
2. Excavation of the Penstock alignment trench from AB2 to AB3 is almost completed.
3. RCC works of AB2, AB 3, AB 4 AB 5, AB 6, AB 7, AB 8 AB 9, AB10, AB11, AB 12, AB 13, AB 14, AB 15, AB 16, AB17, AB18, AB 19, AB20, AB 21, AB22, AB23, AB24, AB25 and AB26 have been completed.
4. Backfilling works of Penstock Alignment is in progress.
5. Manhole works are in progress.
6. Kholsi protection works at AB21 is in progress.

C.2.6. Powerhouse and Associated Structures

1. As of this quarter, **95.42%** of the physical progress has been achieved.
2. First stage concreting works of Switchyard has been completed.
3. Construction of firefighting tank is completed and protection work is ongoing.
4. Shotcrete works for switchyard protection is completed.
5. Shotcrete works for powerhouse protection is in progress.
6. Kholsi protection works at old switchyard is in progress.
7. Preparation for finishing of control room (seepage control, water supply and sanitation, railing and skirting) is in progress.
8. Pipe fitting and concrete works at penstock tunnel and vertical tunnel are in progress.

D. Electromechanical (EM) Work

1. As of this quarter, **80%** of the physical progress has been achieved.
2. Transportation of Runner and all three MIV has been completed.
3. Installation of MIV is in progress.
4. Transportation of Turbine housing is in progress.
5. Cooling water system pumps, Heat exchanger, return line duplex filter installation, pipeline fabrication and fixing completed.
6. Vertical rise cable tray fabrication and fixing, CWS foundation embedment frame fabrication and fixing at respective location, Switchyard ACBD and BMK's base frame fabrication and fixing at respective location has been completed.
7. Switchyard towers and equipment's structure fasteners tightening and alignment and busbar formation has been completed.
8. Cable tray support fixing and welding at Powerhouse, unit and machine center line marking is completed.

9. MV power cable laying, dressing, glanding and termination work has been initiated.

E. Hydro mechanical (HM) Works

1. As of this quarter, **89%** of the physical progress has been achieved.
2. **100%** of installation of embedded parts and gate frames at both Likhu and Nupche HWs are completed and gate frames at Likhu Headworks are ongoing.
3. **83%** of works has been completed along Nupche HRP and **99%** of works has been completed along Likhu HRP.
4. **50.21 %** of erection of pipe along Vertical Shaft and **64.32%** along Horizontal Shaft has been completed.
5. **84.48%** of erection of pipe along penstock alignment are completed.

F. Transmission Line

1. As of this quarter, **83%** of the physical progress has been achieved.
2. Approx **98%** of tower material has been delivered to site.
3. **95.51%** of Tower foundation concreting has been completed.
4. **54.49%** of Tower Erection work has been completed.
5. 1.03 km **(4.29%)** out of 24 km of stringing works has been completed.

G. Planning, Governance and Other Works

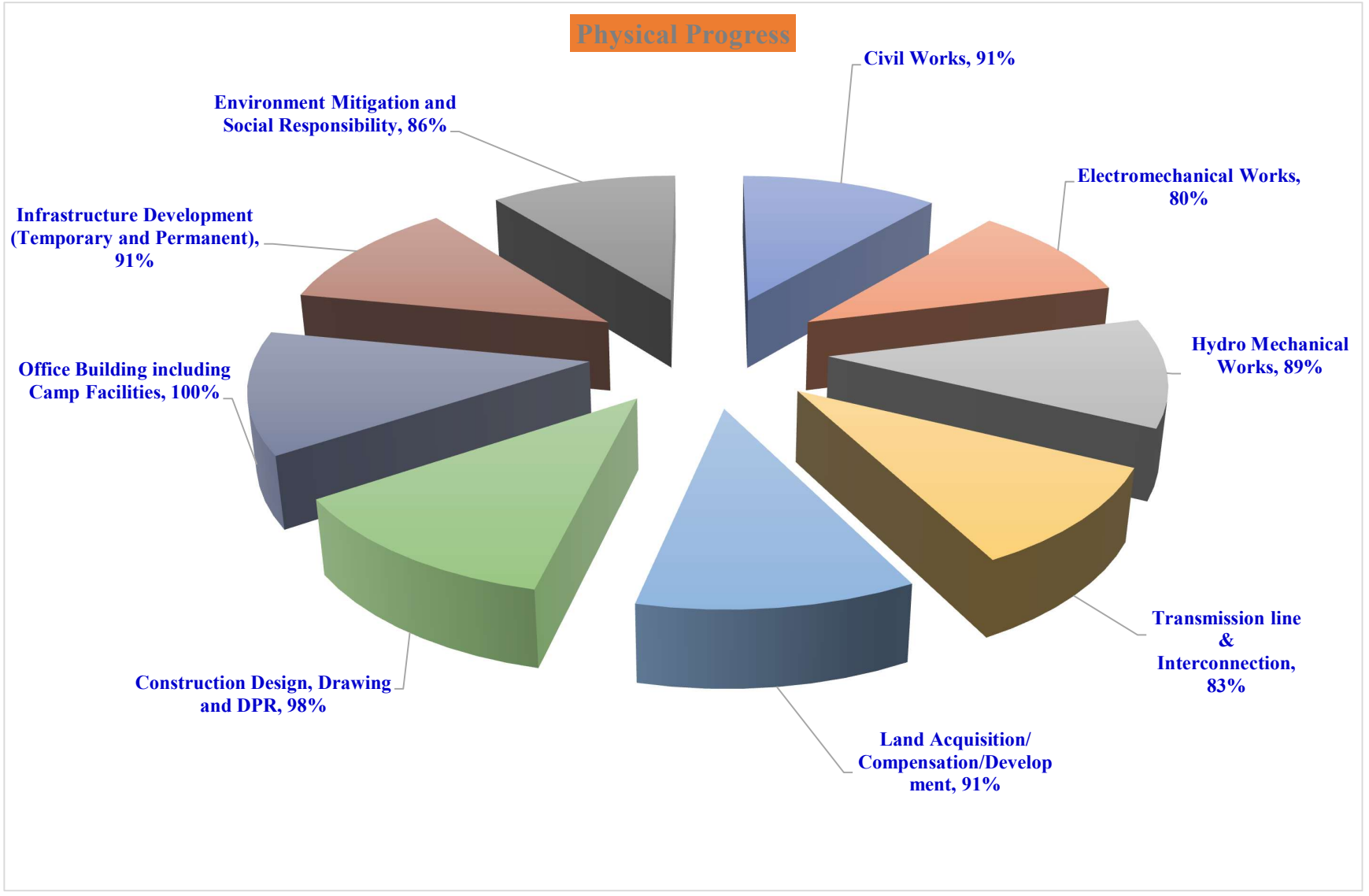
1. Investment in nearby small and other large projects are in progress.
2. Development and Implementation of Strategy to increase Productivity has been effectively done.
3. Documents for approval IPO for the public has been submitted to Securities Board of Nepal (SEBON).
4. The optimum productivity plan for the monsoon period has been finalized in coordination with all the involved contractors.

H. Any Bottlenecks

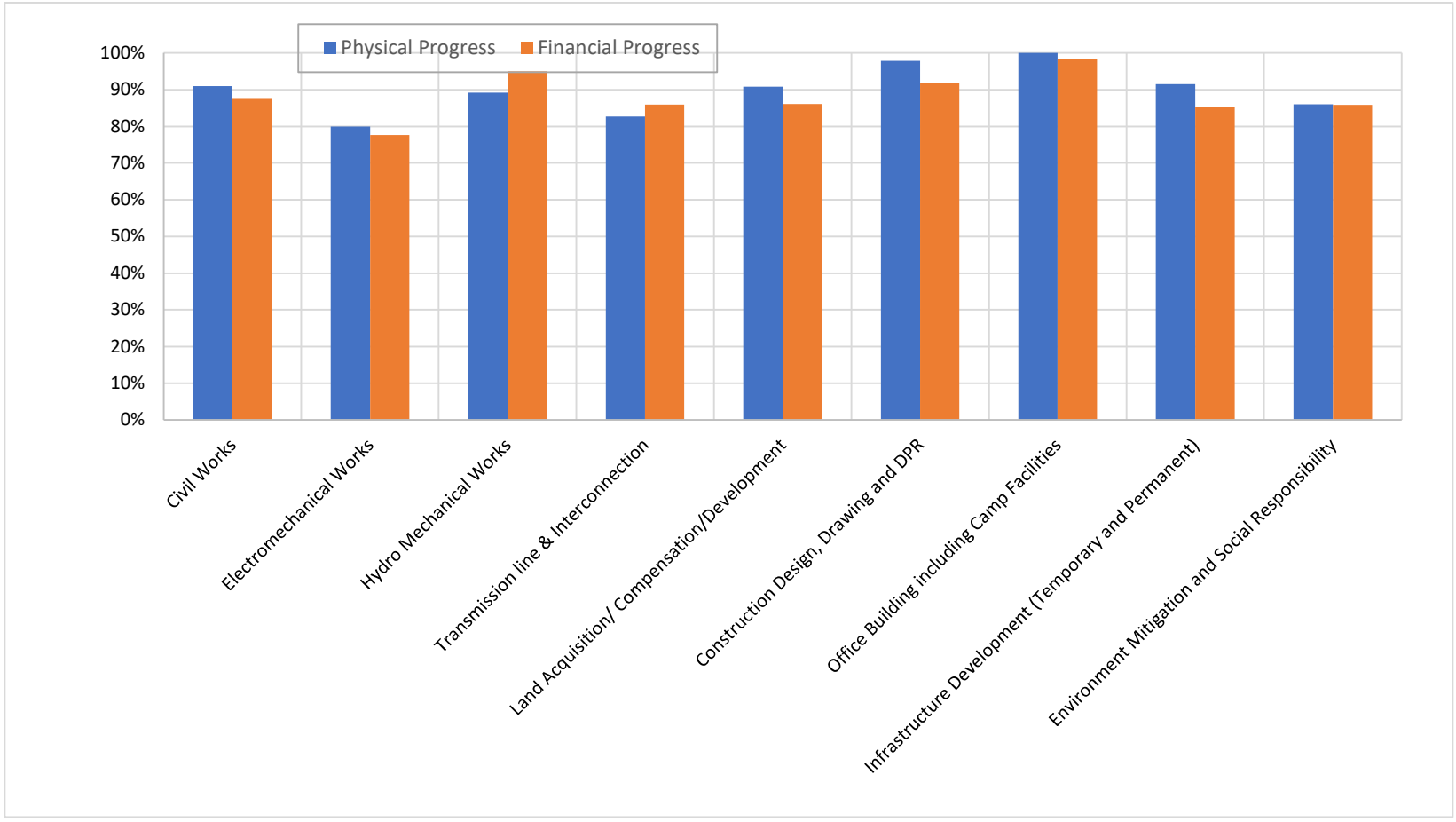
1. Breakthrough of the Main Headrace Tunnel and it's finishing.
2. Transportation of Major EM- Equipment along with their erection.
3. Completion of VT/PT Pipe Erection.

I. Financial and Physical Progress

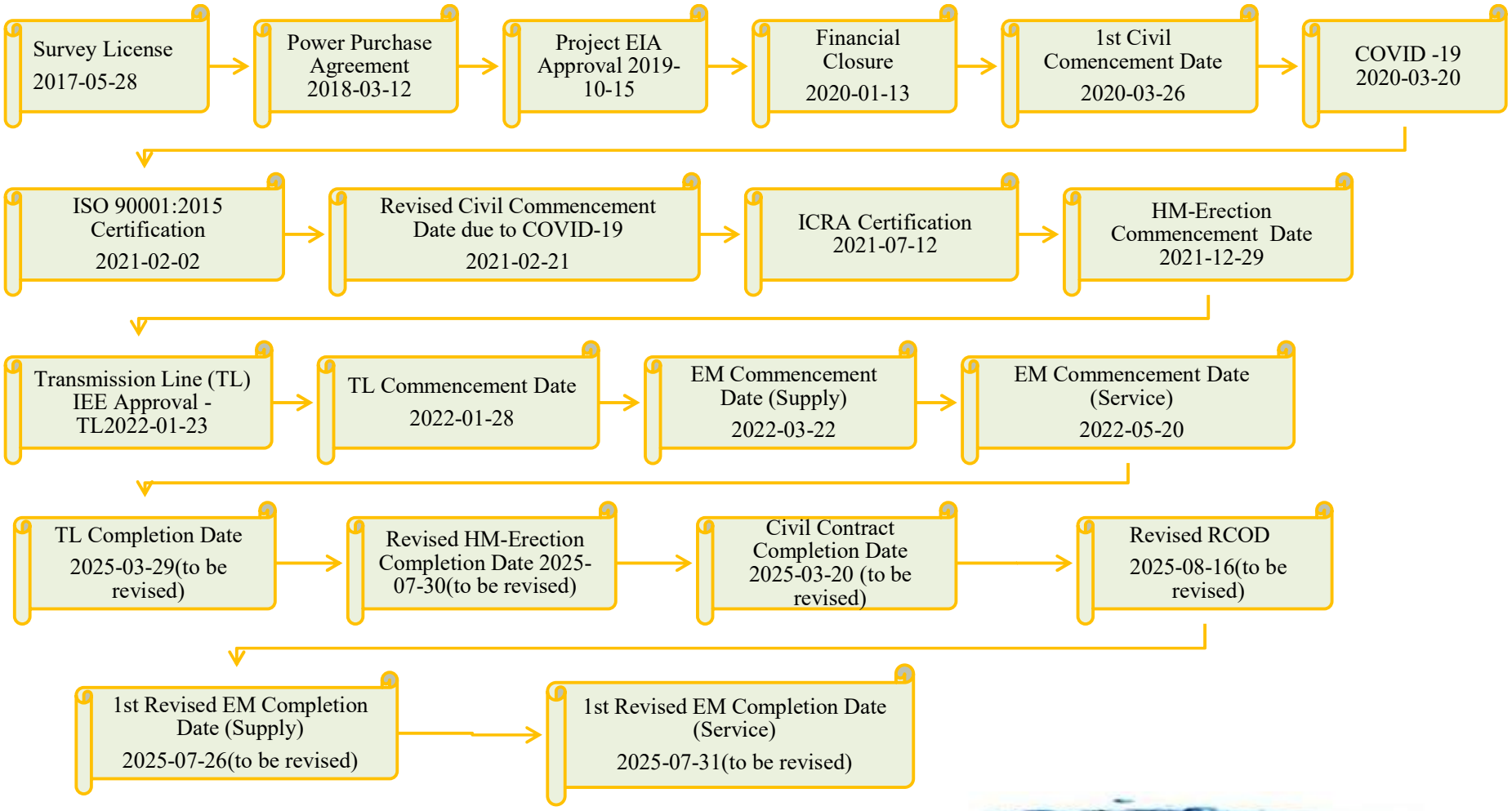
1. Till the date **85.58%** of the budget has been utilized and about **88%** of the overall physical progress has been achieved.


Physical Progress
Civil Works, 91%
Electromechanical Works, 80%
Hydro Mechanical Works, 89%
Transmission line & Interconnection, 83%
Land Acquisition/ Compensation/Development, 91%
Construction Design, Drawing and DPR, 98%
Office Building including Camp Facilities, 100%
Infrastructure Development (Temporary and Permanent), 91%
Environment Mitigation and Social Responsibility, 86%

Physical Vs Financial Progress.



J. Revised NLHP Project's Major Timeline



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Section A: About the Project

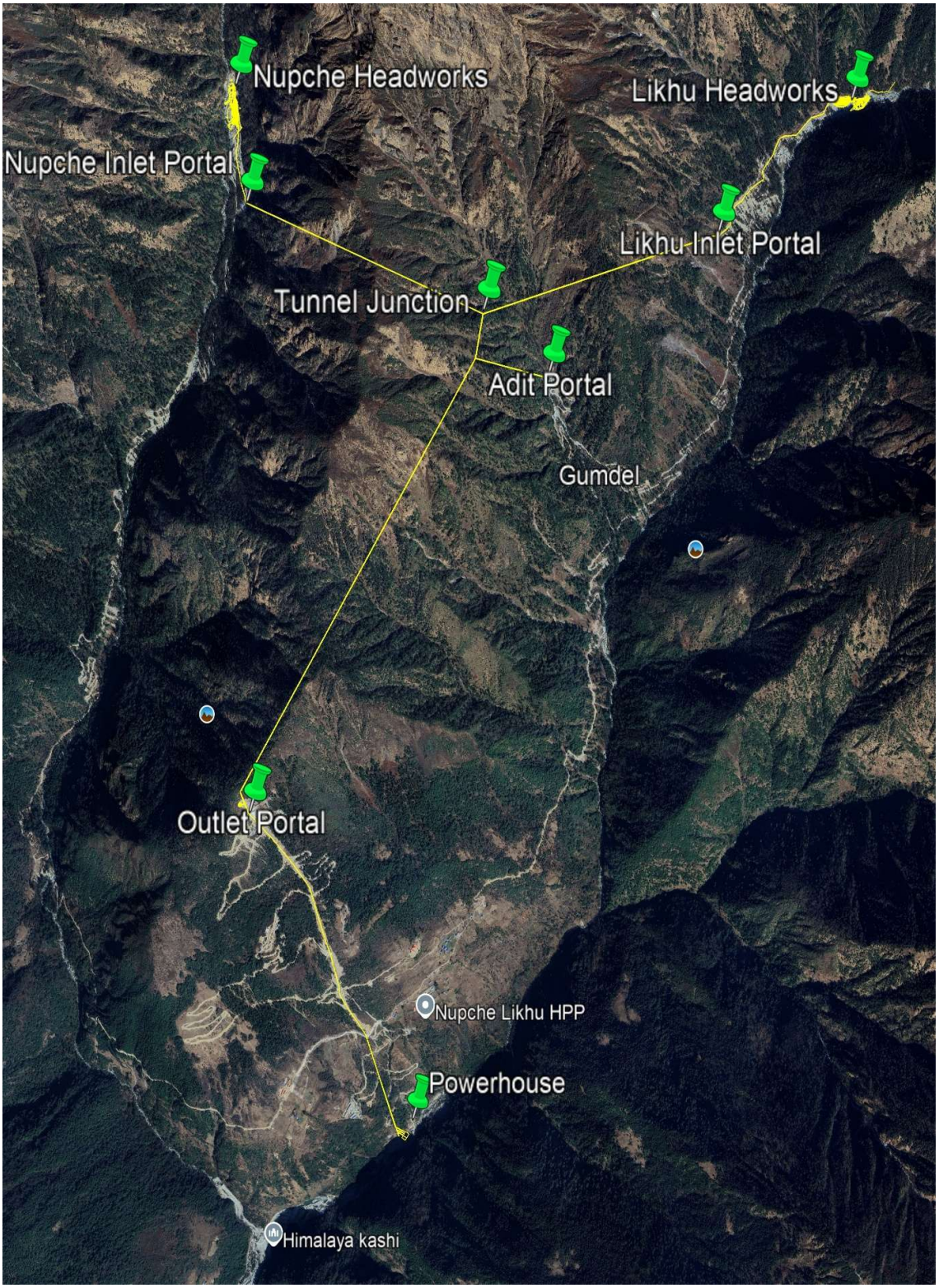


Fig: General Arrangement of the Project

1. Introduction

1.1 Background

Vision Energy & Power Ltd (VEPL) is committed to developing the 57.5 MW Nupche Likhu Hydropower Project in the Ramechhap District by utilizing local, technical, managerial, and financial expertise. The company is dedicated to supplying power to the National Grid to meet domestic energy demands. This project is designed as a run-of-river (RoR) hydropower initiative.

1.2 About the Project

The proposed Nupche Likhu Hydropower Project is situated in Umakunda Rural Municipality, Ward No.: -1 of Ramechhap District, Nepal. The project utilizes water sourced from the snow-fed Nupche and Likhu rivers, originating in the high mountainous and hilly regions. The intake for the project is positioned north of Lahachhewar Village on the left bank of the Nupche Khola, with a weir crest elevation of 3,338 m above mean sea level (amsl), and on the right bank of the Likhu Khola, also with a weir crest elevation of 3,338 m amsl. The powerhouse is located on the right bank of the Likhu Khola, with the turbine centerline at 2,332.35 m amsl. The project has an estimated gross head of 1,005.65 meters and a design discharge of 7.11 m^3/sec.

1.3 Location & Access:

The project can be access from Kathmandu through an existing all-weather road up to Manthali (131 km) or 94 km road from Bardibas. After Manthali, following about 125 km partly stone paved earthen road reaches up to Kyama, Gumdel VDC. Furthermore, from Kyama an access road has been reached near to Kongematar village, the proposed Powerhouse site, Lahachhewar village which is also the residential area for the project employees, Outlet/Surge Shaft, Adit Tunnel, Likhu Headworks and Nupche Headworks.

1.4 Main Financial Features of the Project

a) Total project cost of the project: NRs.10,983,640,292.00 and total cost per MW = NRs. 197,019 thousand.
b) Internal Rate of Return (IRR): 17.50 %, Equity Internal Rate of Return (EIRR): 27.57%
c) Simple Payback Period: 4.75 Years; Discounted Payback Period: 7.68 years.
d) High Energy per MW (6.63 GWh p.a.), Dry Energy 36.61% and Wet Energy 63.29%
e) Income Per MW: is NPR 4.07 Crore.

f) The Project has high head. It ensures cost efficiency and high energy.

g) Professional, Transparent and Responsible Management.

h) Aims to benefit Small and medium Investors too.

i) Focused on high Return on Investment and high value in secondary market.

1.5 Salient Features of the Project

S.N.	Particulars	Remarks
1.	**General**	
	Name of the Project	Nupche Likhu Hydropower Project
	Type of the Project	Snow fed Run-off River Hydropower Project
2.	**Location**	
	Zone/ Development Region	Janakpur Zone/Central Development Region
	District	Ramechhap
	Project Location	Umakunda Rural Municipality, (Gumdel VDC)
	River	Nupche Khola and Likhu Khola
	License Boundary	
	Longitude	86°26'30" E - 86°30'30" E
	Latitude	27°40'37" N - 27°43'43" N
3.	**Hydrology**	
	Catchment Area at Headworks	150 Km^2 (Nupche 82km^2&Likhu 68 km^2)
	Design Discharge (Q 45 %)	3.89 m^3/s+ 3.22 m^3/s (Nupche & Likhu) = 7.11m^3/s
4.	**Nupche & Likhu- Headworks**	
	Weir	
	Type	Boulder line weir
	Bed Load Sluice	
	Type	Bed Load
	Intake	
	Type	Orifice, Side Intake
	Gravel Trap	
	Type	Single, Dufour
	Settling Basin	
	Type	Double Bay Dufour Type
5.	**Headrace Pipe**	
	Headrace Pipe	421.35m & 1,053.12m (Nupche & Likhu)
6.	**Tunnel Length**	
	Total Length	7,605.972 m
	Tunnel Size	3.2 m x 3.8m (Excavation Size)
7.	**Surge Tank**	
	Type	Surface, Circular
8.	**Penstock Pipe Length**	
	Total Steel Penstock Pipe	2,395.3 m
9.	**Power House**	
	Type	Surface
10.	**Turbine**	

	Type	Horizontal Pelton
	Number of units	3
	Rated Output Capacity per unit	20.26 MW
11.	**Generator**	
	Type	Solid State, PID Governor
	Number of units	3
	Rated Output Capacity	22.55 MVA
	Excitation System	Brushless Type
12.	**Transformer**	
	Type	Outdoor, Oil immersed, Three Phase
	Rated Capacity	23 MVA
	Number of Units	3
13.	**Tail-Race Canal**	
	Type	Box Culvert
14.	**Transmission Line & Grid**	24 km 132 kV Double circuit line up to National grid at 132 kV switchyard of NEA Hub at Garjyang Substation, Ramechhap district.
15.	**Power and Energy**	
	Gross Head	1005.65m
	Net Head at Full Flow	968.33 m
	Installed Capacity	57.5 MW
	Generated Energy per Annum	139.757 GWh, 36.61% (Dry) and 241.978 GWh, 63.39% (Wet) **Total: 381.735 GWh**
16.	**Project Road to HW & PH**	38.90 km
17.	**Approximate Cost of Project**	1,130million (Revised)
18.	**Required Commercial Operation Date (RCOD)**	2082/04/31 BS (To be Revised) 2025/08/16 AD

1.6 Investment Module

The investment in Promoters Share has been closed from Ashwin End 2075.

2. Human Resources and Good Governance

2.1 Organization Chart

The organization structure of Nupche Likhu Hydropower Project has been prepared considering Construction, Operation & Maintenance phases of the Project. The detained organization chart is presented in the official website of the company i.e. www.veplinfo.com.

2.2 Good Governance

Nupche-Likhu Hydropower Project has proposed Performance Based Incentive program for its employee. The key performance area (KPA) and Key performance index (KPI) is developed for whole project period. Based on the developed KPI the performance evaluation mechanism is developed. Further,

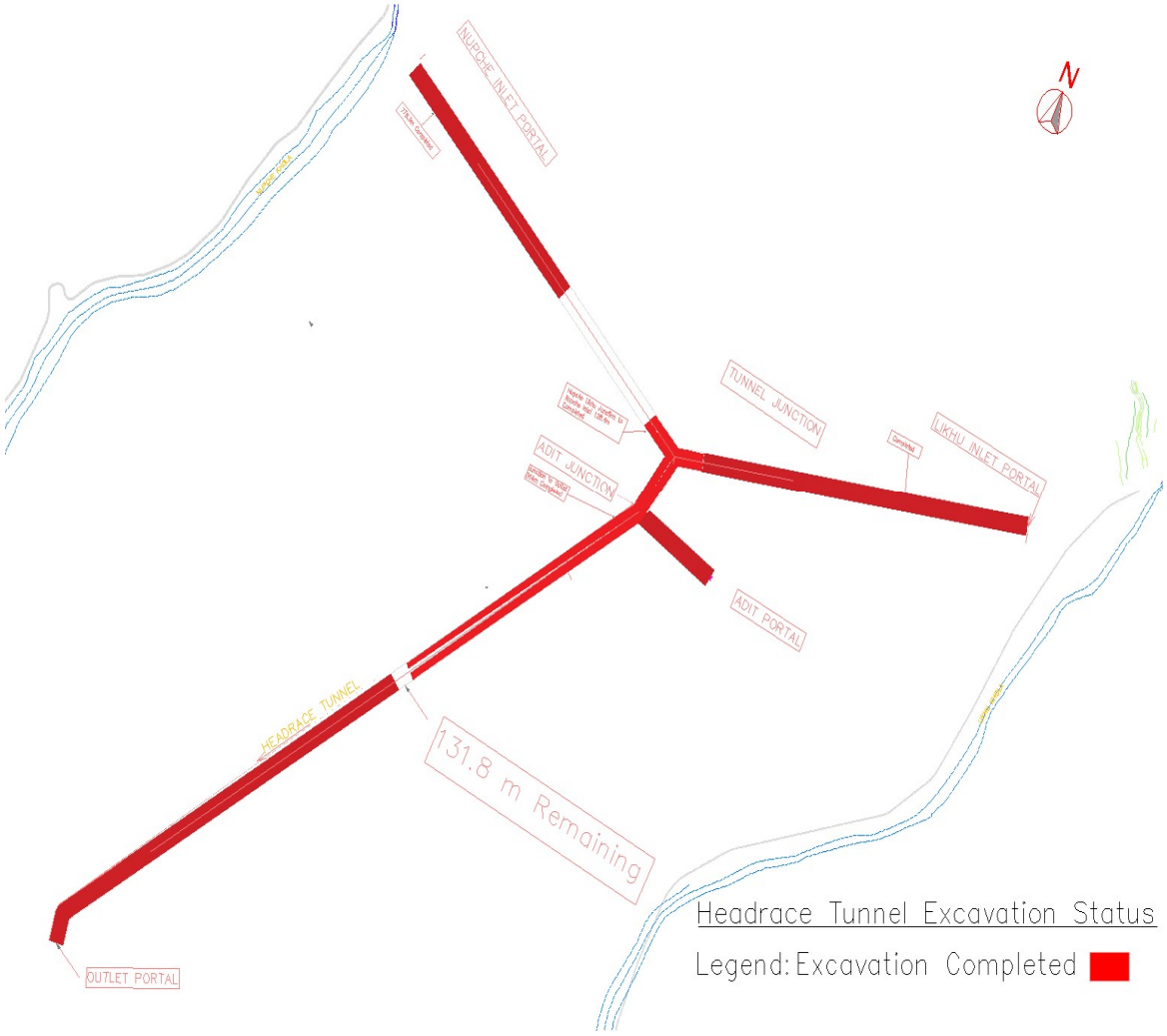
1. Various manuals such as Finance Manual, Human Resource Manual, Investment Manual, Corporate Governance Guidelines, Performance Evaluation Guidelines, Project Management Guidelines, Branding Guidelines, etc. are in practice.
2. Formation of various committees such as High-level coordination sub-committee, Audit Committee, Local Area Co-ordination Sub-Committee and International Co-ordination Sub-Committee.
3. Recruitment of highly professional Consultants.
4. Work plan assigned to each executive level and working level personnel.
5. Updates on performance evaluation format for each personnel which is conducted on quarterly basis.
6. Compliance officer appointed for legal and internal guidelines compliance.
7. Regular meeting of Board of Directors and Various Committees.
8. Unique investment module and mechanism to select quality investors.
9. Integrity, transparency, legal compliance, team work, higher return, responsibility, safe investment, accountability are the core values of the Company.

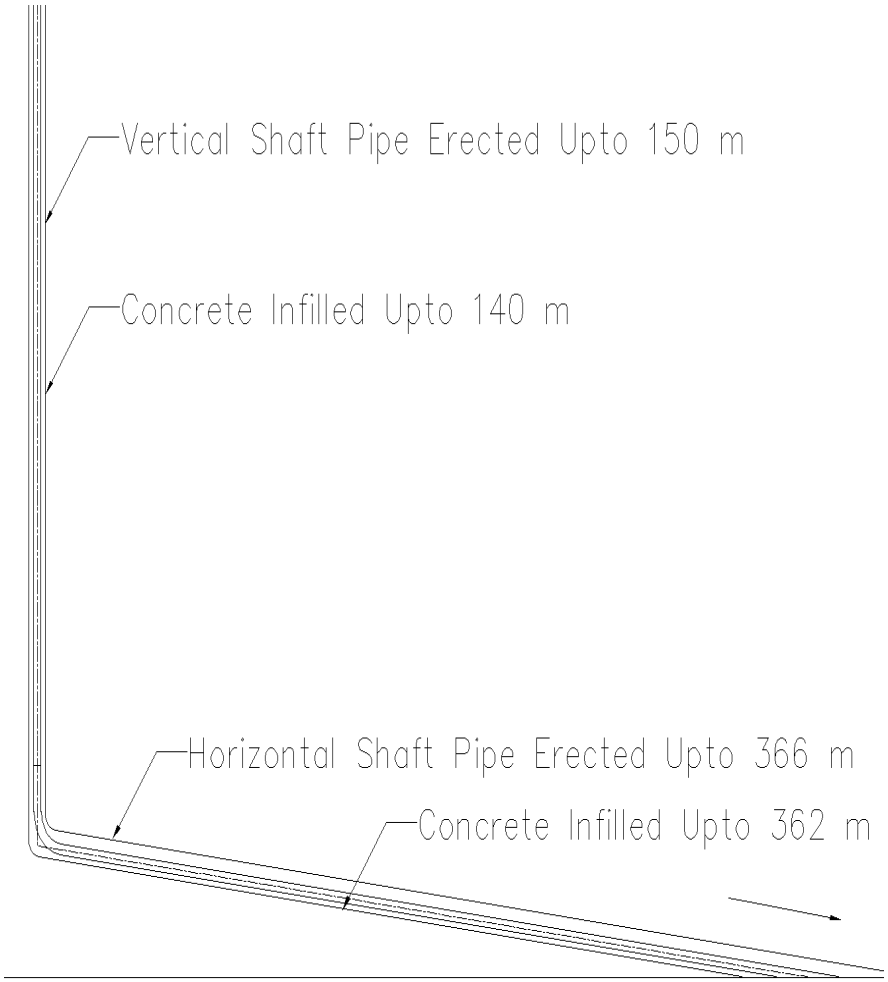
3. Project Implementation

3.1 General

The company has obtained the Generation Liscence. It has planned to generate electricity within the period of 4 years from the commencement of construction work. The Environmental Impact Assessment (EIA) for the project and Initial Environmental Examination (IEE) for the Transmission Line has been approved. The Supervision & Management Consultants, Civil Contractor, Explosives Suppliers, Electromechanical Contractor, Hydromechanical Contractor and Transmission Line Contractor are actively involve in the construction of the project. Detailed progress of the project is also presented in the official website of the company i.e., www.veplinfo.com.

Section B: Current Status of the Project





4. Current Status of the Project

4.1 Completed Works of the Project

4.1.1 Forest, EIA & IEE Related

1. **Environmental Impact Assessment (EIA)** study of Project has been approved.
2. The application for approval of **'Tree Cutting and use of Government Land'** has been approved from the Council of Ministers.
3. Procurement of Land for the replacement of the government land used by the Project has been completed.
4. The agreement between Department of National Parks and Wildlife Conservation, Department of Forests and Soil Conservation and Vision Energy & Power Ltd. for use of **'Tree Cutting and use of Government Land'** has been signed on 30th Chaitra, 2077.
5. Field Work for Tree Counting and Stamping for the project is completed in pursuant to EIA.
6. IEE for the Transmission Line has been approved on 2076-10-09 and Tree cutting and government land use for Transmission Line from cabinet of government of Nepal has been approved on 2080-04-23, also agreement with Department of National Parks and Wildlife Conservation has been concluded.
7. Submission of self EHS Audit Report to ministry of Forest and Environment.
8. Land acquisition and Agreement with the NPWC has been completed and Tree stamping completed and cutting has been completed.

4.1.2 Preliminary/Preparatory Works

1. **Survey License** of the project was obtained for 57.5 MW on 2074/06/29 (15/10/2017).
2. **Power Purchasing Agreement (PPA)** has been done with Nepal Electricity Authority (NEA) on 2074/11/28 (12/03/2018).
3. **Financial Closure** has been completed with Machhapuchchhre Bank Ltd. (Lead Bank), Himalayan Bank Ltd. (Co-Lead Bank), Citizens Bank International Ltd., NCC Bank Ltd., Kumari Bank Ltd., Agriculture Development Bank Ltd., Rastriya Banijya Bank Ltd., Global IME Bank Ltd.., Kamana Sewa Bikash Bank Ltd.
4. **Generation License** has been obtained on 2076/10/12.
5. The License for **Transmission Line** has been obtained on 2078/12/30.

6. **Automatic Gauge Station** has been installed at Nupche & Likhu Intake site.
7. **Hydroelectricity Investment and Development Company** (HIDCL) has approved to invest in equity share capital of Vision Energy & Power Ltd (VEPL).
8. **Detailed Engineering Design** of the Project & Transmission Line has been completed.
9. The **Construction of main Camp House and associated facilities** has been completed.
10. **Bank's consultants** for the project have been selected.
11. The Company's Senior Management team including the Executive Chairman, Board of Directors, General Manager, Project Director **launched blasting process** for the Penstock Tunnel and Vertical Shaft construction work on *12th Ashwin 2078*.
12. The **Supervision & Management Consultants, Civil Contractor, Explosives Suppliers, Electromechanical Contractor, Hydromechanical Contractor and Transmission Line Contractor** has been selected and agreement has been signed.
13. Land acquisition for the Project has been completed.
14. Completion of Construction Power Line.

4.1.3 Civil Works

1. **91%** of physical progress in Civil Works has been achieved.
2. Excavation of Vertical and Horizontal Shaft is completed.
3. The total Tunnel of 7,474.172 m (98.27%) has been completed out of 7,605.972 m Progress in the excavation of the Headrace Tunnel (HRT) is presented front-wise as detailed below:

SN	Description of Site	Tunnel Length(m)	Actual Tunnel Excavated (m)	Remaining	Excavation Progress
1.0	**Vertical Shaft**	295.37	295.37	0	100.00%
2.0	**Penstock Tunnel**	0	0	0	0.00%
2.1	First Unit Bifurcation	56.28	56.28	0	100.00%
2.2	Second Unit Bifurcation	45.814	45.814	0	100.00%
2.3	Third Unit Bifurcation	32.28	32.28	0	100.00%
2.4	Penstock Tunnel	631.2	631.2	0	100.00%
	Total (1+2)	**1,060.944**	**1,060.944**	**0**	100.00%
3.0	**Headrace Tunnel**				
3.1	**Outlet Portal-Adit Junction**	1,563.45	1,547	16.45	98.95%

3.2	**Likhu Inlet- Nupche Likhu Junction**	1,426.254	1,426.254	0	100.00%
3.3	**Nupche Inlet -Nupche Likhu Junction**	1,598.915	1,598.915	0	100.00%
3.4	**Adit Portal-Adit Junction**	346.121	346.121	0	100.00%
3.5	**Adit Junction-Nupche Likhu Junction**	227.978	227.978	0	100.00%
3.6	**Adit Junction-Outlet Portal**	1,164.55	1,049.2	115.35	90.09%
	Total (3)	**6,327.268**	**6,195.468**	**131.8**	**97.92%**
4.0	**Surge Shaft and Connecting Tunnel**				
4.1	**Surge Shaft Connecting Tunnel**	20.03	20.03	0.00	100.00%
4.2	**Surge Shaft**	42.83	42.83	0.00	100.00%
4.3	**Adit 2 (Additional Bypass Tunnel)**	154.9	154.90	0.00	100.00%
	Total (4)	**217.76**	**217.76**	**0.00**	**100.00%**
Total (1+2+3+4)		**7,605.92**	**7,474.172**	**131.8**	**98.27%**

4. All second stage concreting of gate frame has been completed at Likhu Headworks.
5. 3,657.38m(61.16%) of tunnel finishing works (shotcrete lining) out of 5,979.92m has been completed.
6. 1,312.0m (21.94%) RCC Invert concrete lining has been completed at HRT till this period.
7. Completion of 140 m Concreting at the Vertical Shaft and 362 m of concreting at Horizontal Shaft.
8. 89% of the physical progress has been achieved in Nupche Headworks.
9. Rebar, Formwork and M25 RCC works at Settling Basin (panel-01) is completed.
10. Structure protection works with boulder laying upstream of intake is completed.
11. Likhu HWs is at the verge of completion, approx. 99.62% of civil works of Likhu HWs has been completed with 99% the second stage concreting.
12. Completion of concreting and backfilling works of Anchor Block from 1 to20 for Likhu Headrace pipe has been completed.
13. 84.48% of the physical progress has been achieved in Penstock alignment.
14. Along the penstock alignment, 25 Anchor Blocks out of 27 has completed.
15. Fire Fighting Tank Construction has been completed and protection works is ongoing.

16. Rockfall barrier works has been 100 % completed for Powerhouse area.
17. Shotcrete works for switchyard protection is completed.

4.1.4 Electromechanical Works

1. Approx**. 80%** of physical progress in Electromechanical Works has been achieved.
2. Transportation of Runner at site and manufacturing and testing of MIV has been completed
3. Cooling Water System Pumps, heat exchanger, return line duplex filter installation, pipeline Fabrication and fixing completed.
4. Vertical rise Cable Tray Fabrication and fixing, CWS foundation embedment frame fabrication and fixing at respective location, Switchyard ACBD and BMK's base Frame fabrication and fixing at respective location has been completed.
5. Switchyard towers and Equipment's structure fasteners tightening and alignment and Busbar Formation has been completed.
6. Cable Tray Support Fixing and Welding at Powerhouse, Unit and Machine Center Line Marking is completed.
7. MV power cable laying, dressing, glanding and termination work has been initiated.

4.1.5 Hydro mechanical Works

1. **89%** of Hydromechanical works has been completed.
2. 85% of installation of embedded parts and gate frames in Nupche HWs components is completed and 100% gate frames are installed at Likhu HWs.
3. 83% of works has been completed along Nupche HRP and 99% of works has been completed along Likhu HRP.
4. 50.21 % of erection of pipe along Vertical Shaft and 64.32% along Horizontal Shaft has been completed.
5. 84.48% of erection of pipe along penstock alignment are completed.

6. **The details of Pipe Erection Works are as follows:**

Erection of PIPES	Total Length (m)	Erected Length (m)	Remaining Length(m)	% Completed
Penstock	1,527.54	1,290.4	237.14	84.48%
Vertical Shaft	298.76	150	148.76	50.21%
Horizontal Shaft	569	366	203	64.32%
Bifurcation and Manifolds (Branch pipe)	182	125.99	56.01	69.23%
Likhu HRP	1,053.12	1,049.12	4	99.62%
Nupche HRP	421.35	348.447	72.902	82.70%
Total	4,051.77	3,329.96	721.81	82.19%

4.1.6 Transmission Line

1. As of this quarter, 83% of the physical progress has been achieved.
2. Approx 98% of tower material has been delivered to site.
3. 95.51% of Tower foundation concreting has been completed.
4. 54.49% of Tower Erection work has been completed.
5. 1.03 km (4.29%) out of 24 km of stringing works has been completed.

4.1.7 Planning, Governance and Other Works

1. Documents for approval IPO for the public has been submitted to Securities Board of Nepal (SEBON).
2. The optimum productivity plan for the monsoon period has been finalized in coordination with all the involved contractors.
3. Monitoring of ISO certification has been completed.

4.2 Ongoing Works of the Project

4.2.1 Forest and EIA Related Works

1. Tree plantation is in progress.
2. Agreement between the landowner along the Transmission Line alignment has been 98% completed.
3. Frequent Site visit from GCAP representative and providing training for Army personals and the Contractors representative at site for the protection of wildlife as well as the safety related trainings.

4. Implementation and follow-up of environmental and social management plan throughout the construction phase to achieve good environment.
5. Under the Community Support Program, financial support was extended to five government schools in Chuchure-1 of Gokulganga Rural Municipality, one health post, and two sports clubs. Furthermore, assistance was provided for the construction of a Gumba and a community hall (Aama Samuha), as well as the supply of medical equipment to the health post in Kyama, Gokulganga Rural Municipality. In addition, gabions were constructed and delivered to a government school in Gumdel, and fencing works were carried out for the Gumdel Drinking Water Supply Project.

4.2.2 Preliminary/Preparatory Works

1. Road strengthening and routine maintenance of access road are ongoing.

4.2.3 Civil Works

1. Kholsi Protection Work of Nupche headrace pipe, penstock pipe ongoing.
2. RCC works at Intake/Bed Load Trap at Nupche HWs.
3. Construction of control building in both Nupche and Likhu Headworks is in progress.
4. Infill Concreting at VT and PT
5. Finishing works at Surge Shaft.
6. Final lining works at Headrace Tunnel.

4.2.4 EM (Electromechanical) Works

1. Transportation of Turbine Housing and Penstock protection Valve in Progress.
2. Installation of MIV is in progress.
3. Control and Instrumentation cable termination works.
4. Cooling water system pipelines welding works.
5. Installation of hydraulic pressure unit (HPU) piping.
6. Manufacturing and Inspection for auxiliary equipment is in progress.
7. MV power cable laying, dressing, glanding and termination works.

4.2.5 HM (Hydro-mechanical) Works

1. Erection of Penstock Pipe in Vertical and Horizontal Shaft is in progress.
2. Erection of Penstock Pipe in Penstock Alignment is in progress.

3. Fabrication, supply and Erection of hoisting arrangement gear and gear box at Nupche & Likhu Headworks.
4. Fabrication and supply of gate parts and hoist is in progress.
5. Fabrication and installation of coarse and fine trash rack is in progress.
6. Testing and Rectification of the HM pipes and accessories along with Nondestructive testing in Headrace Pipe.

4.2.6 Transmission Line

1. Tower protection work of different tower footing is in progress.
2. Pit marking of the tower and survey and establishment of camp in other front along the tower alignment.
3. Erection of Tower.
4. Installation works of Stringing in Towers.

4.2.7 Planning, Governance and Other Works

1. Investment in nearby small and other large projects is ongoing.

4.3 Challenges Faced:

Though the company is committed to complete the work in stipulated time and schedule, company struggles to tackle the project management challenges and issues related to the processes and directions of government, local community, site condition etc. The major challenges we have faced are.

1. Delay in transportation of Turbine Housing and Penstock protection Valve by the EM Contractor.
2. Local issues such as excessive demands for construction equipment's/upgradation of roads
3. Topographical challenges and unexpected ground conditions at TL alignment than anticipated in geotechnical investigation.
4. Damaged road section in various location of access road to Nupche-Likhu Hydropower project.
5. Unexpected ground condition inside tunnel during excavation.

Management Plan for the Mitigation of Challenge:

1. Mutual discussion with Electromechanical Contractor through Senior Management. Delivery of Turbine Housing and Penstock Protection Valve is expected to be started by 1st week of Bhadra 2082.
2. Co-ordination with local authority and local people about the issue.
3. Beside the topographical challenges the resources such as equipment and manpower with advance working methodology has been adopted.
4. Road maintenance work in progress and regularly being done.
5. Optimum planning for the progress and demobilization of contractor for cost optimization.

4.4 Physical Progress

Vision Energy & Power Ltd records physical progress data on every construction work of the Nupche Likhu Hydropower Project. The evaluation of project physical progress has been prepared by weighted method which is highlighted as the best and realistic technique to determine the percentage complete of the overall project. Below is the physical progress data as of **Ashadh, 2082**.

OVERALL PHYSICAL PROGRESS ACHIEVED: 88%

SN	Activities	Physical Progress
1	Civil Works	91%
2	Electromechanical Works	80%
3	Hydro Mechanical Works	89%
4	Transmission line & Interconnection	83%
5	Land Acquisition/ Compensation/Development	91%
6	Construction Design, Drawing and DPR	98%
7	Office Building including Camp Facilities	100%
8	Infrastructure Development (Temporary and Permanent)	91%
9	Environment Mitigation and Social Responsibility	86%
	Total	**88%**

4.5 Financial Progress

Vision Energy & Power Ltd. records all important financial data on every aspect of a business's activities. Below is the financial progress data to manage the operations of our business and also to provide reporting transparency to our stakeholders.

Allocated Budget Vs. Actual Utilization As on 32nd Ashadh, 2082

SN	Particulars	Revised Amount	Total Utilization Including Advance	Utilization %
1	Preliminary Works	246,969,000	246,051,846	99.63%
2	Civil Works	4,297,121,504	3,769,069,636	87.71%
3	Electromechanical Works	1,393,112,270	1,082,309,256	77.69%
4	Hydro Mechanical Works	1,277,016,246	1,212,895,308	94.98%
5	Transmission line & Switchyard	616,207,595	529,256,031	85.89%
6	Land Acquisition/ Compensation/Development	97,473,125	83,928,125	86.10%
7	Project Supervision/Management and Engineering	559,548,771	489,262,559	87.44%
8	Construction Design, Drawing and DPR	30,386,932	27,886,932	91.77%
9	Office Building including Camp Facilities	94,355,241	92,855,241	98.41%
10	Office Equipment	16,157,340	14,920,510	92.35%
11	Vehicle	22,866,898	22,866,898	100.00%
12	Infrastructure Development (Temporary and Permanent)	868,827,844	740,902,531	85.28%
13	Environment Mitigation and Social Responsibility	197,040,608	169,173,788	85.86%
14	Loan Documentation Fee	75,954,921	67,929,921	89.43%
15	Interest During Construction	1,509,963,900	1,123,999,176	74.44%
	Total	**11,303,002,196**	**9,673,307,758**	**85.58%**

Total Share Capital as on Ashadh, 2082: - NPR 3,320,000,000

4.6 Loan Details

Total loan from Consortium Banks is 7 Arab 93 Crores. Loan disbursement till this period is NPR 6,709,574,863.00

4.7 Planning for the next quarter

a) Excavation and finishing of 100% of the Headrace Tunnel.
b) Transportation and Installation of Turbine.
c) Installation of Generators.
d) Complete erection of all pipes in Vertical shaft and Penstock Tunnel; along with the infill of concrete.
e) Completion of 100% of Penstock Pipe Works.
f) Completion of 100% of the Nupche and Likhu Headworks.
g) Installation of gates in Likhu HWs, Nupche HWs & Tailrace.
h) Complete excavation, civil works and backfill of 78 nos of Towers along Transmission Line.
i) Erection of all 78 nos of towers along transmission line.
j) Completion of stringing works for 40 no of Towers location.
k) Completion of all Tower Protection Work

ANNEX – 1: PHOTOGRAPHS OF WORK PROGRESS

Fig-1: External View of Powerhouse and Control Building

Fig-2: Internal View of Powerhouse including EOT (Electromechanical Works)

Fig-3: Switchyard (Electromechanical Works)

Fig-4: Delivery of Turbine accessories and PPV in progress

Fig-5 Power cable Dressing at Switchyard (Electromechanical Works)

Fig-6: Transformer Accessories Erection at Powerhouse (Electromechanical Works)

Fig-7: Installation of Rock fall Net for powerhouse Protection

Fig-8: Kholsi Crossing works at Powerhouse site

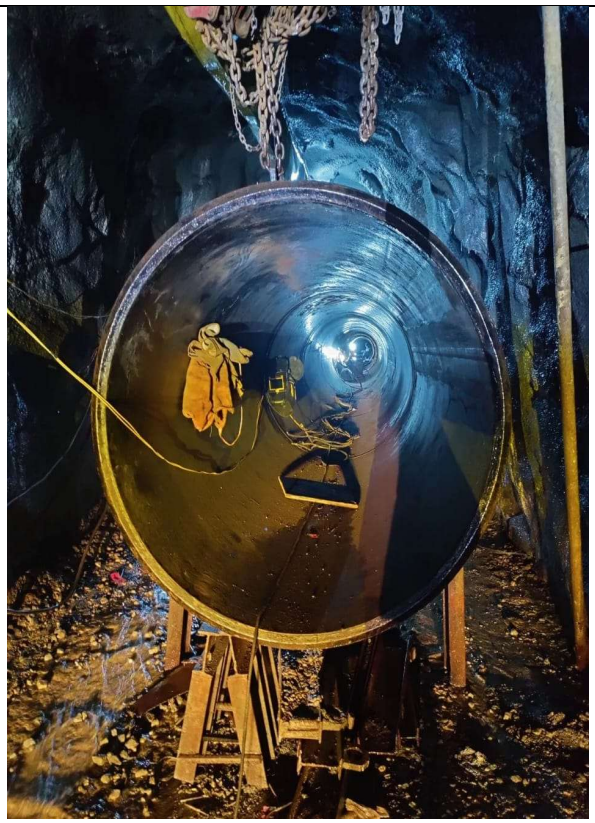


Fig-9: Pipe Erection work at Inclined Penstock Tunnel

Fig-10: Penstock Pipe Erection Work from AB26 D/S)

Fig-11: Pipe Erection work from AB 23 to 24 D/S

Fig-12: Pipe Erection work at Outlet Tunnel (T-junction to connecting tunnel)

Fig-13: Installation of Rib support at Adit (F7) D/S tunnel face

Fig-14: Face Drilling by Boomer at Outlet (F8) HRT

Fig-15: Invert Lining at Invert of Likhu(face-4) Tunnel

Fig-16: Support works(shotcrete) at Rib section in tunnel

Fig-17: Headrace pipe Alignment at Nupche Waterway.

Fig-18: Headrace pipe Alignment at Likhu Waterway.

Fig-19: Overview of Completed Nupche Headworks

Fig-20: Overview of Completed Weir/Intake of Likhu Headworks

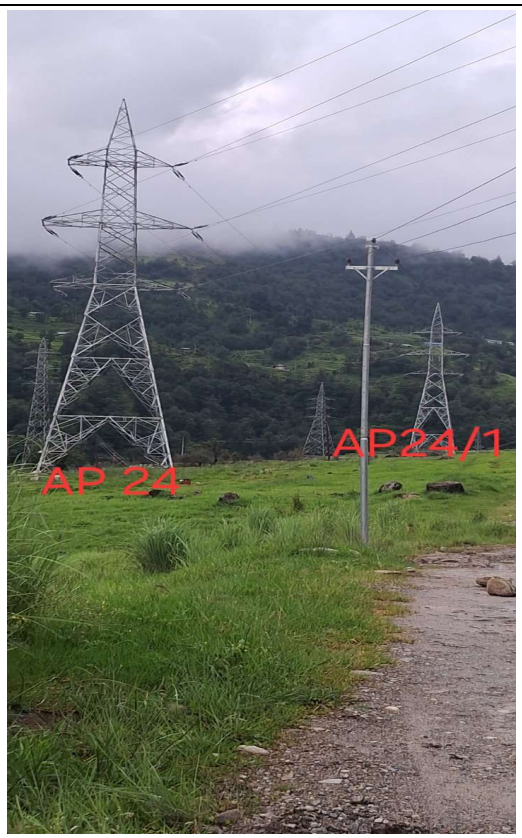


Fig-21: Tower Erection and Stringing Works in Progress

THANK YOU