NUPCHE LIKHU HYDROPOWER PROJECT (57.5 MW)

Ramechhap, Nepal



Project Progress Report

Shrawan, 2080 – **Ashwin**, 2080



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Executive Summary

This Progress Report is prepared for providing information about the progress of Nupche Likhu Hydropower Project (NLHP), Ramechhap (57.5MW). It contains the information about the project activities and progress of the months from **Shrawan 2080 to Ashwin 2080**. The major achievements during the period are:

A. Forest and EIA/IEE Related Works

- 1. Continuation of Tree Plantation in overall Project site;
- 2. Approval of Tree cutting in conservation area, from Cabinet in final phase and it is expected to be approved within mid of Kartik 2080.
- 3. Construction of Drinking water project in ward no 1 Gumdel area on demand of Local peoples under "Community Support Program".

B. Preliminary/Preparatory Works

- 1. The road strengthening and routine maintenance of project's access road has been continued.
- 2. Sangwa Danda and Deurali road section maintenance.
- 3. Continuation of road maintenance from Sibalaya, Deurali and Thado Khola road section.
- 4. Communication with the local authority about the maintenance of the causeway and road sections in Gokul ganga rural municipality.
- 5. Erection of construction power line up to Nupche headworks has been completed.
- 6. Clearing of Nupche HWs access road after flash flood.

C. Civil Works

i. Underground Works

- On October 5, 2023, the excavation from Adit Junction to Nupche Likhu Junction was successfully finished, creating a new starting point for excavation work extending from that junction to the Nupche and Likhu face
- 2. Excavation of HRT (Headrace Tunnel) from Outlet about 578.1m (41%) completed out of 1400m;
- 3. Excavation of HRT from Adit Junction towards Outlet about 328m (25%) has been completed out of 1329.4m;
- 4. Excavation of HRT from Nupche Inlet about 521 m (65%) has been completed out of 799.5m;

- 5. Excavation of HRT from Nupche Likhu Junction about 24.5 m (3%) has been completed out of 799.5m;
- 6. Excavation of HRT from Likhu Inlet 1033 m (100%) has been **completed**;
- 7. Excavation of HRT from Nupche Likhu Junction towards Likhu Inlet about 25 m (6%) has been completed out of 396.78m;
- 8. Excavation of Penstock Tunnel 757.68 m (100%) has been **completed**;
- 9. Excavation of Vertical Shaft 295.91 m (100%) has been **completed**;
- 10. Excavation of Connecting Tunnel 20 m (100%) has been **completed**;
- 11. Excavation of HRT Adit Junction to Nupche Likhu Junction 227.97 m (100%) has been **completed**;
- 12. Excavation and support work in Surge Shaft area in progress including the slope protection area.
- 13. The total Headrace Tunnel of 4156.06 (56%) has been completed out of 7446.47m;
- 14. Safety shotcrete support works in the Likhu inlet has been started.

ii. Likhu Headworks

- 15. Completion of construction of Weir and Floodwall at Likhu Headworks;
- 16. M25 Concrete Works in Gravel Trap Spillway is in Progress.
- 17. Rebar, Formworks and Concrete Works at Forebay including Spillway is in Progress.
- 18. M25 RCC works at intake column and hoisting Slab is in Progress
- 19. M60 Concrete works (substitute to hard stone lining) is in progress
- 20. Construction of Likhu Headworks Settling Basin has been **completed**.

iii. Likhu Headrace Pipe

- 21. River and Road Crossing works is completed in Likhu Headrace pipe is **completed**.
- 22. Completion of concreting and backfilling works of Anchor Block from 9 to 12 for Likhu Headrace Pipe.
- 23. M25 Plum Concrete at AB-2, AB -3, AB-14, and AB-15 is completed.
- 24. HM contractor has handed over AB-2, AB-3, AB-114, AB -15 to Civil Contractor and other works by HM is on progress.

iv. Nupche Headworks:

- 25. Rebar and Form works at AB-2, AB-3, AB-14 and AB -15 is Completed.
- 26. Rebar, Formwork and M25 RCC works at Settling Basin panel 2 to 7 is in Progress.
- 27. Masonry Works at settling and Flushing zone of Settling basin is in progress. Approx. Settling Basin has been 40% completed.

v. Nupche Headrace Pipe

- 28. Head Race Pipe (HRP) Alignment excavation work is in progress.
- 29. PCC at AB 6 and 7 is completed and HM work has been already started

vi. Penstock Pipe Alignment

- 30. Excavation of the Penstock alignment trench from AB-8 to AB-21 has been completed.
- 31. M15 blinding concrete of 75mm thickness has been completed from AB 09 to AB 20.
- 32. M25 Plum concrete works of AB 9, AB 10 AB 11, AB12, AB 13, AB15 and AB16 have been completed.
- 33. Backfilling work from AB 12 to AB 11 is completed. Similarly, Backfilling work From AB 9 to AB 10 is also completed. While Backfilling work From AB 11 to AB 10 is in progress.

vii. Powerhouse

- 34. Rebar, Formworks and Concreting of Powerhouse is completed.
- 35. Concrete hollow Block work is in Progress.
- 36. Masonry works for Switchyard protection work is in Progress
- 37. M25 RCC works of Expansion Joints is in Progress

Total Progress of Civil Works up to this quarter is approx. 49.46%.

D. Electromechanical (EM) Works

- 1. Completion of detailed drawing of major Electromechanical (EM) equipment
- 2. Ongoing detailed final assembly drawings of EM auxiliaries' equipment.
- 3. Completion of manufacturing and testing of Generator unit 1 dispatch letter issued.
- 4. Delivery of EOT crane, arrived at border.
- 5. Completion of transportation of Hydro mechanical pipe lot 1, 2 and 3

Total Progress of EM Works up to this quarter is approx. 41.95%.

E. Hydro mechanical (HM) Works

- 1. HM accessories, bell mouth, bifurcation has been reached to site.
- 2. 26% of Pipes has been progressively completed. The details are as follows:

Erection of PIPIES	Completed
Penstock	19%
Vertical Shaft	0%
Horizontal Shaft	0%
Bifurcation and Manifolds (Branch pipe)	59%
Likhu HRP	62%
Nupche HRP	0%

- 3. Design finalization of Nupche HWs settling basin and weir.
- 4. Revision of Bill of Quantities Hydro-mechanical completed and 80% completed in case of Civil.

Total Progress of HM Works up to this quarter is approx. 7.34%.

F. Transmission Line (TL)

- 1. Mobilization of Transmission Line (TL) contractor to site (TL);
- 2. Civil material testing (Steel, Cement, Aggregates) for TL;
- 3. Transportation of stubs and earthing material to site;
- 4. Inspection of DB and DD tower material; ready for Dispatch;
- 5. Excavation of foundation of Tower No. 24 and 24/1 has been started;

Total Progress of TL Works up to this quarter is approx. 74.03%.

G. Planning, Governance and Other Works

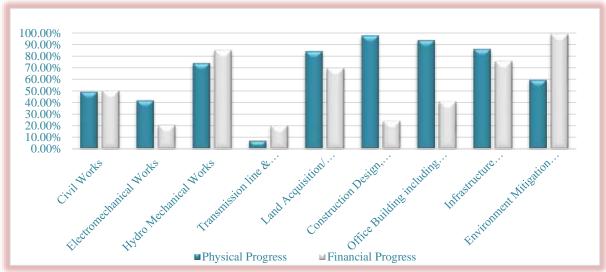
- 1. Investment in nearby small and other large projects has been started;
- 2. Some of the major plan for next quarter is discussed in detail report. Please refer to the status of the project below;
- 3. Development and Implementation of Strategy to increase Productivity;
- 4. Amendment-III of Project Implementation Plan;
- 5. Preparation of Civil works cost optimization Report;

H. Any Bottlenecks

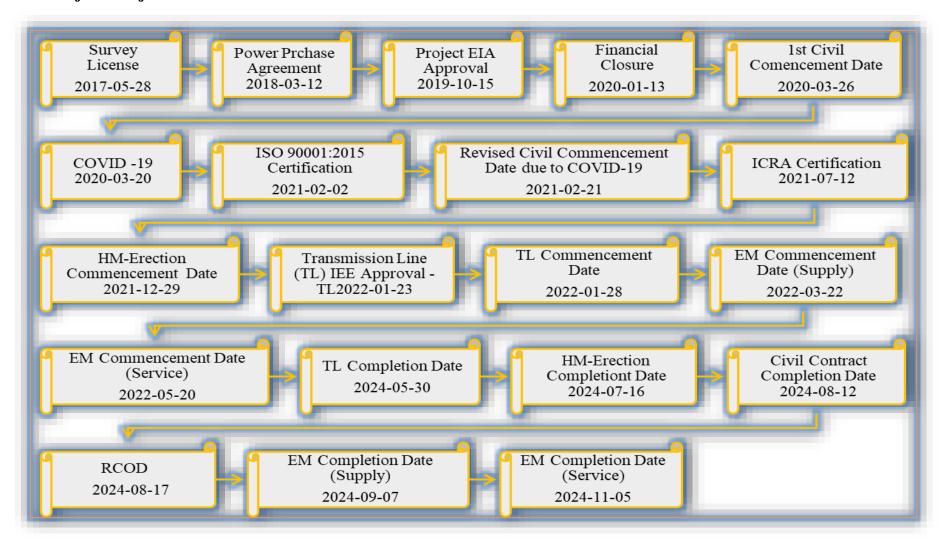
- 1. Rectification in Branch pipes and Hydro mechanical accessories.
- 2. Encounter of weak zone in Likhu inlet portion.

I. Financial and Physical Progress

1. Till the date 47.39% of the budget has been utilized and about 54.93% of the overall physical progress has been achieved;



J. NLHP Project's Major Timeline



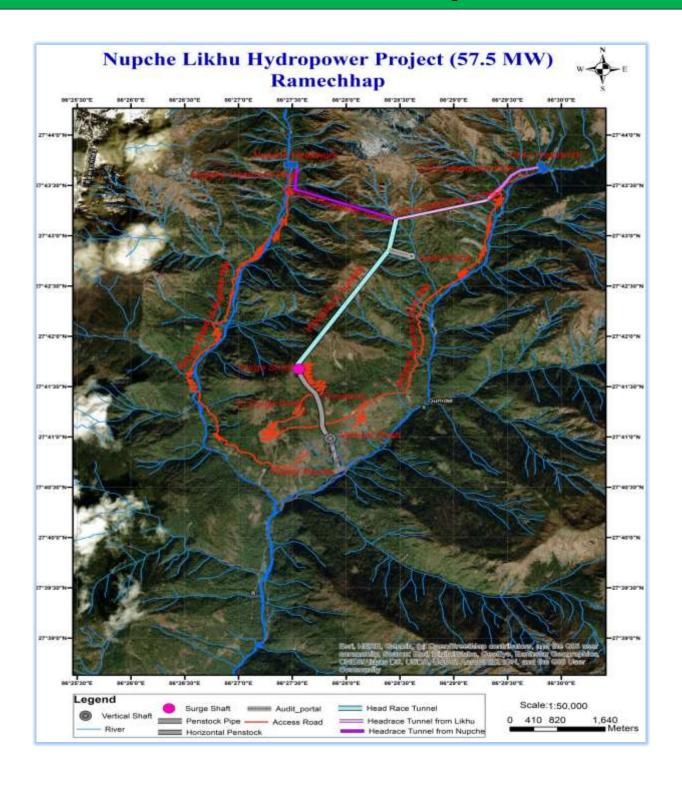
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Section A: About the Project



1. Introduction

1.1 Background

Vision Energy & Power Ltd (VEPL) aims to develop Nupche Likhu Hydropower Project (57.5 MW) in Ramechhap District using local technical, managerial and financial capability and is dedicated to supply the power to the National Grid to fulfill domestic energy demand. The project is a run-of-river (RoR) hydropower project.

1.2 About the Project

The proposed Nupche Likhu Hydropower Project is located in Umakunda Rural Municipality of Ramechap district of Nepal. The source of water for the project is originated from Nupche and Likhu rivers which are snow-fed Rivers starting from the High Mountain/Hilly areas. The proposed intake of the Nupche Likhu Hydropower Project is located north of Lahaksewar village in left bank of Nupche Khola with its weir crest level at an elevation of 3338 m above amsl and the right bank of Likhu Khola with its weir crest level at an elevation of 3338 m above amsl. The powerhouse is located on the right bank of the Likhu Khola with the turbine center line level at 2336 m amsl. The gross head estimate is 1003.5 meter and design discharge is 7.11 m³/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, Lahaksewar 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: 10,578,458 thousand and total cost per MW = NRs. 183,973 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: More than NPR 4 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 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	Nucphe 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.	<u>Hydrology</u>		
	Catchment Area at Headworks	150 Km ² (Nupche 82km ² &Likhu 68 km ²)	
	Design Discharge (Q 45 %)	$3.89 \text{ m}^3\text{/s} + 3.22 \text{ m}^3\text{/s} \text{ (Nupche & Likhu)} = 7.11 \text{m}^3\text{/s}$	
4.	Nupche & Likhu- Headworks		
	Weir		
	Туре	Boulder line weir	
	Bed Load Sluicer		
	Туре	Bed Load	
	Intake		
	Туре	Orifice, Side Intake	
	Gravel Trap		
	Туре	Single, Dufour	
	Settling Basin		
	Туре	Double Bay Dufour Type	
5.	<u>Headrace Pipe</u>		
	Headrace Pipe	504 m & 1158 m (Nupche & Likhu)	
6.	Tunnel Length		
	Total Length	7475 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	2712 m	
9.	Power House		
	Type	Surface	
10.	Turbine		
	Туре	Horizontal Pelton	
	Number of units	3	
	Rated Output Capacity per unit	20.26 MW	

11.	<u>Generator</u>		
	Туре	Solid State, PID Governor	
	Number of units	3	
	Rated Output Capacity	22.55 MVA	
	Excitation System	Brushless Type	
12.	<u>Transformer</u>		
	Туре	Outdoor, Oil immersed, Three Phase	
	Rated Capacity	23 MVA	
	Number of Units	3	
13.	Tail-Race Canal		
	Type	Box Culvert	
1.4	Tuonguissian Lina & Cuid	24 km 132 kV line up to National grid at 132 kV	
14.	Transmission Line & Grid	switchyard of Proposed NEA Hub at Garjyang Substation, Ramechhap district.	
15.	Power and Energy	Substation, Ramechiap district.	
13.	Gross Head	1005.65m	
	Net Head at Full Flow	968.33 m	
		57.5 MW	
	Installed Capacity		
	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	10,579 Million NPR (As per DDS report by DDS consultant for bank "Sanima Hydro & Engineering Pvt. Ltd.")	
18.	Approximate Construction Period:	4 Years	
19.	Required Commercial Operation Date (RCOD)	2081/04/31 BS 2024/08/15 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,

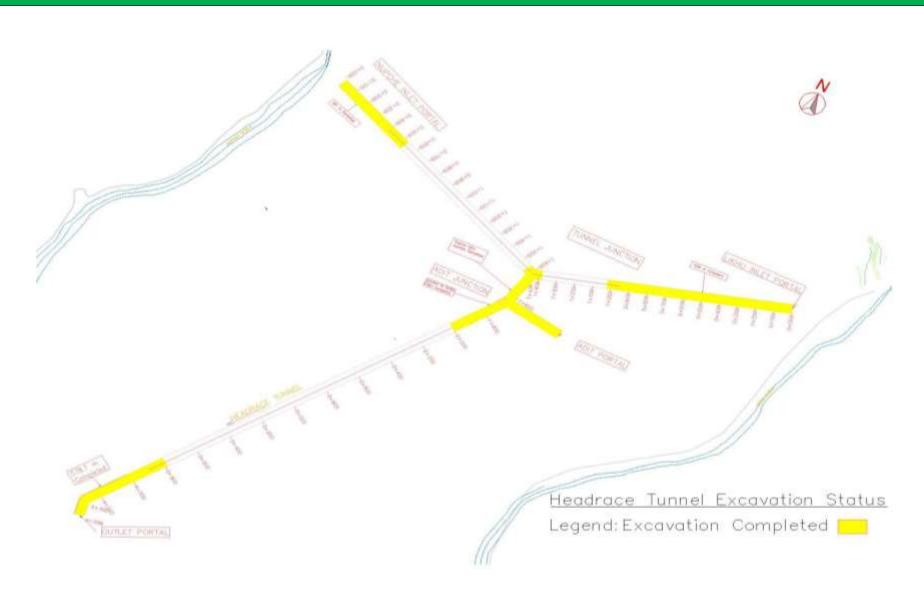
- 1. Various manuals such as Finance Manual, Human Resource Manual, Investment Manual, Corporate Governance Guidelines, Performance Evaluation Guidelines, Project Management Guidelines, Branding Guidelines, etc. are in practice.
- 2. Formation of various committees such as High-level coordination sub-committee, 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. Performance evaluation of each personnel 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 has been selected and agreement has been signed. The Civil and HM Contractor has been mobilized to the project construction site and has started the construction and the designing of EM components by the EM contractor is in progress. 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

A. Major Completed Works

- 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 and Power Pvt. 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. Initial Environmental Examination (IEE) study report of the transmission line has been approved from the Ministry of Energy, Water Resources and Irrigation;
- 7. Submission of self EHS Audit Report to ministry of Forest and Environment.

4.1.2 Preliminary/Preparatory Works

A. Major Completed 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., Bank of Kathmandu Ltd., Kamana Sewa Bikash Bank Ltd.
- 4. **Generation License** has been obtained on 2076/10/12.
- 5. The **Survey License of Transmission Line** for the 4th year i.e., up to 2078/12/14 has was renewed and has been completed.
- 6. The License for Transmission Line has been obtained on 2078/12/30.
- 7. **Automatic Gauge Station** has been installed at Nupche & Likhu Intake site.
- 8. **Hydroelectricity Investment and Development Company** (HIDCL) has approved to invest in equity share capital of Vision Energy and Power Pvt. Ltd (VEPL).

- 9. **Detailed Engineering Design** of the Project & Transmission Line has been completed.
- 10. The Construction of main Camp House and associated facilities has been completed.
- 11. Bank's consultants for the project have been selected.
- 12. The Company's Senior Management team including the Chairman, Board of Directors, General Manager, Project Director **launched blasting process** for the Penstock Tunnel and Vertical Shaft construction work on 12th Ashwin 2078.
- 13. The Supervision & Management Consultants, Civil Contractor, Explosives Suppliers, Electromechanical Contractor, Hydromechanical Contractor and Transmission Line Contractor has been selected and agreement has been signed.
- 14. Land acquisition for the Project has been completed.

B. Other Completed Works

- 1. Road Strengthening and routine maintenance.
- 2. Completion of Construction Power Line of Nupche.

4.1.3 Civil Works

A. Major Completed Works

- 1. Concreting of Super structure works has been completed in power house.
- 2. Masonry work is ongoing in the outer partition wall.
- 3. Invert PCC in inclined tunnel has been completed.
- 4. On October 5, 2023, the excavation from Adit Junction to Nupche Likhu Junction was successfully finished, creating a new starting point for excavation work extending from that junction to the Nupche and Likhu face
- 5. Excavation of HRT (Headrace Tunnel) from Outlet about 578.1m (41%) completed out of 1400m;
- 6. Excavation of HRT from Adit Junction towards Outlet about 328m (25%) has been completed out of 1329.4m;
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- 11. Excavation of Penstock Tunnel 757.68 m (100%) has been completed;
- 12. Excavation of Vertical Shaft 295.91 m (100%) has been completed;
- 13. Excavation of Connecting Tunnel 20 m (100%) has been completed;
- 14. Excavation of HRT Adit Junction to Nupche Likhu Junction 227.97 m (100%) has been completed;
- 15. Construction of Likhu Headworks components i.e., Intake, Flood wall, Gravel Trap, Settling Basin has been completed; finishing works shall be carried out during coming quarter.
- 16. Along the Likhu HRP, 11 Anchor Blocks out of 26 has completed.
- 17. Along the penstock alignment, 8 Anchor Blocks out of 27 has completed.
- 18. About 40% of Nupche settling basin in headworks area has been completed till end of Ashwin 2080.

B. Other Completed Works

1. Masonry wall in the boundary of switchyard for the protection has been started.

4.1.4 Electromechanical Works

A. Major Completed Works

- 1. Completion of detailed drawing of major Electromechanical (EM) equipment
- 2. Ongoing detailed final assembly drawings of EM auxiliaries' equipment.
- 3. Completion of manufacturing and testing of Generator unit 1 dispatch letter issued.

B. Other Completed Works

1. Delivery of powerhouse EOT crane, valve house HOT crane has arrived at border.

4.1.5 Hydromechanical Works

A. Major Completed Works

- 1. Completion of transportation of Hydro mechanical pipe lot 1, 2 and 3
- 2. HM accessories, bell mouth, reducer, bifurcation has been reached to site.
- 3. Erection of pipes 26% has been progressively completed.
- 4. 4 nos of Bend fabrication for Nupche headrace pipe

B. Other Completed Works

1. 35% of pipes has been transported to Nupche yard.

4.1.6 Transmission Line

A. Major Completed Works

- 1. Mobilization of Transmission Line (TL) contractor to site (TL).
- 2. Civil material testing (steel, cement, aggregates) for TL.
- 3. Inspection of DB and DD tower material; ready for Dispatch.
- 4. Stub and Earthing material has been delivered to the site.
- 5. Excavation of foundation of Tower No. 24 and 24/1 has been started. Including the erection of stub in Garjyang area.

B. Other completed works

- 1. 50% of the Site handover from the client has been received.
- 2. Adequate storage of the civil construction material has been completed.
- 3. Storage yards for the tower materials along the tower alignment has been established.

4.1.7 Planning, Governance and Other Works

A. Major Completed Works

1. The Company has received ISO 9001:2015 Certificate on 2021-02-02.

4.2 Ongoing Works of the Project

4.2.1 Forest and EIA Related Works

A. Major Ongoing Works

- 1. Agreement with NPWC to start tree stamping and tree cutting along the transmission line.
- Implementation and follow-up of environmental and social management plan throughout the construction phase to achieve good environmental outcomes as per approved EIA

4.2.2 Preliminary/Preparatory Works

A. Major Ongoing Works

1. Road strengthen and routine maintenance of access road.

B. Other Ongoing Works

4.2.3 Civil Works

A. Major Ongoing Works

- 1. Masonry wall for the protection in switchyard area.
- 2. Fabrication of the roof truss.

- 3. Support works and water management in vertical Shaft and preparation to handover to HM.
- 4. Concreting of Anchor Blocks 1, 9 and 12 in likhu headrace pipe, along with the backfilling works.
- 5. RCC works in settling basin in Nupche settling basin.
- 6. Excavation and PCC along the Nupche Headrace Pipe alignment.
- 7. HRT excavation from 5 tunnel faces.
- 8. Preparatory works and clearing works in Penstock alignment AB 17-20 is going on.
- 9. Slope protection and support installation is in progress for Surge Shaft.
- 10. Final support lining in the likhu inlet area is in progress.

B. Other Ongoing Works

- 1. Storage of adequate construction material and provision of equipment at site is in progress.
- 2. Preparation for shifting Batching plant to Nupche headworks

4.2.4 EM (Electromechanical) Works

A. Major Ongoing Works

- 1. Route Survey for the transportation of the Products.
- 2. Manufacturing and testing or Unit 2 and 3 Generator.

B. Other Ongoing Works

1. Delivery of the EoT Crane, transformer and Generator Unit 2 to the site.

4.2.5 HM (Hydro-mechanical) Works

A. Major Ongoing Works

- 1. Fabrication of gates frames, trash rack is in progress.
- 2. Final stage, erection of pipes along likhu headrace pipe 2-15 stretch.
- 3. Installation of Bend at 3, 8, and 16 along penstock alignment.

B. Other Ongoing Works

- 1. Retrieve the track links along the penstock alignment buried under debris.
- 2. Preparatory works in vertical tunnel is in progress.

4.2.6 Transmission Line

A. Major Ongoing Works

1. Site clearance in the tower area is in progress.

2. Pit marking of the tower and survey and establishment of camp in other front along the tower alignment.

B. Other Ongoing Works

4.2.7 Planning and Other Works

A. Major Ongoing Works

1. Investment in nearby small and other large projects has been started;

B. Others Ongoing Work

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. Flash flood (estimated return period of 50 years)
- 2. Regulation of Explosive.
- 3. Defects in HM pipes; rework required.
- 4. Instability issues in Likhu Inlet Tunnel.
- 5. Road Blockage ceasing materials/fuel transport in site. (few days work affected)

Management Plan for the Mitigation of Challenge:

- 1. Get the approval in coordination with Government authority as soon as possible.
- 2. Co-ordination with local authority and local people about the issue.
- 3. Assigning interface manager for smooth transfer of responsibility to parties.
- 4. Implication made for contractor to manage safety manager.

4.4 Physical Progress

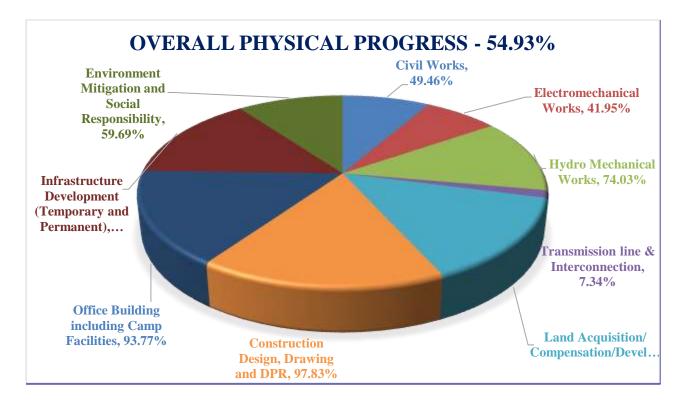
Vision Energy & Power Ltd records physical progress data on every construction work of the Nupche Likhu Hydropower Project. The objective and realistic measurement of physical progress during a construction project is a key element for successful project management in providing asbuilt information for project planning, control, cost engineering, and many others. Progress measurement is an input directly used to help determine the earned value of a project and forecasts such as cost at completion and estimated finished date. 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 and financial progress data up to 30th Ashwin 2080.

Physical Progress vs. Financial Progress

SN	Activities	Physical Progress	Financial Progress
1	Civil Works	49.46%	50.30%
2	Electromechanical Works	41.95%	20.69%
3	Hydro Mechanical Works	74.03%	85.10%
4	Transmission line & Interconnection	7.34%	20.31%
5	Land Acquisition/ Compensation/Development	84.31%	69.74%
6	Construction Design, Drawing and DPR	97.83%	24.34%
7	Office Building including Camp Facilities	93.77%	40.94%
8	Infrastructure Development (Temporary and Permanent)	86.17%	75.70%
9	Environment Mitigation and Social Responsibility	59.69%	98.88%

OVERALL PHYSICAL PROGRESS ACHIEVED: 54.93%



4.5 Financial Progress

Vision Energy & Power Ltd. records important financial data on every aspect of a business's activities. As such they can be evaluated on the basis of past, current, and projected performance. 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 Up to 30th Ashwin, 2080

SN	Particulars	Amount (Rs.)	Utilization Up to 30th Ashwin, 2080 (Rs.)	Utilization %
1	Preliminary Works	246,969,000	246,051,846	99.63%
2	Civil Works	3,765,706,000	1,894,175,930	50.30%
3	Electromechanical Works	1,566,438,000	324,170,189	20.69%
4	Hydro Mechanical Works	1,133,371,000	964,517,087	85.10%
5	Transmission line & Switchyard	474,075,000	96,301,994	20.31%
6	Land Acquisition/ Compensation/Development	127,050,000	88,598,692	69.74%
7	Project Supervision/Management and Engineering	414,549,000	231,267,631	55.79%
8	Construction Design, Drawing and DPR	114,356,000	27,828,568	24.34%
9	Office Building including Camp Facilities	226,479,000	92,713,591	40.94%
10	Office Equipment	40,342,000	14,396,233	35.69%
11	Vehicle	88,990,000	20,228,434	22.73%
12	Infrastructure Development (Temporary and Permanent)	780,470,000	590,824,016	75.70%
13	Environment Mitigation and Social Responsibility	106,680,000	105,489,103	98.88%
14	General Expenses	73,501,000	-	0.00%
15	Loan Documentation Fee	69,685,000	61,638,528	88.45%
16	Interest During Construction	1,349,797,000	255,324,978	18.92%
	Total	10,578,458,000	5,013,526,820	47.39%

Total Share Capital as on 30th Ashwin 2080: - NPR 1,88,82,83,699.00

4.6 Loan Details

Total loan from nine Consortium Banks is **7 Arab 93 Crores**. Loan disbursement during this period is **NPR 3,13,50,12,460.00**

4.7 Planning for the next quarter

- a) Re-establishment of fabrication workshop, relocation of batching plant to Nupche headworks.
- b) Completion of Roof and Masonry wall around the power house.
- c) Delivery of electromechanical machineries and installation on the machine pit.
- d) Infilling works inside vertical shaft.
- e) Completion of concreting and backfilling of Anchor Block (AB) from 3 to 9 and AB 19-23.
- f) Finishing works in the Likhu Headworks
- g) 1st stage river diversion in Nupche headworks.
- h) Start excavation and support works of Surge Shaft.
- i) Excavation of 70% of the Headrace Tunnel.
- j) Completion of 75% of Likhu Headrace Pipe Works.
- k) Completion of 75% of Nupche Headrace pipe works
- 1) Completion of 60% of Penstock Pipe Works.
- m) Installation of gate at Tailrace.
- n) Start concreting of inclined horizontal tunnel.
- o) Erection of 20 nos of towers along transmission line.

ANNEX – 1: SOME PHOTOGRAPHS OF WORK PROGRESS



Erection of Powerhouse Column



Block Production for Exterior wall



Excavation of Tailrace Works



Masonry works at Boundary at Switchyard protection



Loading test of Pipes at vertical shaft



Fabrication of Frames for gates in workshop



Branch pipe installation with saddle support



Fabrication of VS2 Bend

Erection of Bend 12 at penstock



Lowering of pipes



Fitting of pipes



PCC at inclined Tunnel



Masonry works at Penstock



Road Diversion at Penstock



Penstock AB3







Rib installation at Nupche inlet



Likhu Inlet Tunnel Face

Tunnel Face at Outlet



Tunnel Face at Adit D/S



Cavity protection at Likhu Inlet; Chainage 1+029



Nupche Settling Basin





Pipe Transportation at Nupche yard

Nupche Settling Basin



Gravel Trap at Likhu Headworks





Likhu Intake

 $Erection \ of \ Bell \ mouth \ at \ Likhu \ HW$



Likhu Bell Mouth



Likhu Intake Top slab



Fitting of Pipes at Likhu HRP

Painting at Likhu HRP





Field Density Test for Foundation of Transmission line(Left) Placement of rebar in foundation(right)





Foundation pit marking of Transmission line(Left) Excavation of foundation(right)





Concreting at Foundation pit.





Kholsi Debris during Flash Flood

Access Road Blockage



Factory Inspection of Generator

THANK YOU!