

PEGU KHOLA SMALL HYDROPOWER PROJECT (3.45 MW)

Dolakha, Nepal



MONTHLY PROGRESS REPORT

August, 2026

Submitted to:

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Battisputali, Kathmandu-09

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BIGU HYDRO VENTURE PVT. LTD.

Battisputali, Kathmandu-09, Nepal

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1 ACRONYMS & ABBREVIATION

PH	Power House
PKSHPP	Pegu Khola Small Hydropower Project
amsl	above mean sea level
L	Length
B	Breadth
H	Height
GWh	Giga-Watt hour
MW	Mega-Watt
W	Width
HPP	Hydropower Project
HRT	Head Race Tunnel
PH	Powerhouse
CDO	Chief District Officer
DAO	District Administration Office
JV	Joint Venture
HW	Headworks

2 INTRODUCTION

2.1 Project background

Pegu Khola Small Hydropower Project (PKSHP) was identified by Bigu Hydro Venture Pvt. Ltd. (BHVPL) following a reconnaissance study undertaken by the company. Initially, the survey license, with license number Bi. Bi. Bi. 072/73 Bi. Uh. Sa. 709, was issued by the Ministry of Energy, Water Resources and Irrigation (MoEWRI) through the Department of Electricity Development (DoED) on the 3rd Poush, 2072 BS (18th December 2015), for an installed capacity of 3 MW under the name of Ms. Sabitri Shrestha. The license was subsequently renewed on the 5th Poush, 2074 BS (20th December 2017 AD), and transferred to Bigu Hydropower Venture Pvt. Ltd. on the 13th of Chaitra 2074 BS (27th March 2018 AD). The Company also received the generation license Bi.Bi.Bi.077/78 Bi. U.311 for the Project on 11th Bhadra 2077 B.S (27th August, 2020 A.D). A Power Purchase Agreement (PPA) between BHVPL and NEA has also been signed on 30th Ashad 2079 BS (14th July, 2022 AD) for installed capacity 3 MW.

This project area is located at Bigu Rural Municipality, Dolakha District, Bagmati Province (formerly Janakpur Zone, Central Development Region), Nepal. The project area lies within Gaurishankar Conservation Area. Geographically, the Project is located between latitude 27° 49' 22" N to 27° 50' 18" N and longitude 86° 04' 59" E to 86° 03' 21.5" E. Physio- graphically the project area lies in Lesser Himalaya sequence of central Nepal. The entire project structure: Headworks, waterway alignment and powerhouse lie along the right bank of Pegu River. The proposed project site can be reached from Kathmandu via Araniko highway up to Charikot (133 km black topped) followed by 47.5 km black topped road up to Singati. From Singati Bazaar, a 25 km long gravel/earthen road continues to Sorung Bazaar. The project site is currently accessible up to the powerhouse area from the Sorung Bazar which is about 5 km.

The power generated from the plant will be evacuated by an approximately 2 km long 33 kV single circuit transmission line to the switchyard of the downstream project Sagu Khola-1 Hydropower Project (5.5 MW). From thereon, the power is evacuated along with power generated from the 10 MW Mathillo Sagu Khola Small Hydropower Project to the switchyard of 20 MW Sagu Khola Hydropower Project which is then finally transmitted to NEA substation at Singati via 132 kV transmission line.

The Financial Closure has been concluded with NIFRA Bank on 2082/3/5. Apart from Financial Closure, BHVPL is continuously working on technical parts towards the Detail Design and Award of Contracts. BHVPL is also involved in acquisition of private land and development of infrastructures like access road and camp facilities of the Project.

2.2 Salient Features

General

Project Name	Pegu Khola Small Hydropower Project
River	Pegu Khola
Type of Scheme	Run of River (RoR)
Project Location	Dolakha
Province	Bagmati
Municipality	Bigu Rural Municipality
Latitude	27° 49' 22" N to 27° 50' 18" N
Longitude	86° 04' 59" E to 86° 03' 21.5" E

Organization

Developer	Bigu Hydro Venture Pvt. Ltd.
Consultant	Sanima Hydro and Engineering Pvt. Ltd.

Hydrology

Catchment Area at Intake	23.55 km ²
Catchment Area at Powerhouse	31.58 km ²
Design Discharge	1.76 m ³ /s at 42.42% PoE
Annual Average Discharge	2.47 m ³ /s
Minimum Environmental Release	20% of each monthly flow
Flood Discharge at Intake (100 years)	22.85 m ³ /s
Flood Discharge at Powerhouse (100 years)	29.30 m ³ /s
Construction Flood Discharge at Intake (20 years)	12.33 m ³ /s
Construction Flood Discharge at Powerhouse (20 years)	16.54 m ³ /s

Geology

Regional Geology	Lesser Himalayan Region
Major Rock Types in Headworks	Schist
Major Rock Types in Waterways	Schist intercalated with Phyllite
Major Rock Types in Powerhouse	Metasandstone intercalated with Phyllite

Structures**Weir**

Type	Boulder Lined
Length	8.00 m
Height	6.00 m
Crest Level	2065.40 m amsl

Intake

Type	Side Intake
Number of Orifice	2
Size (B X H)	1.40 m X 1.00 m
Invert Level of Orifice	2063.60 m amsl

Undersluice

Number of Orifice	1
Size (B X H)	2.00 m X 1.50 m
Invert Level	2062.08 m amsl
Steel Lining	MS Plate, 10mm thick

Settling Basin

Type	Surface
Size of Particle to Settle	0.2 mm
Settling Efficiency	100% (Camp's Efficiency)
Number of Bays	2
Inlet Transition length	17.00m
Settling basin size (LXBXH)	25MX3.53MX1.90M each

Headrace Pipe

Type	Surface/Buried
Material	Mild Steel of E250 grade
Length	2096.47 m
Internal Diameter	1.15m, 1.10 m
Thickness	6 mm to 8mm

Surge Pipe

Type	Surface/Buried
Material	Mild Steel of E250 grade
Length	88.70 m
Internal Dia	1.95m, 2.00m
Thickness	10mm
Up Surge level	2072.22 m amsl

Type	Surface/Buried
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Penstock

Type	Surface/Buried
Material	Mild Steel of E250 grade
Length	564.80 m
Internal Dia	1.0m
Thickness	6mm to 16mm

After Bifurcation

Length	18.20 m each
Diameter	0.72m
Thickness	14mm

Powerhouse

Type	Surface
Length	28.00 m
Breadth	16.50 m
Height	18.80 m

Tailrace

Type	Surface
Number of bays	1
Size (LXBXH)	31.0Mx2.3mx2.0m
Number of drops	8
Height of each drop	1.5m

Turbine

Type	Horizontal Axis Pelton turbine
Number of Units	2
Rated Output per Unit	1725 kW
Rated Net Head	230.74 m
Discharge per unit	0.882 m ³ /sec
Speed	750 rpm
Turbine axis level	1826.90m amsl

Turbine Efficiency	90%
Generator	
Type	3-phase Brushless Synchronous
Number of Units	2
Rated Output per Unit	2029 kVA
Frequency	50 Hz
Power factor	0.85
No of pole	10
Speed	750 rpm
Generator Efficiency	96%

Transformer

Type	Step-up Transformer
Number of Units	1
Rating of Each Unit	3,600 kVA
Rated Voltage	6.6/33 kV
Transformer Efficiency	99%

Switchyard

Type	Outdoor type
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Transmission Line

Transmission Voltage	33 /132 kV
Length from Switchyard to Sagu Khola-1 HPP (5.5 MW)	2 Km
Connection Point-1	SK-1 HPP
Length from SK-1 HPP to Sagu Khola HPP (20 MW)	6.5 Km
Connection Point-2	SKHPP

Power & Energy (As per PPA)

Gross Head	238.50m
Net Head	230.74m
Installed Capacity	3.45 MW
Dry Season Energy	2.99 GWh
Wet Season Energy	16.96 GWh
Total Annual Energy	19.95 GWh

3 INSTITUTIONAL ARRANGEMENT

Following entities constitute the whole institutional arrangement of Pegu Khola Small Hydropower Project having installed capacity of 3 MW:

1. **Employer** : Bigu Hydro Venture Pvt. Ltd. (BHVPL)
2. **Design Consultant** : Sanima Hydro Engineering Pvt. Ltd (SHEPL)
3. **Supervision Consultant** : Hydro Engineering and Energy Solution Pvt. Ltd. (HEESPL)
4. **Civil Contractor** : Singha Bahini Construction Pvt. Ltd. (SBCPL)

5. **Hydro-Mechanical Contractor:** Sahara Construction and Engineering Works Pvt.Ltd
6. **Electro-Mechanical Contractor:** Gepert Hydro India Pvt.Ltd.

4 KEY DATAS

- Survey License Awarded: 3rd Poush 2072 BS (18th December 2015)
- Renewal of Survey License: 2017
- EIA Study approved: jan-2020
- Grid Connection Agreement: 25th Kartik 2075 BS (11th November 2018 AD).
- Generation License Obtained: 11th Bhadra 2077 B.S (27th August, 2020 A.D).
- PPA Signed: 30th Ashad 2079 BS (14th July, 2022 AD)

5 RESOURCES AT SITE

5.1 Human Resources

Human Resources deployed at site (*Bigu Hydro Venture Pvt. Ltd.*)

SN	Designation	Nos.	Site
1	CEO	1	HO/Project
2	Resident Engineer	1	Project
3	PRO	1	Project
4	Social Mobilizer	1	Project
5	Light Driver	2	Project
6	Cook	1	Project
	Total	6	

Human Resources deployed at site (*Hydro Engineering and Energy Solution Pvt. Ltd.*)

SN	Designation	Nos.	Site
1	Sr. Surveyor	1	Project
2	Surveyor/Civil Overseer	1	Project
3	Office Helper	1	Project
	Total	3	

Human Resources deployed at site (*Singha Bahini Construction Pvt. Ltd.*)

SN	Designation	Nos.	Site
1	Construction Manager	1	Project
2	Sr. Civil Engineer/Billing Engineer	1	Project
3	Civil Overseer	1	Project

4	Surveyor	1	Project
5	Electrician	2	Project
6	Operator	1	Project
7	Store In-charge/Sr. Store Keeper	2	Project
8	Cook	1	Project
9	Skilled/Unskilled Labours	16	Headworks
	Total	26	

Human Resources deployed at site (For Civil Construction)-Sub Contractor La Nirman Sewa.

SN	Designation	Nos.	Site
1	Civil Supervisor	1	Headrace Pipe Line
2	Skilled/Unskilled	15	Headrace Pipe Line
3	Foreman/Supervisor	0	Headrace Pipe Line
4	Operator	1	Headrace Pipe Line
	Total	17	

Human Resources deployed at site (For Civil Construction)-Sub Contractor G.K Shree Construction Pvt.Ltd.

SN	Designation	Nos.	Site
1	Civil Supervisor	3	Project
2	Skilled/Unskilled	24	Project
3	Foreman/Supervisor	0	
	Total	27	

Human Resources deployed at Site (Sanjay Construction Company Pvt. Ltd)

S.N	Designation	Nos.	Site
1	Operator	1	Project
	Total	1	

Human Resources deployed at site (Sundrawati Construction Pvt. Ltd.)

SN	Designation	Nos.	Site
1	Operator	1	Project
2	Helper	1	Project
	Total	2	

5.2 Plant and Equipment**Status of Plant and Machineries at site**

SN	Plant and Machinery	Unit	Quantity	Status
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A	Transportation Vehicles			
1	Pick Up	Nos.	2	Working
2	Motorbike	Nos.	2	Working
3	Tractor	Nos.	1	Working
B	Construction Equipment			
1	Excavator	Nos.	4	Working
2	Breakers	Nos.	3	Working
3	Concrete Mixture (2 bag)	Nos.	2	Working
4	Rebar Cutting Machine	Nos.	1	Working
5	Rebar Bending Machine	Nos.	2	Working
6	Crusher Plant	Set	1	Under Construction at Galphu
7	Monkey Jumper	Nos	1	Working
C	Stationary Equipment			
1	Printer	Nos.	2	Working
D	Surveying Equipment			
1	Total Station	Nos.	2	Working
2	Tri Brach	Nos.	2	Working
3	Auto Level	Nos.	1	Working
4	Tripod	Nos.	5	Working
5	Prism/Pole/Clamp	Set	4	Working
6	Mini Prism	Set	1	Working
7.	Levelling Staff	Nos.	1	Working
E	Electric Equipment			
1	Submersible Sludge Pump-4"	No.s	2	Working
2	Submersible water Pump-2"	No.s	2	Working
3	Submersible water Pump-6"	No.s	1	Working
F	Laboratory Equipment			
1	Compressive Test Machine (CTM)	Set	1	Working
2	Oven	No.s	1	Working
G	Miscellaneous Machine			

5.3 Material Stocks

Materials stock at Site

SN	Description	Unit	Opening Balance	Received	Used	Closing Balance
A	Cement					
1	OPC	Bags	897.00	2247.00	2689.00	455.00
2	PPC	Bags	-	-	-	-
B	Reinforced Steel Bar					
1	Binding Wire 1.6 mm	Kg.	462.00		350.00	112.00
2	Rebar 8 mm	Kg.	0.00			
3	Rebar 10 mm	Kg.	0.00			
4	Rebar 12 mm	Kg.	10733.50	12822	10260.00	13295.50
5	Rebar 16 mm	Kg.	33,130.21	2016	21000.00	14146.21
6	Rebar 20 mm	Kg.	26699.50		25000.00	1699.50
7	Rebar 25 mm	Kg.	8630.30		5000.00	3630.30
8	Rebar 28 mm	Kg.				
C	Aggregates at Site					
1	Sand	m ³				
2	Aggregate	m ³				
D	Fuel					
1	Diesel	Ltr.	2500.00	10744.00	10939.00	2305.00
2	Petrol	Ltr.	0.00	50.00	30.00	20.00
E	Chemical for Concrete					
1	Accelerator	Kg.	-	-	-	-
2	Admixtures	Kg.	-	-	-	-
3	Super Flow	Kg.	-	-	-	-
4	Micro Silica	Kg	0.00	-	-	-
5	Super plasticizer	Kg.	240.00	-	-	240.00
F	M/S Steel Pipe					
1	Headrace Pipe/Penstock/Bend	Nos.	1290.00	-	-	1290.00
2	Bend fabrication	Nos.	10.00	-	-	10.00
3	Bifurcation	Nos.	-	-	-	-
4	Surge Pipe	Nos.				

6 MOBILIZATION AND DEMOBILIZATION

S.N.	Description	Status	Remarks
A	Access Road at Headworks	Completed	
B	Camp Facilities	Completed	
C	Construction Power Line at Headworks	Completed	
D	Construction Power Line at Powerhouse	Completed	
E	Main Civil Works	On-Going	
F	HM Works	On-Going	
F	EM Works	On-Going	
G	TL Works	On-Going	

7 WORKS PROGRESS

7.1 Pre-Construction Works

Camp Facilities, Access Road and construction powerline

The construction of the camp facilities in the headworks area (Doppa Camp) and powerhouse area (Chapsing Camp) construction with CGI Barricaded buildings had completed.

The site access road from main road to Headworks has been completed along Headrace Pipe alignment, it joins headwork and powerhouse site. The site access road has been already handed over to the Main Civil contractor for repair and maintenance.

The main access road (Singati to site) maintenance is ongoing (upgrading as per required).

The national-grid connected Nepal Electricity Authority (NEA) Substation at Singati has been providing all the power necessary for the construction of the Project. The Construction power line at Headworks and powerhouse had completed and Pipe line had partially completed.

7.1.1 Access road

S.N.	Description	Unit	Total Scope	Total Excavation Chainage		Total Progress %	Status
				From	To		
1	Main Road to HRP	m				100.00%	Completed
2	HRP Section	m	2100.00			100.00%	Completed
3	Penstock Pipe	m					
4	Powerhouse Section	m	250.00			100.00%	Completed

7.1.2 Protection Works at Access Road

S.N.	Description	Unit	Total completed Quantity this month	Gabion Installation		Status
				Chainage		
				From	To	

1	Main Road to HRP	m ³				
2	HRP Section	m ³				
3	Penstock Pipe/Powerhouse Section	m ³				

7.1.3 Camp Facilities

S.N	Description	Area m2	Status
1	Employer's Camp (Powerhouse)	348.00	Completed
2	Staff Camp (Headworks)	103.39	Completed
3	Labor's Camp (Headworks)	180.00	Completed
4	Labor's Camp (Powerhouse)	150.00	Completed

7.1.4 Land Acquisition

S.N	Descriptions	Unit	Total Area to be Acquired	Total Area Acquired Previous Month	Total Area Acquired This Month	Total Land Acquisition Completed	% Completed
1	Headworks	Ropani					
2	HRP	Ropani	64.34			64.34	100.00%
3	Surge Pipe	Ropani	6.51			6.51	100.00%
4	Penstock, Powerhouse, Tailrace & Switchyard with road	Ropani	44.89			33.95	75.63%
5	Access Road	Ropani	5.61			5.61	100.00%
6	Camp	Ropani	0.68			0.68	100.00%
7	Intake Kholsi	Ropani	4.00			4.00	100.00%
<i>Note: Kitta no 013, 37, 43, 463, 464, 513 and 514 already sign the agreement papers</i>							
48.00 ropani of land has been acquired as replacement land for GCAP							

7.1.5 Construction Power

S.N.	Description	Location	Status
1	Headworks	Gaklakte to Doppa	Completed
2	HRP/Penstock	Doppa to Chapsing	Completed
3	Powerhouse	Chapsing	Completed

7.1.6 Laboratory setup

S.N.	Description	Location	Status
A	Establishment		
1	Civil Works	Headworks/Powerhouse	Completed
2	Equipment Purchase	Headworks/Powerhouse	Completed

7.2 Communication Facilities

S.N.	Description	Location	Status
1	Powerhouse Camp		Completed
2	Headworks Camp		Completed

7.3 Health and Safety

S.N.	Description	Location	Status
A	Camp		
1	Employer's Camp		Ongoing
2	Headworks Camp		Ongoing
B	Provision of personnel protective equipment.		
1	Headworks		Ongoing
2	HRP/Penstock		Ongoing
3	Powerhouse		Ongoing

7.4 Water Supply and Sanitation

S.N.	Description	Location	Status
1	Employer's Camp		Completed
2	Headworks Camp		Completed
3	Headworks Labor's Camp		Completed

7.5 Main Civil works

7.5.1 Weir, Under sluice and Flood Wall

No any activity at weir and under sluice due to monsoon season. Under sluice panel-1 has been completed, Panel-2 flood wall has been completed and gate hosting portion is ongoing, Panel 2,3,4 bed at river side wall has been completed, panel 3,4 and 5 at hill side wall is completed Hard stone Lining at panel-3 has been completed and panel-4 & 5 is ongoing. Weir concrete portion has been already completed.

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Site Clearance	m ²	607.92	607.92	0.00	607.92	100.00%
2	Common Soil Excavation	m ³	308.18	308.18	0.00	308.18	100.00%
3	Overburden Boulder Mixed Soil Excavation	m ³	1232.73	1232.73	0.00	1232.73	100.00%
4	Hard rock Excavation	m ³	840.25	840.25	0.00	840.25	100.00%
5	C15 Concrete	m ³	136.53	13.46	0.00	13.46	9.85%
6	C25/C35 Concrete	m ³	566.79	381.13	0.00	381.13	67.24%
7	Reinforcement	Ton	52.91	49.58	0.00	49.58	93.71%
8	Formwork	m ²	1309.05	862.76	0.00	862.76	65.90%

7.5.2 Intake, Gravel Trap and Spillway

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Site Clearance	m ²	150.10	150.10	0.00	150.10	100.00%
2	Overburden Boulder Mixed Soil Excavation	m ³	512.30	450.15	0.00	450.15	87.86%
3	Hard rock Excavation	m ³	72.50	69.33	0.00	69.33	95.62%
4	C15 Concrete	m ³	6.48				
5	C25 Concrete	m ³	141.96				
6	C35 Concrete	m ³	0.00				
7	Reinforcement	Ton	13.37				
8	Formwork	m ²	564.22				

7.5.3 Approach Canal

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Site Clearance	m ²	85.92	85.92	0.00	85.92	100.00%
2	Overburden Boulder Mixed Soil Excavation	m ³	234.68	150.35	0.00	150.35	64.06%
3	Hard rock Excavation	m ³	120.32	95.75	0.00	95.75	79.58%
4	C15 Concrete	m ³	2.99	1.45	0.00	1.45	48.50%
5	C25 Concrete	m ³	27.86	4.82	0.00	4.82	17.30%

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
6	C35 Concrete	m ³					
7	Reinforcement	Ton	2.19				
8	Formwork	m ²	120.43	7.57	0.00	7.57	6.28%

7.5.4 Settling basin, flushing culvert and Head Pond

Works are ongoing at the headpond. No concrete pouring was carried out at the headpond during this month, with 12.43 m³ of concrete poured. Installation of the settling basin outlet gate frame is ongoing. The headpond bottom raft has been completed.

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	Total % Completed
1	Site Clearance	m ²	1634.34	1634.34	0.00	1634.34	100.00%
2	Common soil excavation	m ³	525.00	482.50	0.00	482.50	91.90%
3	Boulder and gravel mixed soil excavation	m ³	8194.00	7958.34	0.00	7958.34	97.12%
4	Hard Rock / Boulder Excavation	m ³	817.00	580.56	0.00	580.56	71.06%
5	Stone Masonry (1:4 C/S Mortar)	m ³	260.90	255.90	0.00	255.90	98.08%
6	C15 Concrete	m ³	35.21	11.35	0.00	11.35	32.23%
7	C25 Concrete	m ³	343.72	207.84	12.43	220.27	64.08%
8	C35 Concrete	m ³					
9	Reinforcement	Ton	32.38	26.06	1.50	27.56	85.11%
10	Formwork	m ²	1517.81	828.42	93.77	922.19	60.75%

7.5.5 Headrace Pipe, Anchor Block, Saddle Support and Saddle Pier

About 45.85 cum C25 concrete 40% Plum poured at Headrace pipe upto this month.

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Site Clearance	m ²	11804.8	8732.20	0.00	8732.20	73.97%
2	Normal / common soil excavation	m ³	2919.39	2097.91	0.00	2097.91	71.86%
3	Overburden Boulder Mixed Soil Excavation	m ³	16543.2	5640.24	0.00	5640.24	34.09%
4	Hard rock Excavation	m ³	4865.65	4304.71	0.000	4304.71	88.47%

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
5	C15 Concrete	m ³	78.34	1.62	1.50	3.12	3.98%
6	C25 Concrete	m ³	587.75	0.00	2.43	2.43	0.41%
7	C25 Plum Concrete 40%	m ³	1325.72	30.84	45.85	76.69	5.78%
8	Reinforcement	Ton	120.17	1.37	3.27	4.64	3.84%
9	Formwork	m ²	2836.05	28.85	96.29	125.14	4.41%

7.5.6 Surge Pipe and Anchor Block

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Site Clearance	m ²	473.1				
2	Overburden Boulder Mixed Soil Excavation	m ³	499.34				
3	Hard rock Excavation	m ³	195.29				
4	C15 Concrete	m ³	3.539				
5	C25 Concrete	m ³					
6	C25 Plum Concrete 40%	m ³	274.15				
7	Reinforcement	Ton	17.22				
8	Formwork	m ²	1239.93				

7.5.7 Penstock and Anchor Blocks

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Site Clearance	m ²	11804.80				
2	Overburden Boulder Mixed Soil Excavation	m ³	6253.30				
3	Hard rock Excavation	m ³	1525.32	204.06	0.00	204.06	13.38%
4	C15 Concrete	m ³	17.18				
5	C25 Concrete	m ³					
6	C25 Plum Concrete 40%	m ³	717.03				
7	Reinforcement	Ton	45.03				
8	Formwork	m ²	632.97				

7.5.8 Powerhouse and Tailrace

About 205.22 Cum concreting pouring and 5 MT rebar installation at powerhouse machine hall bay-2 this month. Bay 2 machine hall bottom raft, shear wall 1 lift is completed, at bay 1 clearance works is ongoing.

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Site Clearance	m ²	551.08	450.30	0.00	450.30	81.71%
2	Common soil	m ³	273.24	6943.95	0.00	6943.95	289.75%
3	Boulder Mixed Soil Excavation	m ³	2165.3	6943.95	0.00	6943.95	284.13%
4	Hard rock Excavation	m ³	331.25	555.25	0.00	555.25	167.76%
5	C15 Concrete	m ³	358.98	2.00	2.20	4.20	1.17%
6	C25 Concrete	m ³	904.3	101.25	205.22	306.47	33.89%
7	C35 Concrete	m ³					
8	Reinforcement	Ton	177.47	15.00	5.00	20.00	11.26%
9	Formwork	m ²	1544.67	60.00	402.09	462.09	29.92%

7.6 Hydro Mechanical Works (Headrace, Penstock and Surge Pipe)

Total 1476m Headrace/Penstock received at the site till month. Total 241.60 m Headrace Pipe erection completed upto this month.

7.6.1 Headrace Pipe

About 55.60 m of pipe was installed during this month. Pipe shifting and joining of the two pipe sections are ongoing.

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Bends Fabrication	Set	37.00	0.00	10.00	10.00	27.03%
2	Bend Erection	Rm	37.00	2.0	1.00	3.00	8.10%
3	HRP	RM	2092.00	186.00	55.60	241.60	11.55%

7.6.2 Surge Pipe

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Bends	Set					
2	Surge Pipe	RM	82.00				

7.6.3 Penstock Pipe

S.N.	Descriptions	Unit	BOQ Quantity	Quantity Previous Month	Quantity This Month	Total Quantity Completed	% Completed
1	Bends	Set	7.00				
2	Penstock Pipe	RM	520.00				
3	Wyee	Set	1.00				

7.7 Electro Mechanical Works

Earthing strips installation at the machine foundation is completed.

8 VISITORS OF THE MONTH

- Er. Niroj Poudel, CEO, Bigu Hydro Venture Pvt. Ltd. (BHVPL)

9 HEALTH AND SAFETY ISSUES

- No any health issue reported this month.

10 PROBLEM FACES AT THE SITE

- Construction works at the Weir/Under sluice and associated structures have been delay due to earth mass movement and water seepage issues occurring on the hillside.
- Construction works at the Powerhouse have been delay due to earth mass movement and water seepage issues occurring on the hillside.
- Construction Works Progress delay due to monsoon season.
- Head race pipe installation has been delayed due to poor access road conditions along the pipe alignment during the monsoon season.

11 SWOT ANALYSIS

The main aspect of this analysis is to understand the strength, weakness, opportunity and threats of the project work which can be helpful in finding out the value of developing the project's different infrastructures within project boundary.

a) Strength:

The project has a good location and land conditions, making construction easier. Since many hydropower projects are nearby, we can share transmission lines to send electricity to the Singati substation. Construction power is available near to the project site, and there is already a road for transportation, making work faster. Also, because Mathillo Sagu Khola Small Hydropower Project (10 MW) is close, we can share equipment, saving money and time.

b) Weakness:

Social issues may arise as locals have past experiences with hydropower projects, leading to concerns over compensation, environmental impact, and employment. While roads exist, some sections may need upgrades for heavy transport. Limited land availability could require negotiations. The RCOD of our project is less means major construction has not yet started, posing risks of cost escalation and delays if not managed efficiently.

c) Opportunity:

The presence of other hydropower initiatives nearby creates potential avenues for sharing resources, knowledge, and potentially even infrastructure development.

d) Threat:

Heavy rains, landslides, or extreme weather could delay work. Government rules and policies may change, affecting the project's timeline. Some local disagreements over land or jobs could slow progress, so good communication is needed. If construction is delayed, costs may go up over time.

12 CONCLUSION

During the reporting month, satisfactory progress was achieved in the construction of the Pegu Khola Small Hydropower Project (3.45 MW). Significant progress was made in the headworks, including completion of excavation works, continued concreting of the weir and under sluice structures, reinforcement installation, formwork installation, boulder riprap at weir section and hard stone lining works. Excavation activities for the intake and approach canal also advanced substantially.

Along the headrace pipeline alignment excavation works, anchor block concrete pouring works and initial pipe erection activities progressed gradually.

Hydro-mechanical works also advanced with the delivery and erection of headrace and penstock pipes to the site and commencement of pipe erection. Construction camps, access roads, communication facilities, water supply, and construction power systems remain operational and continue to support project activities.

Construction works at the powerhouse experienced delays due to challenging geological conditions, particularly earth movement and groundwater seepage. Prior to encountering these adverse geological conditions, the machine foundation rafts for Bay 1 and had been successfully completed and bay 2 is under construction.

However, construction progress at the headworks and powerhouse was affected by hillside instability, earth movement, and groundwater seepage. Continuous monitoring and timely implementation of stabilization measures will be essential to minimize further delays.

Overall, the project remains under active construction with civil works, hydro-mechanical works, electro-mechanical works, and transmission line works progressing simultaneously. Continued coordination among the Employer, Consultant, Contractors, and stakeholders will be essential to achieve the project milestones within the planned schedule.

13 RECOMMENDATION

1. Expedite stabilization and protection works in areas affected by earth movement and groundwater seepage to minimize construction delays.
2. Increase manpower and construction resources at critical work fronts, particularly at the powerhouse and headrace pipeline alignment to accelerate progress.
3. Ensure continuous supply of construction materials and equipment to avoid work interruptions.
4. Continue implementing strict health, safety and environmental (HSE) measures with regular safety briefings and proper use of personal protective equipment (PPE).

14 PHOTOGRAPHS



Figure 1: Hedapond Work Progress



Figure 2: Hedapond Work Progress



Figure 3: Hedapond Work Progress



Figure 4: HRP Kholsi crossing.



Figure 5: Headworks works progress.



Figure 6: Headrace pipe Anchor blocks.



Figure 7: HRP erection is ongoing,



Figure 8: Powerhouse Machine hall rebar works.



Figure 9 : Power House Work Progress.



Figure 10: Powerhouse machine hall bay-02



Figure 11: Powerhouse works Progress (Shear wall formworks)



Figure 12: Powerhouse Works Progress (Bay 1&2 machine hall raft)



Figure 13: Powerhouse Works Progress.



Figure 14: 33/132KVA sub station protection works at shoring khola.