

PEOPLES ENERGY LIMITED
KHIMTI-2 HYDROELECTRIC PROJECT
(48.8 MW)



PROGRESS REPORT

June 2026

PEOPLES ENERGY LTD.

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LIST OF ABBREVIATIONS

PEL	Peoples Energy Ltd.
PHCL	Peoples Hydro Co-operative Ltd.
PPA	Power Purchase Agreement
NEA	Nepal Electricity Authority
K2HEP	Khimti-2 Hydroelectric Project
HEP	Hydroelectric Project
MW	Mega Watts
RCOD	Required Commercial Operation Date
HCE	Hydro-Consult Engineering Limited
CWTW	Chongqing Water Turbine Works Co. Ltd.
IEE	Initial Environmental Examination
EPC-F	Engineering Procurement Construction-Financing
TOR	Term of Reference
LC	Letter of Credit
FC	Financial Closure
DFO	District Forest Office
KV	Kilo Volt
PH	Power House
MoU	Memorandum of Understanding
BDR	Basic Design Report

CHAPTER – 1 PREAMBLE

1.1 Introduction

Peoples Energy Limited is developing Khimti-2 Hydroelectric Project (48.8 MW) located in the border of Ramechhap and Dolakha districts of Bagmati Province. Khimti River is a tributary of Tamakoshi a major branch of Saptakoshi river system of Nepal. The Khimti River originates at EL. 4500m and converges with the Tamakoshi River at EL. 600m. The total drainage area of the Khimti River is 492.4km², and the drainage area in front of the intake and powerhouse is 295.34km² and 351.4km² respectively. The river section from the dam site to powerhouse is about 7km long. The ridges on both banks are at EL. 2,300~3,000m; the riverbed at the dam is at EL. 1,627m; the riverbed at the powerhouse tailrace is at EL. 1,278m. The run-of-river development scheme is selected.

The headworks site is located at Rasnalu/Gokulganga Rural Municipality of Ramechhap and Jiri Municipality of Dolakha district whereas the powerhouse site is located at Simlep and Hawa/Tamakoshi Rural Municipality of Dolakha District. The headwork is located about 150m downstream the confluence of Jiri Khola and Khimti Khola with headrace alignment passing along the right bank of Khimti Khola and powerhouse site also located on the right bank.

Geographical Coordinates of Khimti-2 Hydroelectric Project

Coordinates	From	To
Latitude	27°33'07"N	27°35'13"N
Longitude	86°09'26"E	86°14'18"E

1.2 Objective of this report

Objective of this report is;

- To update the status of various development activities completed and being undertaken in implementation of 48.8 MW Khimti-2 Hydroelectric Project.
- To update the status of schedules and planning
- To bring forward the difficulties & issues being faced / envisaged at site to the notice of concern authorities and stakeholders

1.3 Key Dates and Milestones

S/N	Activity	Date	Remarks
1.	Survey License Issuance (27.2 MW)	2069 Kartik 15	Closed
2.	Feasibility Study Completed (48.8 MW)	2070 Falgun	Closed
3.	Updated Survey License Issuance (48.8 MW)	2070 Chaitra 7	Closed
4.	IEE ToR Approval	2071 Bhadra 28	Closed
5.	Grid Connection Agreement	2071 Kartik 13	Closed
6.	IEE Report Approval	2072 Kartik 22	Closed
7.	Power Purchase Agreement (PPA) with NEA	2072 Ashwin 14	Closed
8.	Application for Generation License	2072 Kartik 11	Closed
9.	Public Notice of Generation License	2073 Kartik 9-10	Closed
10.	Generation License Issuance	2073 Paush 25	Closed
11.	Generation License Transfer from PHCL to PEL	2073 Falgun 5	Closed
12.	Land Transfer from PHCL to PEL	2074 Jestha 11	Closed
13.	IEE Report Approval transfer from PHCL to PEL	2074 Ashoj 2	Closed
14.	PPA Transfer from Peoples Hydro to Peoples Energy Limited	2074 Ashad 22	Closed
15.	Financial Closure	2074 Ashoj 8	Closed
16.	Updated IEE Report	2076 Poush	Closed
17.	Civil work contract signing with High Himalaya Hydro Construction Pvt. Ltd.	2077 Mangsir 15	Closed
18.	Design Consultant Contract signing with Hydro Tunneling and Research Pvt. Ltd.	2077 Mangsir 25	Closed
19.	Civil Contractor mobilization to site	2077 Poush 14	Closed
20.	Shifting of Grid Connection Point for Power Evacuation to (loop-in, loop-out Substation at	2078 Magh	Closed

	Bhimsensthan, Ramechhap with S/C 132 kV line near PH site)		
21.	Forest and Government Land Approval/Cabinet approval	2078 Jestha	Closed
22.	Explosive License	2078 Ashad	Closed
23.	132 KV Transmission Line IEE Approval	2080 Ashoj 12	Closed
24.	132 KV Transmission Line Survey License	2079 Asar 23	Closed
25.	132 KV Transmission Line Survey License (1 st Amendment)	2079 Magh 4	Closed
26.	132 KV Transmission Line Generation License	2081 Ashad 10	Closed
27.	132 KV Transmission Line Land Acquisition		Closed
28.	Contract award to Global Hydro GmbH for Electromechanical Works	2078 Falgun 10	Closed
29.	Contract awarded to CBMEW Pvt. Ltd for HM works (Gates and hoists)	2078 Falgun 25	Closed
30.	Contract awarded to Cream-KHS JV for HM works (Penstock, bifurcation and expansion joint)	2079 Baisakh 20	Closed
31.	Contract awarded to Royal Construction Pvt. Ltd for Transmission Line Construction Works	2080 Bhadra 20	Closed
32.	Generation License Amendment	2080 Karthik 1	Closed
33.	Required Commercial Operation Date (RCOD)	2081 Shrawan 17	Closed

1.4 Bank Consortium

Financial closure (FC) for the development of Khimti-2 HEP was concluded with the bank consortium of erstwhile ten Class 'A' Commercial Banks of Nepal with Sanima Bank as the lead bank, on September 24th, 2017.

1.5 The Employer

Peoples Energy Ltd. (PEL), previously Peoples Hydro Co-operative Ltd. (PHCL), is the developer of Khimti-2 Hydroelectric Project, situated at Dolakha and Ramechhap districts. PEL obtained the survey license for the project on 2012/10/31. After, feasibility level investigation was concluded and the Power Purchase Agreement (PPA) was signed with Nepal Electricity Authority (NEA) on 2015/10/01. Generation license was obtained for the project on 2017/01/06 by PHCL, and later transferred to PEL on 2017//02/16.

1.6 Local Contractors for Site Infrastructures

PEL has engaged several local contractors for the construction of site infrastructures as pre-construction activities such as access track opening and slope protection works for Access Road, drainage and stone soling for improvement of Access Road, Project Camp, Boundary wall construction and construction of three motorable bailey bridges etc. To execute the mentioned works PEL has engaged some of the local contractors employed at site are:

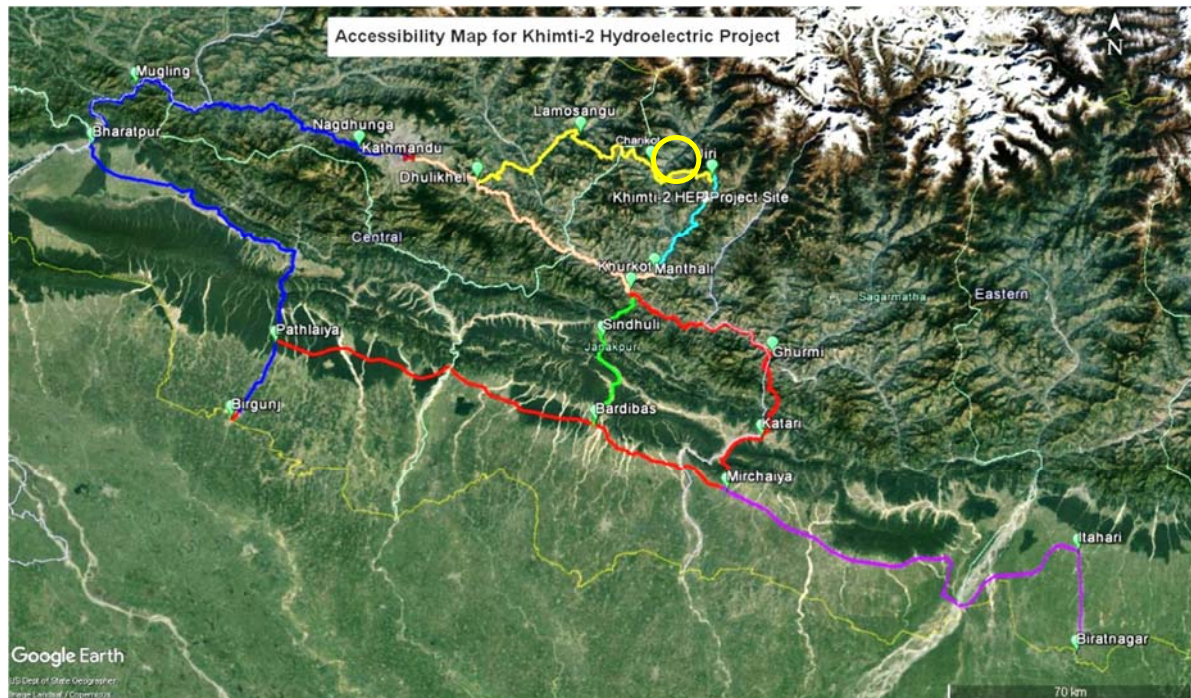
- **For Bridge Construction (Three bridges over Khimti Khola)**
 - S.K. Construction (for Dharapani Bridge at Dam Site)- Bridge I
 - Likhu Nirman Sewa (for Hodampa Bridge for HRT adit site)- Bridge II
 - Him Sagarmatha Construction (for Palate Bridge/PH site)-Bridge III
- **For Road Access and Gabion Works**
 - Bhimeshwor Nirman Sewa
 - Chandrama Nirman Sewa
 - Dangdunge Nirman Sewa
 - Dharmasthali Suppliers
 - Dipshree Construction
 - Greenland Construction
 - Khani Nirman Sewa
 - Kritim Nirman Sewa
 - Likhu Nirman Sewa
 - Moti Construction Pvt. Ltd.
 - New Jagriti Nirman Sewa
 - Peoples Nirman Sewa
 - Prakriti Nirman Sewa
 - Rambole Construction Pvt. Ltd.
 - Serakali Builders Pvt. Ltd.
 - Seti Bhumi Nirman Sewa
 - Sunuwar Nirman Sewa
 - Jiri Nirman Sewa
 - Mama Bhanja Construction
 - Jatteshwor Nirman Sewa
 - Evergreen Construction
- **For Camp Construction**
 - Edgemark Consultancy Pvt. Ltd.
 - Jyoti Shree Interior Pvt. Ltd.
- **Transmission Line-Construction Power**
 - New Satakri Khimti Construction Pvt. Ltd.

1.7 Access to the Site

The project site is accessible from Kathmandu by the following roads:

- i. Kathmandu – Dhulikhel - Dolalghat – Lamosangu - Charikot - Jiri – Headworks site (198 km length)

- ii. Kathmandu – Dhulikhel – Nepalthok – Khurkot – Manthali – Khimti – Betali – Bhimsenthan – Powerhouse site (174 km length)



CHAPTER – 2 TECHNICAL FEATURES OF THE PROJECT

2.1 Salient Features of the Project

Project Name:	Khimti -2 Hydroelectric Project
Installed Capacity:	48.8 MW
Type of Project:	Run off River (ROR)
Location:	Jiri Municipality and Tamakoshi Rural Municipality of Dolkha District (Previous Jiri, Thulopatal and Hawa VDC) of Dolkha District) Gokulganga Rural Municipality of Ramechhap District (Previous Rasnalu VDC of Ramechhap District)

Comparative Salient Features of the Project:

Project Features	Features Details	Remarks
General		
Project Boundary	27°33'07"N to 27°35'13"N 86°09'26"E to 86°14'28"E	
Gross Head	351.5m	
Rated Head	341.643m	
FSL	1633.00 masl	
Normal TWL	1275.96 masl	
Minimum TWL	1275.25 masl	
Hydrology		
Turbine Centre Line	1279.3 masl	
Catchment area at Intake site	317.94 km ²	
Catchment area at Powerhouse	351.4 km ²	
Average Flow	27.36 m ³ /sec	
Minimum Monthly flow	4.45m ³ /sec	
Design Discharge(Q ₄₀)	16.11 m ³ /sec	
Design flood at intake site (Q ₁₀₀)	1165 m ³ /sec	
Design flood at intake site (Q ₁₀₀₀)	1439 m ³ /sec	
Diversion Structure		
Type of diversion structure	Ogee weir with U/ S vertical face and under sluice gates	
D/S Slope	1:0.7	
Weir crest level	1633.00masl	
Crest length of Ogee section	7.50 m	
Total Crest Length of Weir	7.50 m	

Width of Weir	7.50 m	
River bed Level	1627.00 masl	
Undersluice		
Length of undersluice base	53m	
Width of undersluice	7.2m	
Dimension of undersluice (L x B)	2 Nos. 5m x 6m	
Undersluice crest level of gate	1628 masl	
Undersluice Gate	Radial gate, 2nos. 3m x 3m	
Stilling Basin		
Stilling Basin for Ogee Weir (L x B)	41.50 m X 38.20 m	
Stilling basin for Undersluice (L x B)	15.7 m*7.20	
Floor level of stilling basin	1623.00 masl	
End level of stilling basin	1623.00 masl	
Intake		
Side Intake orifice	4 nos. 2.3(H) x 3.0(B)	
Invert Level	1630.0 masl	
No. of openings	4	
Intake Discharge	16.11m ³ /s	
Settling Basin		
Location	Surface	
Type	Intermittent conventional flushing	
Number of compartments	2	
Effective length	72.0m	
Total width of basin	19.0 m	
Width of one compartment	8.0 m	
Height in rectangular section	8.0 m	
Side slope of the compartment	1:1	
Flushing system	Intermittent	
Longitudinal slope of flushing channel	1:50	
Invert level at the beginning of flushing channel	1621.10 masl	
Invert level at the end of flushing channel	1620.85 masl	
Width of the flushing channel	1.20 m	

Flushing Culvert (L x H)	2m x 2.5m	
Invert level at the beginning of flushing culvert	1621 masl	
Size	72m (L) x 8.0m (W) x 8.0m (H) 3.4m hopper depth	
Flushing	Gated Box Culvert 1.2m (W) x 1.2m (H) x 60m (L)	
Primary Gravel Trap		
Size (B x H)	8.60m x 8.50m	
Length	20.5m	
Flushing Culvert		
Size (B x H)	1.5m x 1.8m	
Length	21.5m	
Number of culverts	1	
Flushing Gate	Two, 2.1m x 1.8m	
Invert level of Opening	1627.10 masl	
Level at beginning of culvert	1627.10 masl	
Level at Flushing end	1626.67 masl	
Secondary Gravel Trap		
Size (B x H)	8.0m x 8.30m	
Length	18.10m	
Flushing Culvert		
Size (B x H)	1.5m x 1.8m	
Length	28.0m	
Number of culverts	1	
Flushing Gate	Two, 2.1m x 1.8m	
Invert level of Opening	1626.26 masl	
Level at beginning of culvert	1626.26 masl	
Level at Flushing end	1625.14 masl	
Water Conveyance System (Headrace Tunnel)		
Shape of Tunnel	Inverted D type	
Length	6.321 km	
Finish Diameter	3.50m	
Finish Height	3.90m	
Gradient of HRT	1:500	
Tunnel Portal Level	1621.80 masl	
Surge shaft bottom	1599.80 masl	

No. of bends in HRT	7	
Support	Shotcrete and Concrete lining	
Adit Tunnels		
No. of Adit Tunnels	3	
Total Length of Adit Tunnel	522.67 m	
Diameter	4.40m (W) x 4.55m (H)	
Shape	Inverted D type	
Phulping Adit		
Adit -1 Length	284m	
Adit -1 HRT junction chainage	3+383.25m	
Adit -1 Portal level	1615.00 masl	
Hawa Adit		
Adit -2 Length	200m	
Adit -2 HRT junction chainage	6+784.6m	
Adit -2 Portal level	1580.00 masl	
Adit -3 Powerhouse Area		
Adit -3 Length	40m	
Adit -3 HRT junction chainage	7+473.55m	
Adit -3 Portal level	1278.52 masl	
Pressure Shaft/Tunnel		
Diameter	2.3m	
Total Length (with bends)	954.23m	
Valve house to VIP-1	53.95m	
Vertical Shaft-1 (VS-1)	157.39m	
Surface Penstock Length	207m	
Vertical shaft-2 (VS-2)	67m	
Pressure shaft up-to Manifold (From VS-2)	110.65m	
Diameter of pressure after manifold	1.3m	
Lining	Shotcrete wire mesh and bolts lining	
Surge Shaft		
Diameter	6 m	
Shape	Circular	
Height	65m	
Surge Tunnel –HRT junction chainage	6+719.05m	

Invert level of surge tunnel junction	1599.80 masl	
Invert level of ventilation tunnel portal	1667 masl	
Powerhouse		
Type of Power house	Surface	
Powerhouse cavern dimension (l x B x H)	45m (L) x 16m (W) x 32m (H)	
Turbine Axis Level	EL. 1279.30 masl	
Machine floor level	EL. 1283.42 masl	
Tailrace		
Type	Free Flow Box Culvert	
Length	209.26m	
Shape	Rectangular	
Size	Culvert: 4.00m (B) x 2.5m (H)	
Outlet Level	1275.25 masl	
Turbine		
Type of turbine	Pelton	
Shaft configuration	Vertical Axis	
No. of turbine	3	
Turbine Output	16.451 MW per unit	
No of nozzle	6	
Rated speed	600 rpm	
Rated Efficiency	91.0%	
Generator		
Type	Synchronous 3 Phase	
Rated Power	19.176 MVA	
Rated output capacity per unit	16.267 MW	
Power Factor	0.85	
Voltage	11kV	
Frequency	50 Hz	
No. of Units	3	
Efficiency	97.6%	
Transformer		
No. of Transformer	2 Nos., three-phase	
Capacity	30/31.5 MVA ONAN/ with fan	
Voltage ratio	11/132 kV	

Efficiency	99.3%	
Transmission line		
Length	Approx. 2 km to Loop in Loop Out Switching Station at Bhimsensthan Constructed to evacuated its power on NEA Double Circuit 132 KV TL (Going from Garjyang to 220/132KV Substation at New Khimti)	
Connection	Loop In Loop Out Switching Station at Bhimsensthan	
Type	132 kV, Single circuit	
Cable	ASCR, Bear	
Power and Energy Generation		
Wet Energy	219.5 GWh	
Dry Energy	40.8 GWh	
Total Energy	260.3 GWh	
Firm Energy	107 GWh	
Financial		
Total Project cost	NRs. 8.646 billion	
Revenue	NRs. 1.4 billion	
B/C Ratio	1 .41	
IRR	16.01 %	
Access to the site		
Kathmandu- Charikot – Jiri	198 km (188 km blacktopped)	
Jiri to Dam site	11 km Gravel Road	
Dam Site to Powerhouse site	16 km Gravel Road	
Birgunj-Bardibas-Khurkot-Manthali-Kirnetar/Khimti	290 km	
Khimti to Powerhouse site	27 km Gravel Road	

Progress CHAPTER – 3 PROGRESS DETAILS

3.1 Summary on Construction of Site Infrastructures

S/N	Project Activity	Description	Status/Progress
CONTRACTOR/CONSULTANT'S PROGRESS			
1.	Civil Construction work	High Himalaya Hydro Construction (3HC)	- Contract Signing on 30th November 2020 with High Himalaya Hydro Construction (3HC) - Contractor Mobilized to site on 17th March 2021 - Army mobilized to site on 15th June 2021
2.	Design Consultant	Hydro Tunneling and Research	- Contract Signing on 10th December 2020 with Hydro Tunneling and Research - IFC drawings of various Civil Components are being issued. Total 125 IFC drawings have been issued. - Balance design work along with structural design is ongoing.
3.	Electromechanical works	Global Hydro GmbH	Contract signing of EM works done at 22nd February 2022.
4.	Hydromechanical Works	- CMW India - Cream KHS JV	- Contract signing between CBM India and Peoples Energy Limited for the entire gates and hoists as hydromechanical components of headworks on 9th March 2022 - Contract signing between Cream KHS JV and Peoples Energy Limited for the complete works of penstock and accessories on 3rd of May 2022
5.	132 KV Transmission Line works	Royal Construction Pvt. Ltd	- IEE final report has been approved from Ministry of Energy, Water Resources and Irrigation - Land acquisition works- 100% completed - Rebar, frames for foundation work of dead-end tower at Loop in Loop out Substation received at site. - Contract awarded to Royal Construction Pvt. Ltd on 6th September for Design, Manufacture, Shop test, Supply and Delivery of Plant and Equipment for S/C 132 kV Transmission line.
ACCESS ROAD			

6.	Dharapani to Dam site (Ramechhap side)	• 1.0 km	• 1.0 km of Track opening works – Completed.
7.	Intake-Dharapani Road (Dolakha Side)	• 0.5 km	• 200 m of Track Opening towards intake – completed. • 250 m of access road to Inlet portal completed.
8.	Burke – Hodampa/Phulping (Ramechhap side)	• 2.5 km	• 2.5 km track opening completed Gabion works and Maintenance of Burke-Bhage road- Completed.
9.	Thulopatal – Hodampa/Phulping - Gaighat (Dolakha side)	• 2.0 km	• 2.0 km Track opening, Gravel or Stone paved - Completed.
10.	Hanwa - Palate (Dolakha side)	• 5.5 km	• 5.5 Km Track opening, Gravel or Stone paved – Completed.
11.	Bhimsenthan – Palate/Powerhouse site new track (Ramechhap side)	• 0.5 km	• 0.5 km of Track opening, Gravel or Stone paved – Completed.
12.	Bhimsenthan – Palate/Powerhouse site Old track to be upgraded (Ramechhap side)	• 3.0 km	• Track opening, Gravel or Stone Paved- Completed.
PROJECT CAMP			
13.	Camp Building Construction works	• Total 12 Buildings	• Construction work completed. • Furnishing works completed.
14.	Water Supply System	• Drinking water to Project Camp	• Construction of water supply system completed and is in operation.
		• Drinking water to Locals	• 9 no of Public Tap stand constructed. • Reservoir tank construction is completed. • Water supply to locals is in operation.
33KV TRANSMISSION LINE FOR CONSTRUCTION POWER			
15.	Transmission Line for Construction power	• 9 km 33 kV sub-transmission line	• Contract awarded to New Satakri Khimti Construction • Transmission line work for construction power completed • Electricity connection at all site is in operation.
BAILEY BRIDGE			
16.	Dharapani Bridge (Bridge I)	• 42.672m	• Civil works Completed. • Erection work Completed. • The Bridge in operation.
17.	Hodampa Bridge (Bridge II)	• 33.528m	• Civil works Completed. • Erection work Completed. • The Bridge in operation.
18.	Hawa-Palate Bridge (Bridge III)	• 51.816m	• Civil works Completed. • Erection work Completed. • The Bridge in operation.
OTHER ACTIVITIES			

19.	Hydrology and Sediment Study	• Hydrology and Sediment Study	• Sediment collection & Analysis by HydroLab-Completed. • Discharge Measurement & Hydrological Analysis by Recham Consult -Completed.
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3.2 Administrative Works

20.	ADMINISTRATIVE WORKS	• Various administrative issues	• Forest Land Approval-Completed • Land acquisition: 100% completed • Survey License for Transmission Line (Power Evacuation): Completed.
		• Shifting grid Connection for Power Evacuation	• Approval received for loop in loop out connection shifting grid connection completed.
		• Updated IEE Report	• Final approval received: Completed
21.	LOCAL STAKEHOLDERS' ENGAGEMENT	• Local issues	• Local Stakeholders Engagement through various discussion addressing the project related environmental and social issues are continued • Implementing various social and local infrastructural development works

3.3 Design and Physical Model Study

22.	PHYSICAL HYDRAULIC MODEL STUDY	• Model of Revised Headworks	• Consulting contract award to Hydrolab • Provided required documents • completed model construction of structures. • All the details of the model are finalized and model run successfully completed.
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3.4 Progress Work in Detail

3.4.1 Civil Construction work

Major Activities by the civil contractors at different sites are listed below:

3.4.2 Headworks Site:

All major work of headworks in completed.

- **Intake structures:** Overall Intake Structure 100% completed.
- **Primary Gravel Trap:** 100 % Completed.
- **Secondary Gravel Trap:** 100 % Completed.
- **Transition part (Bifurcation):** 100 % Completed.
- **Transition part of primary gravel trap-** 100 % Completed.
- **Weir-** 100 % Completed.
- **Slope weir:** 100 % Completed.
- **Under sluice structure:** 100 % Completed.
- **Fish Passes Gate:** 100 % Completed.

- **Connection between Inlet and Head Pond Outlet:** Base slab completed, rebar and form work continues.
- **Boulder Riprap:** 100% Completed.
- **Fish ladder:** 100 % Completed.
- **Sand flushing culvert:** 100 % Completed.
- **Radial Gate:** 100 % Completed.
- **Radial Gate Host:** 100 % Completed.
- **River diversion:** 100 % Completed.
- **Left Bank protection wall –** 100 % completed.
- **Middle flood wall:** 100 % Completed.
- **Approach culvert structures:** 100 % Completed
- **Approach culvert (Bifurcation part):** 100 % Completed.
- **Spill way:** 100 % Completed.
- **Settling Basin Flood wall:** 100 % Completed
- **Settling basin –**100 % Completed.
- **Settling basin flushing gate:** 100 % Completed.
- **Approach culvert spillway:** 100 % Completed.
- **Upstream apron:** 100 % Completed.
- **Sloping apron:** 100 % Completed.
- **Settling basin and head pond transition:** Concrete work completed.
- **Sand flushing gate chamber:** 100 % Completed
- **Settling Basin Transition part (between inlet and head pond outlet) –** work under progress.
- **Back fill:** Left bank and settling basin side backfill works continues.
- **Radial gate (2nd stage concrete):** 100% completed.

Overall cumulative headworks progress:- 99% Completed.



Overall, View of the Headworks Area



Intake structure



Settling Basin



Overall, View of the Settling Basin



Headworks Structures



Left bank Back fill works continuous



Transition part between head pond outlet and inlet

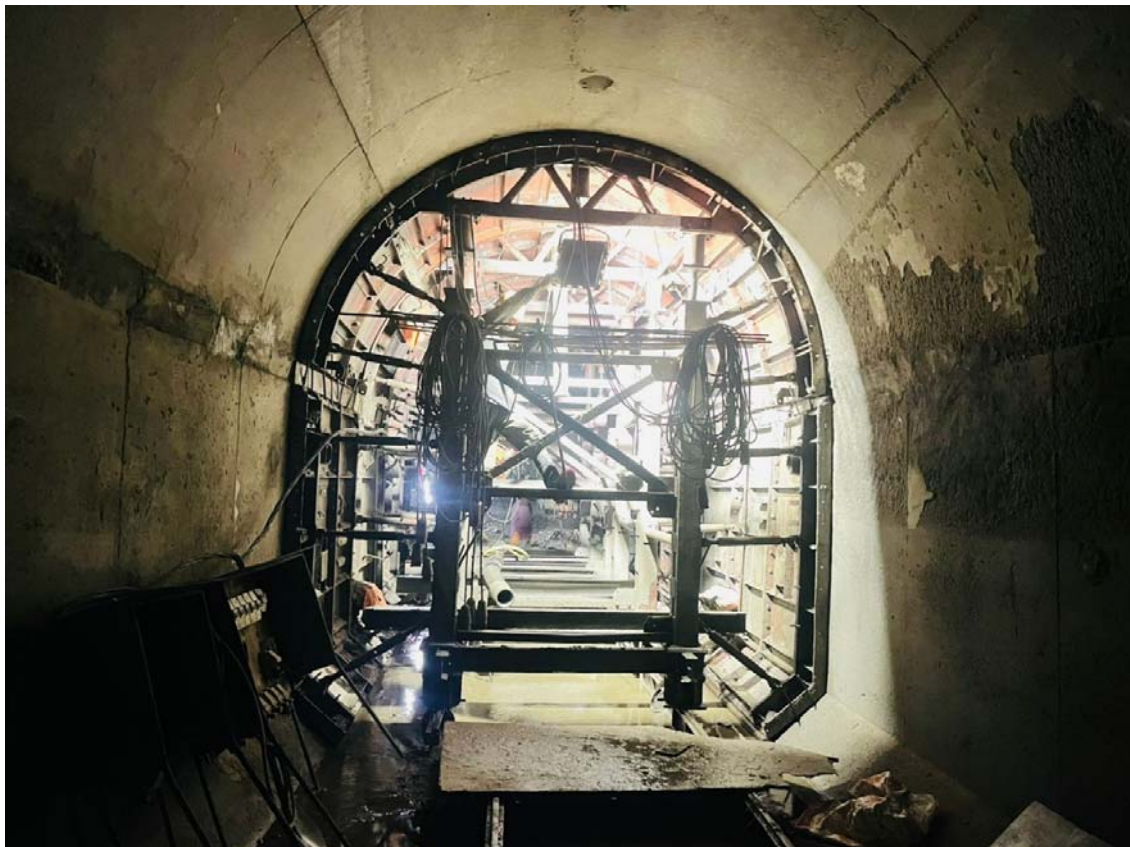
3.4.3 Tunnel Site:

HRT Inlet site (HRT Face-1)

- Excavation of 1629.25 reached and 100 % Completed
- Successful breakthrough of Face 1 and Face 2.
- Final lining works completed.
- Shotcrete works 100 % Completed.
- Invert concrete work 100 % Completed.
- Full concrete (gantry) reached to 0+626.2 m and completed.
- Hybrid concrete and shotcrete works 100 % completed.
- Grouting works reached to 1+630 m and completed.



Face 1 Concrete lining work.



Gantry Preparation for the lining work in Face 1

HRT Face -2

- Tunnel excavation work at U/S HRT from Adit 1 junction: 1+335.75 m reached and 100% completed.
- Invert concrete work 100% completed.
- Full concrete (gantry) 100 % Completed except junction work.
- Hybrid concrete work 100% completed.
- Grouting works reached to 1+335.75 m and completed.



Face 2: Full lining work in face 2 completed



Consolidated grouting work at Face 2

HRT Face-3

- Tunnel excavation work at U/S HRT from Adit 1 junction: 1+547.5 m reached and 100% completed.
- Lining works ongoing.
- Shotcrete work 100 % Completed
- Invert concrete work 100% completed.
- Full concrete (gantry) reached to 0+704 m and completed. (112.79 m achieved in this month).
- Grouting works completed up to 1+247.15 m out of 1+547.15 m (0+80.61 m achieved in this month)



Full Concrete work in Face 3



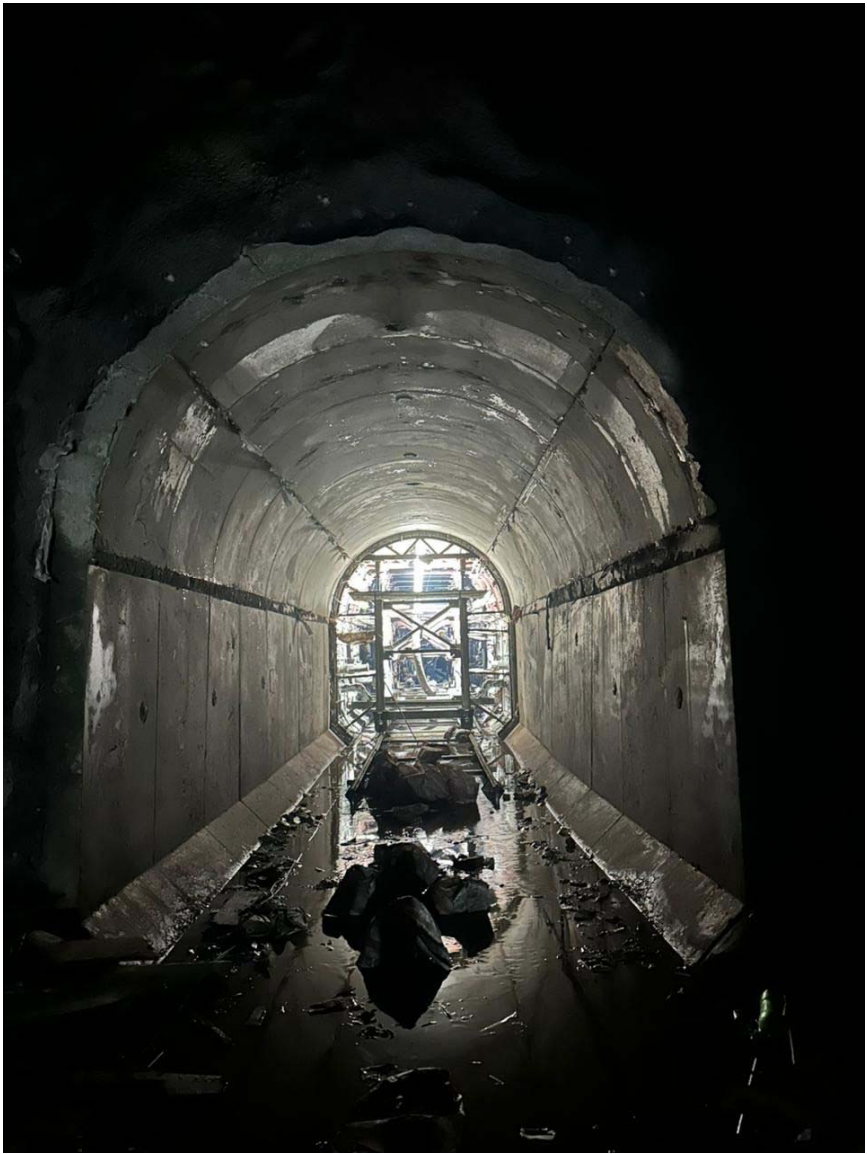
Grouting Work at Face 3

Adit-2 Portal (Surge Tunnel/HRT Outlet) site:

- Adit Tunnel excavation work: **0+200 m face chainage reached** and 100 % completed.

HRT Face-4

- Excavation work at U/S HRT from Adit 2 junction: **1+1753.85 m face chainage reached** and 100% completed.
- Excavation work at Vertical Shaft (VS1) 100 % Completed.
- Excavation work at D/S HRT from Adit 2 junction: 100 % Completed.
- Excavation work at bifurcation to vertical shaft from Adit 2: 100 % Completed.
- Excavation work at Ventilation Tunnel 100 % Completed.
- Excavation work at Surge Shaft: 100 % Completed.
- Concrete work in surge shaft is 100 % Completed.
- Surge Shaft to HRT connecting: **43.25 m** 100 % Completed.
- Invert concrete work 1753.85 m reached and 100 % Completed.
- Full concrete (gantry) reached to 0+604.144 m and completed.
- Grouting works completed up to 0+595 m out of 1+753.85m (0+440m achieved in this month) .



Face 4 full lining work

Peoples Energy Limited
Khimti-2, Hydroelectric Project 48.8 MW
Ramechhap/ Dolakha

Surface and Underground Final Lining Progress Report on month June 2026											
S.N	Description of Work site	Unit	Total HRT Length	Permanent support	Total Length	From 1st June	To 30th June	This month Progress	Progress in percent	Remaining	Remarks
1	HRT from inlet to Adit 1 (F1)	M	1629.25	Shotcrete	1010	1010	1010	0	100.00	0	completed
				Invert Concrete	1630	1630	1630	0	100.00	0	completed
				Full Concrete (Gantry)	626.2	589.15	626.2	37.05	100.00	0	completed
				Hybrid concrete and shotcrete	35.65	35.65	35.65	0.00	100.00	0.00	completed
				Grouting	1630	835	1630	795	100.00	0	completed
2	HRT from Adit 1 Junction to U/S (F2)	M	1335.75	Shotcrete	730.013	730.013	730.013	0	100.00	0	completed
				Invert Concrete	1334.25	1177.58	1327.21	149.65	99.47	7.04	Almost completed
				Full Concrete (Gantry)	596	543.035	587.04	44.005	98.50	8.96	Almost completed
				Hybrid	13.702	13.702	13.702	0	100.00	0	completed
				Plunging shaft	15	7	15	2.8	100.00	0	completed
3	HRT from Adit 1 Junction to D/S (F3)	M	1547.15	Grouting	1334.25	797.75	1326.75	529	99.44	7.5	Almost completed
				Shotcrete	779.65	741	779.65	38.65	100.00	0	completed
				Invert Concrete	1547.15	1537.15	1537.15	0	99.35	10	completed
				Hybrid (Shot+concrete)	70.79	70.79	70.79	0	100.00	0	completed
				Full Concrete	704	582.21	695	112.79	98.72	9	Almost completed
4	HRT from Adit 2 Junction to U/S (F4)	M	1753.85	Grouting	1547.15	50	1247.15	1197.15	80.61	300	
				Shotcrete	1086.33	1021.33	1086.33	65	100.00	0	completed
				Invert Concrete	1756.37	1686.98	1686.98	0	96.05	69.39	completed
				Full Concrete (Gantry)	604.144	602.8	604.144	1.344	100.00	0	completed
				Rock trap+ Steel Lining	65.9	0	0	0	0.00	65.9	
5	Total	M	6266	Grouting	1753.85	155	595	440	33.93	1158.85	

Tunnel Works Summary



Rock Trap Rebar work

Upper Pressure Tunnel & Civil surface Penstock works site:

- **Excavation work at Upper Pressure Tunnel:** 0+519 m face chainage reached and 100% completed.
- 428 m pipe erection work in UPT 100 % Completed.
- Concrete infill up to 41-meter section 100% completed.
- **Saddle support:** Concrete works of all saddled completed and reached to total 91 numbers.

- **Anchor block (AB01):** 100 % Completed.
- **Anchor block (AB02)** - 100 % Completed.
- Back fill or Infill works on over break section completed.
- **Concrete work of outer anchor block (AB06):** Concrete works completed up to 1376.50 m, reaches up to 1382.37 m. rebar and form works continues. Infill concrete (C10) in the place of plum concrete continues.

Overall cumulative tunnel work:- 97% Completed.



End saddle support



Anchor Block (AB06) Outside of the UPT

3.4.4 Powerhouse Site:

1. Powerhouse & Generation Unit (100%)

- Turbine (Powerhouse): Final (3rd stage) concrete work 100% Completed.
- Turbine Outlet Gate: 100% Completed.
- Main Inlet Valve (M.I.V): 2nd stage concrete (C35) 100% Completed.
- Non-shrinkage Grouting: All three turbine units 100% Completed.
- Roofing: Placement of truss and CGI sheet (Roofing work) 100% Completed.
- Gutter Work: 100% Completed.
- Brickwork & Finishing: All powerhouse brickwork, inner plastering, Surki works, and glass installation 100% Completed.
- Painting: Interior/Exterior color work 100% Completed.
- Cleaning: Interior powerhouse cleaning 100% Completed.
- Powerhouse back side backfill works and drain works completed.
- Powerhouse fencing works and landscaping works continues.
- Sump pit excavation work completed, rebar work continues.

2. Control Building & Interior Works (100%)

- Structural: Concrete work on both slabs (A & B), columns of 1st lift, and spiral staircase placement 100% Completed.
- Interior Finishing: Tile works, kitchen works, parqueting, and granolithic flooring 100% Completed.
- Finishing Trades: Plumbing, Surki work, plastering, and ceiling plaster 100% Completed.
- Openings: Installation of all doors and windows in the control room 100% Completed.
- Infrastructure: Base concrete for station transformer and P.C.C. work in transition portion 100% Completed.

3. Tailrace & Water Management (100%)

- Manifold System: 100% Completed.
- Expansion Joints: 100% Completed.
- Tailrace: 100% Completed.
- Tail pool: 100% Completed.
- Gates: Tailrace gate installation 100% Completed.
- Drainage: 100% Completed.

4. Switchyard & External Infrastructure (100%)

- Switchyard General: 100% Completed.
- Boundary: 100% Completed.
- Equipment Bases: 100% Completed.
- Cable Trench: 100% Completed.
- Transformer Yard: 100% Completed.
- Transmission: AP 1 Tower concrete works 100% Completed.
- Fencing works completed.
- Landscaping work continues.

5. Site Protection & Earthworks (100%)

- Retaining Structures: 100% Completed.
- Erosion Control: 100% Completed.
- Gabion Works: 100% Completed.
- General Earthworks 100% Completed.
- Manifold Junction: 100% Completed.
- VS-2: 100% Completed.

Overall cumulative progress of Powerhouse: - 100%



Power House of K2HEP



Figure: Overall View of Powerhouse



Figure: Power House Switchward



Overall Viwe of Powerhouse Area

3.4.5 Hydro Mechanical work

- Vertical Shafts (VS-1 & VS-2): Pipe erection works for both shafts are 100% Completed.
- Lower Penstock Tunnel (LPT): 100% Completed.
- Upper Penstock Tunnel (UPT): 100% Completed.
- Trifurcation & Testing: 100% Completed.
- Surge System: 100% Completed.
- Branch Pipes: 100% Completed.
- Valve Chamber: 100% Completed.
- Intake Works: 100% Completed.
- Inclined Section: Erection 100% Completed.
- Bends & Transitions: is 100% Completed.
- VS-2 Top Anchor Block: Pipe erection at this section has reached a total of 21.01 m.
- Support Structures: 100% Completed.
- Manholes: Installation of one manhole at the UPT (near the niche) and one at the LPT is 100% Completed.
- Pipe erection work for the remaining 54 m section of the HRT beyond the Rock Trap is pending. Installation of the sand flushing gate is also pending.

Overall Cumulative Progress of Hydromechanical Works: - 98%



Super Structure work at the Headworks area



Radial Gate Installation work by HM team



Completion of the Installation of Pipe by HM team at UPT



Pipe Installation work at T Junction

3.4.6 Electro-mechanical works

1. Generating Units & Powerhouse Components (100%)

- Generator Erection: 100% Completed.
- Cooling Systems: 100% Completed.
- Turbine Components: 100% Completed.
- Main Inlet Valves (MIV): 100% Completed.
- Maintenance: Cleaning of turbine casings for Units 1 and 2 is 100% Completed.
- Penstock Drainage: 100% Completed.
- Heavy Lifting: 100% Completed.

2. Switchyard & Substation Infrastructure (100%)

- Transformers: 100% Completed.
- Outdoor Switchgear: 100% Completed.
- Switchyard Structures: 100% Completed.
- Foundations: 100% Completed.
- LILO Switching Station: Dead-end tower erection, conductor stringing, and installation of embedded bolts for the switchyard gantry are 100% Completed.
- Fire Protection: 100% Completed.

3. Electrical Systems & Earthing (100%)

- Panels: 100% Completed.
- Cable Containment: 100% Completed.
- Earthing Layout: 100% Completed.
- Civil Works (EM Support): 100% Completed.

The following tasks are currently being executed by the EM team:

- The remaining E&M works include HEROS panel installation at the powerhouse, nozzle installation, switchyard lightning and protection system works, PPV valve works, and LILO equipment erection works.

Overall Cumulative Progress of Electromechanical works: - 97%



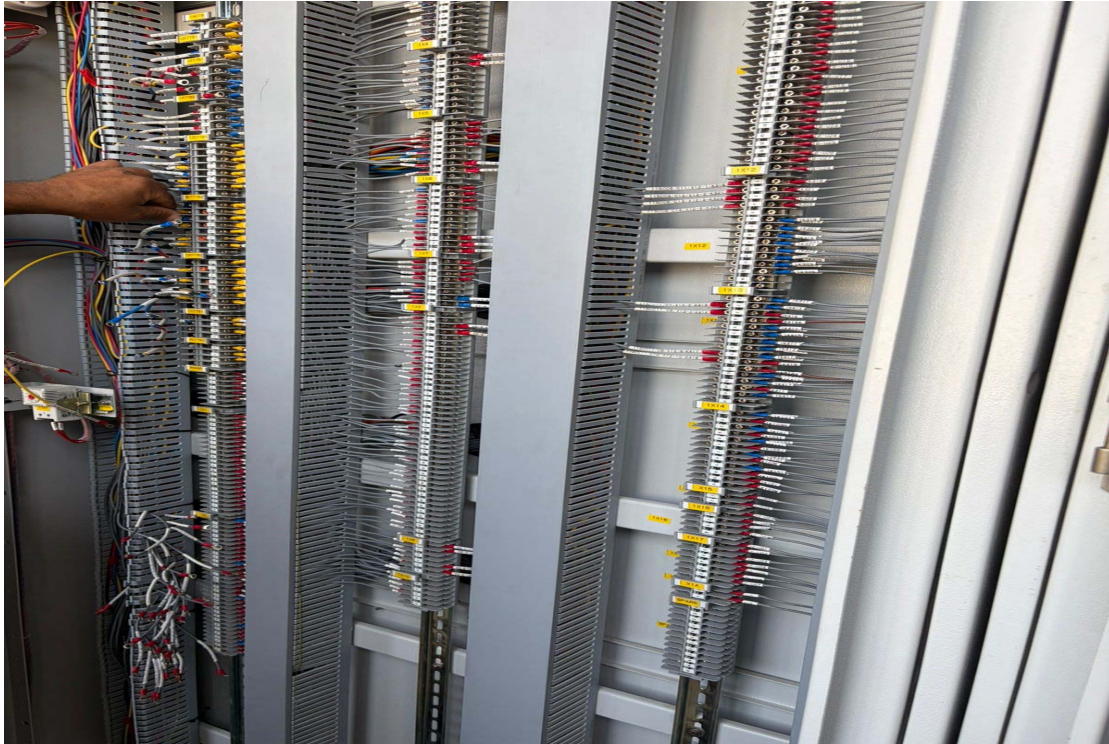
Cable tray installation and above ground earthing work



Outdoor 132Kv equipment connection works



Kit fitting work



Cable termination and panel connection



Switchyard area of the power



Beam erection processing at LILO

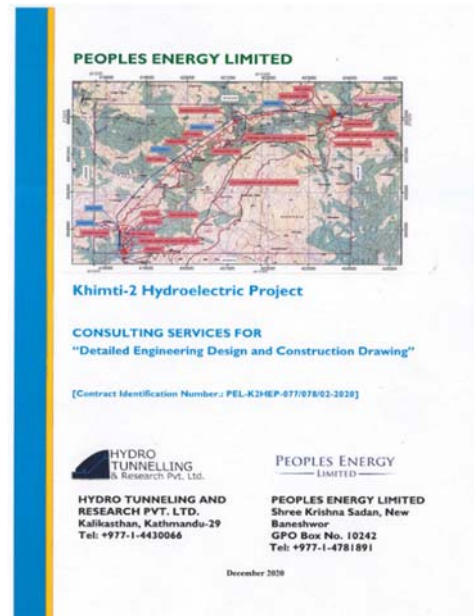


Installation of the Sub station EM equipment at LILO by EM team

3.4.7 Design Consultant's Progress

For the consulting services for detailed engineering design and construction drawing Hydro Tunneling and Research Pvt. Ltd. was awarded the contract on 10th December 2020. Major Activities by the Design Consultant are listed below:

- Total of 125 IFC drawings have been issued till now.
- Overall design and IFC drawings 100% completed



3.4.8 132 kV Transmission Line works

- Foundation works 100% Completed.
- Erection of Dead-end towers at LILO 100% Completed.
- Erection of all the towers has been completed following to which the stringing work has been started.

Overall cumulative progress of transmission line works: - 97%



Figure: API Tower at Powerhouse Switchyards



AP2 Tower at Powerhouse Switchyards



(Incoming Tower)



*(Outgoing Tower)
Completion of the erection of Dead End Towers*

3.4.9 Loop in Loop Out (LILO) Receiving End Substation

- **Excavation:** 100% Completed.
- **Backfilling:** 100% Completed.
- **Plum Retaining Walls:** 100% Completed and reached to total panels 8.
- **Masonry Works:** 100% Completed.
- All structural work for the Retaining Walls has been 100% completed
- **Control building:** Concrete work 100% Completed. Brick works completed, plaster works continues.
- **Foundation excavation works:** Foundation excavation works for various permanent structures to be continues.
- **Concrete Structure:** Concrete work (1st stage) on various structure foundations has been completed.
- Backfill at road all section 100% completed.
- Drain work continues.
- Brick work and plaster work completed.
- Door and Window placement work just started.
- Plumbing works on control building continues.

Overall cumulative progress of LILO works: - 96%



Overall View of the LILO



Various Structure foundation works