STATUS OF SURVEY & INVESTIGATION OF HE SCHEMES
(PART I)

	NAME OF SCHEME:	Mawblei H.E Project - Storage, 2x33 MW
	GENERAL INFORMATION	
1	State	Meghalaya
2	Location -	Damsite- West Khasi Hills District, near Nongmawlong village
(a)	Latitude of Dam	25° 31' 41.21" N
(b)	Longitude of Dam	91° 02' 14.40 " E
	General layout /Index map may please be furnished	
3	District	West Khasi Hills District
4	Nearest G&D site	Damsite
5	Catchment Area near G&D site	218.00 Sq.Km
6	Status of availability of G&D site	Established since May 2006.
7	Basin/River	Wahblei
8	Catchment Area (Sq.km)	218.00 Sq.Km
9	Type of Scheme (ROR/Storage/PSS)	Storage scheme
10	Firm Power (MW)	11.27 MW
11	Annual Energy Benefits (MU)	207.33 MU in 90 % Dependable year
12	Inter State Aspects	Does not arise
13	International Aspects	NIL
14	Defense aspects	No defense installations
15	R & R Aspects	Does not arise
16	Forests area involved	Detail Investigation to be taken up
17	Geological problems anticipated, if any	Sub-surface investigation in progress.
18	Accessibility-Nearest Rail head/	Nearest Rail Head: Guwahati - 275 Km.
19	Road and distance from the project.	Nearest Road: Damsite and Power house;10 Km and 19Km from Mawkhap and Umdang villages respectively on the Shillong-Tura Highway.
20	Upstream scheme, if any -	Nil
21	Downstream scheme, if any. -	Kynshi Stage -II HEP.
	HYDROLOGY	
22	a) Catchment area at dam site	218.00 Sq Km
	b) Average annual runoff	543.33 M Cum
	c) 90% dependable annual runoff	486.96 M Cum
	d) 50% dependable annual runoff	537.02 M Cum
	TENTATIVE PROJECT FEATURES	
	RESERVOIR	
23	a) Full Reservoir Level (FRL)	El 762.00 m
	b) Maximum Water Level (MWL)	El 762.00 m
	c)Minimum Drawdown Level (MDDL)	El 750.80 m
	d) Gross Storage at FRL	34.23 M Cum
	e)Live Storage	20.61 M Cum
	f)Area under submergence at FRL	2.20 Sq Km
	g)Distance of the upstream most FRL from Dam site	
	i)Arial distance	4.31 Km
	ii)Distance along the river	5.98 Km
	DIVERSION TUNNEL	
24	a)Number	1 No.
	b)Size	2.40 m Φ
	c)Length	250.00 m
	d)Diversion discharge (assumed)	111.31 Cumecs

25	**Dam**	
	a) Type	Concrete gravity
	b) Top elevation of dam	EL. 764.00 m
	c) Height of dam above the river bed level	35 m
	d)Length of dam at top	293.00 m
	e) River bed level -	El. 727 m
26	**SPILLWAY**	
	a)Design flood (PMF)	4706 Cumecs
	b)Type	Ogee
	c)Crest Elevation	El 748.00 m
	d)Number of bays	3
	e)Size of radial gates	10.00 m x 18.70 m
	f)Length of Spillway	57.00 m
	g)Energy dissipation	Ski-Jump Bucket
27	**INTAKE**	
	a)Invert level	El 740.30 m
	b)Number	1
	c)Fixed wheel vertical lift gate	3.90 m x 3.90 m
	d)Trash rack	4 of 12 m x 4.70 m
28	**Head Race Tunnel**	
	a) Type	Modified Horse Shoe
	b) Length	3.68 km
	c) Diameter	3.00 m Φ
	d) Design Discharge	23.13 Cumecs
29	**Pressure Shaft**	
	a)Number	1(Bifurcated into 2 of 1.8 m Φ)
	b) Length	3.077 km
	c)Internal Diameter	2.25 m Φ
30	**SURGE SHAFT**	
	a) Type	Restricted Orifice
	b) Diameter	8.00 m Φ
	e) Height	55 m
	f) Diameter of orifice	2.00 m Φ
31	**POWER HOUSE**	
	a)Type	Deep Seated
	b)Installed capacity	66 MW
	c)Number of Units	2 of 33 MW
	d)Type of turbine	Pelton turbine
	e)C.L of turbine	El 379.00 m
	f)Rated Head	338.96 m
	g)Power house cavern size (main)	39.5 m x 13.3 m x 17.25 m
	h)Maximum Gross Head	383.00 m
	i)Minimum Gross Head	369.00 m
	j)Design Discharge	24.84 m3/s
32	**SWITCHYARD**	Size Gas Insulted Switchyard (GIS) on the floor above the transformation/s in Transformer cavern
33	**POWER GENERATION**	
	a)Installed Capacity	66 MW (2 x 33 MW)
	b)Annual Energy Generation in 90% dependable Year	207.33 MU
	c)Annual Energy Generation in 50% dependable Year	274.28 MU
34	**TAILRACE TUNNEL AND OPEN CHANNEL**	
	a)Tailrace Tunnel length	139.81m
	b)Shape	D shape
	c)Diameter	4.00m Ø
	d)Tailrace Channel length	110.63m

Please give brief details about the HE Scheme and enclose a layout map.

Brief details on Mawblei H.E.Project:

Mawblei H.E.Project, is located in Mawshynrut C & R D Block, West Khasi Hills District of Meghalaya.It is a storage type development which envisages construction of a concrete gravity dam of about 35.00 m high across river Wah Blei, a tributary of river Kynshi, where the river bed is about El. 727.00 m to provide a live storage of 20.61 M Cum between the FRL of 762.00m and the MDDL of El 750.80 m. Water from the reservoir are proposed to be diverted to the Power House through a 3.68 m long modified horse shoe shaped head race tunnel of 3.00 m dia. and a 3.077 Km long pressure shaft of 2.25 m dia. bifurcating into 1.8 m dia. for power generation. The power house would have an installation of 2 units of 33 MW each operating under weighted average gross head of 336.00 m (Net Head=338.96 m).The project is proposed to provide annual design energy of 204.96 MU in a 90% dependable year.

(Signature) 15/4/25

Name:Smti. I.War

Designation:Executive Engineer (C)

Telephone No.....Code No

Executive Engineer (Civil)
Investigation Division - II
Me.P.G.C.L., Umiam

STATUS OF SURVEY & INVESTIGATION OF HE SCHEMES
(PART- II)
Quarter Ending March,2025

	NAME OF SCHEME SURVEY & INVESTIGATION	Mawblei HE Project (2x33MW)	
1	Date of commencement of S&I	2006-2007(Hydrological observation)	
2	Date of Sanction	NEC/IRGN/MEG/2K/5/408 Dt.23.01.2009	
3	Likely date of completion of S& I	2026	
4	Likely date of completion of DPR	2026	
5	Estimated cost of S&I/DPR and Phasing of Expenditure	Rs. 472.00 Lakh	
	Revised Estimate Cost	Rs. 892.00 Lakh	
6	Agency of Investigation (in case of Pvt.Agency, Name,	Meghalaya Power Generation Corporation Limited.	
7	**Details of Progress @**	Quantity Done	Quantity to be done
		83%	17%
a	Tracer Path & Approaches	Trace Path completed	
b	Roads	In Progress	
c	Construction of Temp. Building	Completed	
d	Purchase of Special T &P	To be taken up	
e	Topographic Survey/Investigation	100%	
f	Surface & Sub-surface Investigation	98%	
g	Const. Material (CA&FA)	In progress	
h	Hydrological observations	Data collection since June 2006	
i	Meteorological	Data collected since June 2006	
j	Environmental Survey	15%	
k	Programme of works during the year	Observation, compilation and compution of hydrometeorological data of the project are persistent activities. **I. January - March, 2025** Monitoring the SRRG and ORG, pan evaporation and discharge observation **II. April - June, 2025** Forest clearance and land requiremnt.Monitoring of rainfall, evaporation and discharge observation.Calculation and compilation of hydrometeorological data.Exploratory Drilling of DH-15 at the intake of Mawblei HEP. **III. July - September, 2025** Monitoring of rainfall, evaporation and discharge observation.Physical and chemical test of construction material.Observation of HLF at Discharge site.Survey and Lab test of construction materials.Cofer dam-site selection, planning and drilling. **IV. October - December, 2025** Computation and compilation of discharge, rainfall, environment temperature and humidity.Monitoring the SRRG and ORG, pan evaporation and discharge observation.Core Logging-Laboratory testing of core Damsite area, intake, HRT, surge shaft saturated ad unsaturated condition etc.Mapping-Reservoir stability mapping.	
l	Overall progress of works	83%	
m	Geological and foundation Investigation	In progress	
	@ In case it is not possible to give tentative quantity it should be given as percentage Financial Progress.		

8	Estimated cost of Survey & Investigation with price level year	
9	Capital Expenditure incurred upto March,2025	454.60 lakh
10	Budget estimate	
11	Revised Estimate	
	BOTTLLE NECKS, IF ANY	
	1.Limited working days (approx) 6 months in a year. 2.Harsh topography and remoteness of the project area 3.Irregular availability of the official expert of the concerned Government agencies/department who are to carry out the study /information of the respective aspects of the Detailed Project Report(DPR) of the project. 4.Land holding system-The land of the project areas are privately owned and issuing of NOC for S&I of the project takes a considerable amount of time. 5.Scarcity of local firms/contractors capable of carrying out the S&I works such as topographical survey and exploratory drillingof the project. 6.The official formalities such as trading license and labour licenses etc. are some of the reasons where the agencies/firms from outside the state are reluctant to take up the S&I works in Meghalaya. 7.Covid -19 may be attributed to the matter. 8.Compliances to the observation of the concerned Directorates/Divisions/organisations,etc. under CEA by the expert agencies/departments are received after much delay.	

13/4/25

(Signature)
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