

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

NAME OF SCHEME		Mawblei Hydroelectric Project - Storage, (2x38 MW)
I	LOCATION	
1	State	Meghalaya
2	District	West Khasi Hills District
3	River	Wahblei
4	Damsite	
5	Location -	Near village Nongmawlong
6	Latitude	25° 31' 36.96" N
7	Longitude	91° 02' 14.40" E
8	Nearest Airport	Guwahati, Assam
9	Nearest Rail Head	Guwahati(103 Km from Shillong)
II	HYDROLOGY	
10	Catchment area at dam site	218.00 Sq Km
11	Average annual runoff	467.13 M Cum
12	90% dependable annual runoff	379.72 M Cum
13	50% dependable annual runoff	461.63 M Cum
III	RESERVIOR	
14	Full Reservoir Level (FRL)	El 762.00 m
15	Maximum Water Level (MWL)	El 762.00 m
16	Minimum Drawdown Level (MDDL)	El 750.80 m
17	Gross Storage at FRL	34.23 M Cum
18	Live Storage	20.61 M Cum
19	Area under submergence at FRL	2.20 Sq Km
20	Distance of the upstream most FRL from Dam site	
(i)	Arial distance	4.31 Km
(ii)	Distance along the river	5.98 Km
IV	DIVERSION TUNNEL	
21	Number	1 No.
22	Size	2.40 m Φ
23	Length	250.00 m
24	Diversion discharge (assumed)	71.51 Cumecs
V	DAM	
25	a) Type	Concrete
26	b) Top elevation of dam -	EL. 764.00 m
27	c) Height of dam above river bed level	36.37 m
28	d) Length of dam at top	253.00 m (upto NSL)
29	e) River bed level -	El. 727.63 m
VI	SPILLWAY	
30	Design flood (PMF)	4162.69 Cumecs
31	Type	Ogee
32	Crest Elevation	El 743.80 m
33	Number of bays	3
34	Size of radial gates	18.20 m x 8.60 m
35	Length of Spillway	82.60 m
36	Energy dissipation	Ski-Jump Bucket
VII	INTAKE	
37	Invert level	El 744.00 m
38	Number	1
39	Fixed wheel vertical lift gate	3.00 m x 3.40 m
40	Trash rack	4 of 12 m x4.70 m
VIII	HEAD RACE TUNNEL	
41	Number	1
42	Size	3.00 m dia
43	Shape	Modified Horse Shoe
44	Length	3.68 km
45	Design Discharge	23.13 Cumecs

IX	SURGE SHAFT	
46	Number	1
47	Type	2.5 m dia Orifice type
48	Size	10.00 m Φ
49	Height	40 m
X	PRESSURE SHAFT	
50	Number	1(Bifurcated into 2 of 1.6 m Φ)
51	Type	2.25 m Φ
52	Length	2915 m
XI	POWER HOUSE	
53	Type	Surface
54	Installed capacity	76 MW
55	Number of Units	2 of 38 MW
56	Type of turbine	Francis turbine
57	C.L. of turbine	El 379.00 m
58	Rated Head	367.34 m
59	Transformer Cavern	55 m x 12 m x 43.30 m
XII	CHANNEL	
60	Size	7.50 m x 2.50 m
61	Length	60.00 m
62	Design Discharge	38.79 Cumecs
XIII	SWITCHYARD	
		Size Gas Insulated Switchyard (GIS) on the floor above the transformation/s in Transformer cavern
XIV	POWER GENERATION	
63	Installed Capacity	76 MW (2 x 38 MW)
64	Annual Energy Generation in 90% dependable Year	277.08 MU
65	Energy 50% dependable year	322.20 MU

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

Brief details on Mawblei H.E.Project:

Mawblei H.E.Project, proposed to be located in Mawshynrut C & R D Block, West Khasi Hills District of Meghalaya, is a storage type development which envisages construction of a concrete gravity dam of about El. 36.37m high on river Wah Blei, a tributary of river Kynshi, where the river bed is about El. 727.63 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 Surface power house through a 3.68 m long modified horse shoe shaped head race tunnel of 3.00 m dia. and a 2.915 Km long pressure shaft of 2.25 m dia. bifurcating into 1.6 m dia. for power generation. The power house would have an installation of 2 units of 38 MW each operating under weighted average gross head of 385.3 m (Net Head=373.37 m). The project is proposed to provide annual design energy generation of 227.08MU in a 90% dependable year.The salient features given for Mawblei HEP are tentative.

The detailed Topographical Survey and Geological mapping along the Alternative -I and Alternative -II of the Proposed Water Conductor System (WCS) have been carried out and based on the features of the alternative-I,the Power Potential Study have also been prepared wherein the install capacity of the project is about 76 MW whereas the Geological Report along the Alternative -III of the WCS is in progress.

(Signature)

Name:Shri Q.Marbaniang

Designation:Executive Engineer(C)

Telephone No.....Code No

**STATUS OF SURVEY & INVESTIGATION OF HE SCHEMES
(PART- II)**

Quarter Ending March, 2019

NAME OF SCHEME SURVEY & INVESTIGATION		Mawblei HE Project 2x38 (MW)	
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	2019	
4	Likely date of completion of DPR	2020	
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, Designation, Complete Address, telephone no. & Fax No. is to be indicated).	Meghalaya Power Generation Corporation Limited.	
7	Details of Progress @	Quantity Done	Quantity to be done
		75%	25%
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	Const. Material (Survey/Testing)	In progress	
g	Hydrological observations	Data collection since June 2006	
h	Meteorological	Data collected since June 2006	
i	Environmental Survey	In Progress	
j	Programme of works during the year	<p>Observation, compilation and computation of hydrometeorological data of the project are persistent activities.</p> <p>I. January - March, 2019 Preparation of revised budget for 2018-19 and main budget of 2019-20,taking cross section of discharge site,revision of hydrological study, checking the raingauge instruments,compilation and computation of hydrometeorological data excavation of exploratory drift on both banks of dam axis</p> <p>II. April - June, 2019 Seismic study to be submitted to national committee of seismic design Parameter(NCSDP)CWC,New Delhi,Estimation of tentative quantityof construction material,Physical&Chemical Test of CA& FA, Road alignment survey and detailed estimate including drawing and reports,Dam break study and preparation of estimate for river survey downstream of dam site.</p> <p>III. July - September, 2019 Petrographic test , water sample (silt sample) to be collected during high flood,drilling works along WCS and PH, monitoring hydrometeorological data,24 hours observation of discharge and rainfall data and HFL,drilling works along WCS and PH,laboratory test of cores sample of dam site,insitu test in the drifts,</p> <p>IV. October - December, 2019 Cross check the level from discharge site to damsite and up to TRT and maintaining the pillars of every permanent benchmark of the project,compilation of hydrometeorological data,logging of cores and laboratory test of core sample of WCS and PH,River survey downstream of damsite for Dam break study.</p>	
k	Overall progress of works	75%	
1	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, 2019	Rs. 218.89 Lakh	
12	Budget estimate (Proposed)		
13	Revised Estimate		
14	Budget Estimate		

BOTTLE NECKS, IF ANY

Limited working days (approx. 6(six) months in a year), Difficult Terrain and remoteness of the project area, Shortage of Manpower, irregular allocation/release of fund, Inaccuracy of toposheet covering the project account to revision of project components result in delay of S&I works.

(Signature)

Name:Shri Q.Marbaniang
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)

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