

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

<b>NAME OF SCHEME:</b>		<b>Nongkohlait H.E Project- ROR, 2x31 MW</b>
<b>GENERAL INFORMATION</b>		
1	State	Meghalaya
2	Location -	South West Khasi Hills Dist.Meghalaya
(a)	Latitude of Dam	} at damsite
(b)	Longitude of Dam	
<b>General layout /Index map may please be furnished</b>		
3	District	South West Khasi Hills District
4	Nearest G&D site	Damsite
5	Catchment Area near G&D site	233.00 Sq.Km
6	Status of availability of G&D site	Established since April 2006.
7	Basin/River	Umngi
8	Catchment Area (Sq.km)	233.00 Sq.Km
9	Type of Scheme (ROR/Storage/PSS)	ROR scheme
10	Firm Power (MW)	Detail study to be taken up
11	Annual Energy Benefits (GWh)	276.35 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 - 170 Km.
19	Road and distance from the project.	Nearest Road: Damsite: Shillong-Mawsynram road, Power House:Phlangkynshi village
20	Upstream scheme, if any -	Umngi HEP (2x31 MW)
21	Downstream scheme, if any. -	Nongnam HEP (2x15MW),Mawput(2x19MW)
<b>II PROJECT FEATURES</b>		
<b>RESERVOIR</b>		
22	a) Full Reservoir Level (FRL)	El 830.00 m
	b) Maximum Water Level (MWL)	El 830.00 m
	c) Minimum Drawdown Level (MDDL)	El 780.00 m
	d) Gross Storage at FRL	6.28 M Cum
	e) Live Storage	4.19 M Cum
	f) Bed level	El 750.00 m
<b>Dam</b>		
23	a) Type	Concrete gravity
	b) Top elevation of dam -	EL. 832.00 m
	c) Height of dam above the river bed level	80.00 m
	d) Length of dam at top	164.00 m (NSL to NSL)
	e) River bed level -	El. 750.00 m
<b>Head Race Tunnel</b>		
24	a) Type	Modified Horse Shoe
	b) Length	5680.00 m
	c) Diameter	3.30 m Φ
	d) Design Discharge	17.34 Cumecs
<b>SURGE SHAFT</b>		
25	a) Number	1

25	b) Diameter	10.00 m
	c) Length	80.00 m
	<b>PENSTOCK</b>	
26	a) Number	1 (one)
	b) Diameter	2.20 m
	c) Length	965.00 m
27	<b>POWER HOUSE</b>	
	a) Type	Surface
	b) Installed Capacity	2X31 MW
	c) Number of Unit	2
	d) Type of turbine	Pelton Turbine
	e) Gross Head	440.00 m
	f) Net Head	396.00 m
	g) J.N.L	390.00 m

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

**Brief details on Nongkohlait H.E.Project:**

The Nongkohlait HE project envisages construction of 80 m high concrete gravity dam across Umngi river with FRL at El 830 m, 5.68 Km long and 3.30 m dia D-shaped head race tunnel terminating in a surge shaft, 80 m high and 10 m dia surge shaft, 965 m long, 2.20 m dia penstock, an underground power house having an installation of 2 vertical axis Pelton driven generating units of 31 MW each operating under rated head of 396 m. The project has been proposed to develop as a run-of-the river type scheme harnessing a gross head of about 440.00m and utilizing regulated releases from upstream project.

The project with a proposed installation of 62 (2X31 MW ) would afford an annual energy generation of 276.35 Gwh considering upstream Umngi HE Project and 332.87 Gwh (PFR) considering scheme based on natural inflow without Umngi HE Project in a 90% dependable year.

Signature

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**STATUS OF SURVEY & INVESTIGATION OF HE SCHEMES**

**(PART- II)**

Quarter Ending March,2023

NAME OF SCHEME SURVEY & INVESTIGATION		Nongkohlait HE Project (2x31 MW)	
1	Date of commencement of S&I	2006(Hydrological observation)	
2	Date of Sanction	NEC/IRGN/MEG/2K/8 Dt.05.03.2014	
3	Likely date of completion of S& I	-	
4	Likely date of completion of DPR	-	
5	Estimated cost of S&I/DPR and Phasing of	Rs. 502.00 Lakh	
6	Agency of Investigation (in case of Pvt.Agency,	Meghalaya Power Generation Corporation Limited.	
7	<b>Details of Progress @</b>	Quantity Done	Quantity to be done
		30%	70%
a	Tracer Path & Approaches	12%	
b	Roads	To be taken up	
c	Construction of Temp. Building	Completed	
d	Purchase of Special T &P	To be initiated	
e	Topographic Survey/Investigation	70%	
f	Const. Material (CA&FA)	In progress	
g	Hydrological observations	Data collection since June 2006	
h	Meteorological	Data collected since June 2006	
i	Environmental Survey	To be taken up	
j	Programme of works during the year	<p>Observation,monitoring, compilation and computation of hydrometeorological data of the project are persistent activities.</p> <p><b>Jan to March,2023</b> :- Observation of Hydrometeorological data,monitoring the existing discharge site,supervising and checking the topographical survey points or marks of the project and checking the instruments of recording and non-recording raingauge at every stations.</p> <p><b>April to June, 2023</b> :Taking cross section of discharge,detail survey for location the surge shaft and Power House Area,collecing silt sample,monitoring,compilation and computation of hydrometeorological data,observing HFL during moonsoon.</p> <p><b>July to Sept, 2023</b> :- Hydrological studies,monitoring and collecting of Hydrometeorolical data and Geological mapping of damsite.</p> <p><b>Oct to Dec,2023</b>:-Setting up BM pillars along the periphery of reservoir,collecing,monitoring,compilation and computation of hydrometeorological data,setting up BM pillars along periphery of rservoir and Geological mapping along WCS.</p>	
k	Overall progress of works	30%	
1	Geological and foundation Investigation	Geological Mapping initiated	
	@ 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 2023	Rs 99.88Lakh	
10	Budget estimate		
11	Revised Estimate		

<u>BOTTLE NECKS, IF ANY</u>	
	<p>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.</p> <p>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.</p> <p>Clearance/approval of the respective DPR aspects by the concerned Government agencies/department take a considerable amount of time.</p> <p>The land of the project areas are privately owned and issuing of NOC for S&amp;I of the project takes a considerable amount of time.</p>

(Signature)

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