

## STATUS OF SURVEY & INVESTIGATION OF HE SCHEMES

### (PART I)

NAME OF SCHEME		Nongkohlait HE Project ROR 120 (MW)
GENERAL INFORMATION		
1.	State	Meghalaya
2.	Location -	Dam – Concrete gravity, between East and South West Khasi Hills District, other components fall in South West Khasi Hills District
a)	Latitude of Dam	25° 20 ' 23 " N,
b)	Longitude of Dam	91° 32' 18 " E,
General layout /Index map may please be furnished		
3.	District	East and South West Khasi Hills
4.	Nearest G&D site	Damsite
5.	Catchment Area near G&D site	229.00 Sq.Km
6.	Status of availability of G&D site	Established since April, 2006, 200 m upstream of Dam Axis
7.	Basin/River	Umngi
8.	Catchment Area (Sq.km)	229.00 Sq.Km
9.	Type of Scheme (ROR/Storage/PSS)	ROR
10.	Firm Power (MW)	(a) with U/S Umngi- 17.43 MW (b) without U/S Umngi 3.32 MW
11.	Annual Energy Benefits (GWh)	(a) With U/S Umngi – 385.24 Gwh (b) Without U/S Umngi 332.87 Gwh
12.	Inter State Aspects	Does not arise
13.	International Aspects	-do-
14.	Defense aspects	-do-
15.	R&R Aspects	-do-
16.	Forests area involved	Detail investigation to be taken up
17.	Geological problems anticipated, if any	-do-
18.	Accessibility-Nearest Rail head/Road and distance from the project.	Guwahati (158 km via Shillong.)
19.	Upstream scheme, if any	-(a) Rangmaw HEP (65 MW) (b) Umngi (storage) HEP (2x27MW)
20.	Downstream scheme, if any.	- (a) Nongnam HEP (50MW) (b) Mawpot HEP (21 MW)
II PROJECT FEATURES		
21.	Type of Diversion Structure	Concrete gravity Dam
	a) Height (m)	43 m
	b) FRL (m)	880m
	c) MDDL (m)	871m
	e) Live /Storage (Mcum)	0.46 M cum
22.	Water conductor system	
	a) Type	- D-Shape- R.C.C. lined
	b) Length	- 5.36 Km
	c) Diameter	- 3.50 m Φ
23.	Power House	
	a) Type	- Underground
	b) No. of units	- 2 units (2X60 MW)
	c) Head (m)	- Gross Head = 483.0m (b) Rated Head = 463.0m
24.	Tail Race Water conductor System	
	a) Type	- D – Shaped Tunnel
	b) Length (m)	- 1.29 Km
	c) Size	- 4.50m
	d) TWL (m)	- 391.00

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

Brief details on Nongkohlait H.E.Project:

Nongkohlait H.E. Project Dam is located between East and South West Khasi Hills District, other components fall in South West Khasi Hills District of Meghalaya envisages utilization of the waters of the Umngi, for power generation on a run-of-the-river type development, harnesses a gross head of about 490m and utilizing regulated releases from upstream projects. The project with a proposed installation of 120 MW (2X60MW) would afford an annual energy generation of 385.24 Gwh considering upstream Umngi HE Project and 332.87 considering scheme based on natural inflow without Umngi HE Project upstream, in a 90% dependable year. The levelled tariff from the project at present cost would be Rs.3.88/KWh considering upstream Umngi HE Project and Rs.1.72/KWh without considering Umngi HE Project on upstream.

The diversion site is located at Latitude 25°20'23" N and Longitude 91°32'18" E. The damsite is approachable from Umnangrim village on Shillong – Mawsynram road, which is about 50 kms from Shillong. The nearest rail head and airport are located at Guwahati. A small airport is also functioning at Shillong. The Nongkohlait HE project envisages construction of 43 m high concrete gravity dam above the deepest foundation level across river Umngi to provide a live storage of 0.46 m cum with FRL at 880 m and MDDL at 871 m, 5.32 Km long and 3.5 m dia D-shaped head race tunnel terminating in a surge shaft, 57 m high 10 m dia surge shaft, 655 m long, 2.70 m dia penstock, an underground power house having an installation of 2 vertical axis Pelton driven generating units of 60 MW each operating under a rated head of 463 m and 923 m long tail race tunnel to carry the power house releases back to the river.

(Signature)

Name: Shri. Q. Marbaniang

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

Quarter Ending December, 2016

NAME OF SCHEME

Nongkohlait H.E Project ROR 120 MW

SURVEY & INVESTIGATION

- |   |   |
|---|---|
| 1. Date of commencement of S&I  | 2005-2006 (Hydrological observation)            |
| 2. Date of Sanction   | NEC/IRGN/MEG/2K/8 Dt.05.03.2014                 |
| 3. Likely date of completion of S& I  | 2017-2018                                       |
| 4. Likely date of completion of DPR   | 2018-2019 (Target to be revised)                |
| 5. Estimated cost of S&I/DPR and Phasing of Expenditure   | Rs. 502.00 Lakhs                                |
| 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
25%	75%

- |  |  |
|--|--|
| a) Tracer Path & Approaches  | 40% completed  |
| b) Roads   | To be taken up   |
| c) Construction of Temp. Building  | 50%  |
| d) Purchase of Special T &P  | To be initiated  |
| e) Topographic Survey/Investigation  | To be Taken up   |
| f) Const. Material (Survey/Testing)  | Quarries identified  |
| g) Hydrological observations   | Observed since 2006  |
| h) Meteorological  | -do-   |
| i) Environmental Surveys   | To be taken up   |
| j) Programme of works during the year  | Observation, compilation and computation of hydro-metrological data of the project, carry and establishing of BM at the proposed damsite, carrying out the alignment survey and preparation of long and cross sections of the proposed water conductor system, Identification of fine and course quarries. |
| k) Overall progress of works   | 25%  |
| l) Geological and foundation Investigations  | 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  | Rs. 502.00 Lakhs   |
| 9. Expenditure incurred upto June, 2016  | Rs. 81.06 Lakhs  |
| 10. Expenditure incurred upto September, 2016  | Rs. 81.89 Lakhs  |
| 11. Expenditure incurred upto December, 2016   | Rs. 85.49 Lakhs  |
| 12. Budget Estimate  |  |
| 13. Revised Estimate 2016 - 17   |  |
| 14. Budget Estimate 2016 - 17  |  |

**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)

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