

NEW MELLING HYDRO ELECTRIC PROJECT (90 MW)

PROJECT SUMMARY

Government of India has launched the "50000MW Hydro- Electric Initiative" and accordingly the Government of Arunachal Pradesh has earmarked certain Hydro Electric Projects for allocation to private developers for the development of hydro power in the state. **SEW Energy Ltd.**, (having its registered office at 6-3-871, Snehalatha, Green lands Road, Begumpet, Hyderabad, -500016), has identified **New Melling Hydro Electric Project (60MW)**, in Tawang District for development, on Build, Own, and Operate and Transfer (BOOT) basis and entered in to a Memorandum of Agreement (MoA), with Government of Arunachal Pradesh on the 02-03-2009. Copy enclosed as **Annexure 12**. Subsequently, the Power potential chapter of the DPR has been furnished to the CEA and based on the water availability, the CEA has approved a revised installed capacity of **(90MW)** for the project, vide letter No 2/ARP/37/CEA/2011-PAC/21-22 dated 31.01.2014. Copy enclosed as **Annexure-12A**. The Executive Summary of the project is enclosed as **Annexure 12 B**.

As per the MOA, a Special Purpose Vehicle (SPV) for the implementation of the project by name "**SEW NEW MELLING POWER CORPORATION LTD**" has been incorporated and Copy of incorporation certificate is enclosed as **Annexure 13**.

Required permission for conducting survey & investigations was issued by the Department of Environment and Forest, Government of Arunachal Pradesh vide letter No: FOR/261/CONS/2009/3603-04 DT 4-3-2010. Copy enclosed as **Annexure 14**.

New Melling Hydro Electric Project (90MW),

New Melling H. E. Project is proposed to be developed as a run-of-the-river scheme on River Mago Chu, between elevations 2730 m and 2520m, in Jang subdivision under Social Forestry Range Jang and Social Forestry Division Tawang in Tawang District, as per the MoA. Later, the Govt of Arunachal Pradesh has approved 2506.24m as minimum Tail Water Level, vide letter No: PWR5/W-1989/2009/Vol-II/1050-51 Dated 3-3-2014, Copy enclosed as **Annexure 12C**. The project does not envisage major storage of water at the proposed location. The gross storage capacity is only 0.39 MCM at FRL of 2730m. The total catchment area up to diversion site is 805 Sq.km.

Project Location

The barrage is proposed on Mago Chu at about 8.23 km upstream of the confluence of Mago Chu and Nyukcharong Chu (Latitude 27° 39' 0.39" N and Longitude 92° 04' 55.02" E), and the power house is proposed at about 4.60 km upstream of the confluence, (Latitude 27° 37' 52.5" N, Longitude 92° 03' 23.4" E). The project is located in the limits of Rho and Yuthembu villages under Jang sub division in Tawang District. **The entire land on either side of the river is classified as Unclassified State Forest (USF).** A note on justification for proposing the project in the forest land is enclosed as **Annexure 6**. Details of alternate sites considered and selection of present locations are explained in **Annexure 15** and the map showing the alternatives considered is enclosed as **Annexure 15A**.

Component Structures of the project

A 22 m high and 47.8 m long barrage is proposed across Mago Chu and the water is proposed to be diverted through a concrete lined headrace tunnel of length 3128m and 4.5m diameter followed by surge shaft of dia 6.5m and then a single pressure shaft of 3.40m diameter and 240.7m long bifurcating near the power house in to two penstocks of diameter 2.8m and 2.0m having lengths 20.5m and 35.5m each. The 3m dia penstock again bifurcates in to two numbers of diameter 2.0m each with lengths 30.5m and 24.5m and leading to an Underground Power House with an installed capacity **90 MW** to be located on the right bank of Mago Chu. The salient features of the project, is enclosed as **Annexure-16**. The project lay out map is enclosed as **Annexure 16A**.

Power Potential

The Project with an installed capacity **90 MW** is estimated to generate an annual energy of **433.01GWh** in a 90% dependable year with a machine availability of 95%. The power generated from the project is proposed to be evacuated through Tawang II pooling station proposed to be constructed by PGCIL.

Estimated Cost of the project

The total estimated cost of the project is Rs. 938.02 Crores including Rs. 143.54 Crore towards escalation and 149.85 Crores for IDC based on July, 2013 price level. The levelised tariff comes to Rs. 4.73/kWh. The detailed Cost Benefit analysis is enclosed as **Annexure- 7**.

Back ground of the Proposal

The proposal for the Diversion of **28.42 ha** of Forest Land required for New Melling HEP (90MW) , being developed by SEW New Melling Power Corporation Ltd., was uploaded in the web site with project Proposal No. **FP/AR/HYD/17227/2015**. But, the name of the User Agency was inadvertently considered as SEW Mago Chu Power Corporation Ltd. As per the MOA, all the sanctions are to be obtained in the name of the Special purpose vehicle only i.e. SEW New Melling Power Corporation Ltd.

Further, due to the inclusion of the areas of the existing RWD road, nallah crossings (within the plots), and small portions of adjoining areas etc., the area proposed to be diverted has been increased to **33.48 ha**, as against **28.42 ha** proposed earlier. In the circumstances, fresh proposal for diversion of forest land is being submitted in the name of the user agency, SEW NEW MELLING POWER CORPORATION LTD. **There are no changes in the locations of component structures or locations of areas proposed for different purposes earlier.**

Revised Land Requirement of the project.

The requirement of land for various purposes/components of New Melling HEP is as follows;

A. Surface Forest Land

Land is required for the proposed surface structures / components of the Project like Labour colony, Reservoir Submergence area, Head works, intake, Desanding chambers, Facility areas , Quarry areas , Muck dump yards , Stack yards, Magazine, Colony areas, Approach roads, Portal of SFT, Portals of Adits etc. The total requirement of surface forest land for the above purposes comes to **25.08 ha**.

B. Notional Area for Underground Structures

Notional Land is proposed for the proposed underground structures like Adits to various underground structures, Feeder tunnels, Silt Flushing Tunnel, Head Race Tunnel, Power house, Pressure Shaft, Penstock, Main Access Tunnel, TRT, etc. The total notional area required for the underground structures comes to **5.49 ha**. Thus the total bare minimum land required for the project is as follows;

Surface area	25.08ha
Notional area for underground structures	5.49 ha
River	2.91ha
Total	33.48ha

The purpose wise breakup of total requirement of land is enclosed as **Annexure 2**. The map of the forest area required for diversion showing the boundary of the adjoining forest land, to a scale of **1:50,000**, is enclosed as **Annexure 4**. Also the map indicating the land identified for various purposes/ component structures is enclosed as **Annexure 5**.

Environmental Clearance

Required clearance for the Preconstruction activities along with Terms of Reference (TOR) for preparation of EIA/EMP report was accorded by MoEF. Subsequently, the EIA/EMP report was prepared and public hearing conducted on 4-2-2015, by the State Pollution Control Board and the final EIA/EMP report was approved and conditional Environmental Clearance accorded by the MoEF on 3.3.2016. Copies of the CAT Plan and Muck Disposal Plan as provided in the approved EIA/EMP Report are enclosed as **Annexure 10** and **Annexure 17** respectively. Further, New Melling H E Project has been recommended for implementation in the report of NEHU, on the Cumulative Impact Assessment and Carrying Capacity Study of Tawang River Basin approved by MoEF&CC.

Employment likely to be generated.

At present, most of the local population sustain on agriculture and allied activities. There are no major industries or other means of occupation in this area. The project will open a large number of job opportunities to the local population both during construction and operation phases.

As per the MoA, preference shall be given to the local people and the following criteria will be followed, subject to the conditions that the incumbents fulfilling the requirements of qualification for the positions.

- Managerial/professional post: 25%
- Ministerial/clerical post: 50%
- Skilled jobs: 25%
- Unskilled jobs: 75%

During the construction period of 42 months a total of about 52500 man days will be created, including staff and labour, at an average of about 500 people per day assuming 25 working days per month. During project operation period of 40 years allocated as per MOA, about 80 people (including staff and labour) are required on a regular basis.

Present stage of the project

All the investigations, except drifting, have been completed and the Detailed Project Report is under appraisal in CWC/CEA/GSI at the Pre Consultation stage. DPR will be submitted to CEA after clearance at Pre consultation stage.

Undertakings

All necessary undertakings including those to bear the cost of Compensatory Afforestation, Cost of NPV, Cost of Forest Produces and that the construction activities will not be started before Final Forest Clearance etc. are also enclosed. The details of all the Undertakings/Certificates /Documents furnished are shown in **Annexure A**.

Signature:**Name:**

Jayaprakash N.,

Designation: Business Associate.

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