

HYDRO ELECTRIC POWER POLICY OF MIZORAM - 2010

1. GENERAL PROFILE OF MIZORAM:

- (i) **Geographical Location**: Mizoram is one of the eight North Eastern States of India. It is located between Latitude 21.58° N and 24.35° N and Longitude 92.15° E and 93.29° E.
- (ii) **The People**: The Mizo society is well-knitted and homogeneous in culture, language and faith. These traits add commonality to their approaches to development and other social activities.
- (iii) **Topography** : Mizoram is mostly hilly. The hills are steep and are separated by rivers which flow either to the North or South, creating gorges between the hill ranges. Eastern sector is higher than the western sector. Average height of the hills is about 900 metres.
- (iv) **Climate** : The maximum average temperature in the summer is 30°C, while in the winter the minimum average temperature is around 11°C. The four months between November and February are winter time in Mizoram which is followed by the spring. The three months from June to August are known as the rainy season. The Climate is at its moderate best in the autumnal months-September and October, when the temperature moves between 19°C to 25°C.

(v) **Land Use Pattern** : The land usage pattern as shown below reveals that the total cropped area is relatively small and a large area is still under forest.

| | |
|------------------------------|----------|
| Forest area | : 75.77% |
| Fallows land | : 7.73% |
| Barren and uncultivable area | : 3.08% |
| Cultivable waste | : 8.25% |
| Net sown area | : 5.15% |

(vi) **COMMUNICATIONS**: (Road, Air, Railways and Telecommunications)

(a) **Roads**:

- National Highway (NH) – 54 connects the State with mainland India through Silchar, Assam.
- NH-150 connects the State with Manipur and Nagaland.
- NH-40A links the State with Tripura which will also provide connectivity to Bangladesh.
- Another road from Aizawl - Champhai (Mizoram) - Tiddim (Myanmar) will soon connected India and Myanmar in future.

(b) **Air Services** : Mizoram is connected with Kolkata and Guwahati by daily Air Services.

(c) **Train/Railways** : Mizoram can be reached by train at Bairabi (Mizoram) Rail Station or via Silchar (Assam). Bairabi is

about 110 kms whereas Silchar is about 180 kms from the State capital.

(d) **Tele-communications** : Mizoram is covered with reliable telephone connection and internet facilities.

(vii) **Vital statistics of Mizoram:**

Other statistics of Mizoram are provided in the table below:

| | |
|-------------------------------------|--|
| Geographical area | : 21,087 sq. km |
| Rural area | : 98% |
| Urban area | : 2% |
| Population as per 2001 AD census | : 891,058 |
| Population density | : 42 per sq. km |
| Literacy rate | : 88.49% |
| Language spoken | : Mizo and English (in cities and towns people are conversant in Hindi) |

(viii) **Responsive and accessible State Government:** The Government of Mizoram is forward-looking and committed to the economic upliftment of the State. It is responsive and accessible to all kinds of new economic initiatives and proposals.

2. **Hydro Power Potential** : The topography of the State provides for ideal conditions for development of Hydro-Electric Power Projects. There are two major types of rivers in Mizoram according to their direction of flow; rivers which flow in North direction namely, Tuivai, Tuivawl, Tlawng, Tut, Serlui and

Tuirial and rivers flowing in Southern direction namely, Kolodyne, Tuichang, Tuipui, Tiau and Mat. Apart from the major rivers, the State has many small rivulets which are perennial in nature and providing ideal condition for developing projects in the category of Micro / Mini and Small Hydro Electric Project. The Hydro Power potential of Mizoram is assessed to be around 3663 MW (**Annexure – I**).

3. **Present Power Scenario** : Despite availability of such huge potential, the State has so far developed only 15.025 MW under the State sector from Small Hydro Electric Projects. Under the Central Sector, the North Eastern Electric Power Corporation (NEEPCO) is now taking up project execution of Tuirial Hydro Electric Project in Mizoram with an installed capacity of 60 MW. Under the State Sector, 3 Nos. of Small Hydel Projects have been taken up which are at various stages of construction with a target capacity addition of 15.50 MW during the 11th Plan period. The present generation from the Hydro Power sources are therefore, not adequate to meet the peak demand of about 99 MW. This demand is met from Central Power Generating Plants supplemented by seasonal 15.025 MW Small Hydel Projects. There also exists 22.93 MW Heavy Fuel Oil Power Plant for back-up in the event of failure of Power Generations from above. Peak load forecast for Mizoram is 217 MW for the year 2011 – 2012.
4. **State Nodal Agency** : Power & Electricity Department, Government of Mizoram is the Nodal Agency for developing and promoting Hydro Power in Mizoram for Projects beyond 25 MW at present. All

the approval/consent of the State Government relating to Power Projects will be conveyed by the Secretary (Power), Government of Mizoram or a person duly authorized by him. The State Nodal Agency for Projects below 25 MW is Zoram Energy Development Agency (ZEDA).

5. **Present Approach of the State Government** : The State Government has since liberalized the policy towards development of the Hydro Power Projects in the State. Keeping in tune with the Central Government Policy of capacity addition from Hydro Projects, the State Government has opened its door for investigation, Detailed Project Report (DPR) preparation and subsequent implementation of the Hydro Power Projects. Accordingly, Central Power Sector Undertakings (CPSU) like the NEEPCO Ltd., NTPC (Hydro) Ltd., and Central Government organizations like the Central Water Commission (CWC) and the Brahmaputra Board have been allowed to undertake the investigation works at various sites.
6. **PM's 50,000 MW HEP Initiative** : The Central Government has also identified 3 schemes in the State with an installed capacity of about 1500 MW, for preparation of the Preliminary Feasibility Reports (PFRs).
7. **Development Policy of the State Government:** The State Government has taken the policy decision to develop the available Hydro Power potential of the State in a most environment, eco-friendly and judicious manner for all round development of Mizoram. As such, the following policy decision applies for developing any project :-

- (i) Prior approval/consent of the State Government must be obtained by the developers for implementation of any Hydro Power Project in the State.
- (ii) Detailed Project Report of the project must be approved by the State Government prior to implementation by the Developers.
- (iii) The State Government agencies must be invariably associated from the stage of project formulation/investigation.
- (iv) The State Government must be taken into full confidence in all matters by the Central Government and the Developers.
- (v) Preference shall generally be given to the investigating agency for the development of the project.

8. Procedure of allotment : Any interested Developer including the private Developers may give their offer to the State Government through the State Nodal Agency. The general procedure for allotment of the project shall be as under :-

- (a) The State Government will give scheme wise/project wise consent for preparation of the Preliminary Feasibility Report (PFR) through the State Nodal Agency under the signature of the Secretary (Power), Government of Mizoram, to the User Agency/Developer.
- (b) The proposal for the Stage-I Forest Clearance received from the user agency will be processed by Environment & Forest Department, Government of Mizoram only after getting ex-

PLICIT No Objection Certificate (NOC)/consent of Power & Electricity Department. However, recommendation of Environment & Forest Department to the Ministry of Environment & Forest, Government of India shall not constitute approval of State Government for project implementation.

- (c) The User Agency/Developer shall submit the Preliminary Feasibility Report (PFR) to the State Nodal Agency, i.e. the Secretary (Power), Government of Mizoram. Based on such Preliminary Feasibility Report (PFR), State Government will decide to give consent for detailed survey and investigation and Detailed Project Report (DPR) preparation in Projects where Survey & Investigation are not yet done.
- (d) The proposal for Stage-II Forest Clearance received from the User Agency will be processed by the State Environment & Forest Department only after getting explicit No Objection Certificate (NOC)/ consent of the State Nodal Agency. The State Environment & Forest Department will clearly stipulate that the recommendation of the State Environment & Forest Department shall not be construed as the approval of State Government for the project implementation and the proposal is subjected to concurrence of the Ministry of Environment & Forest, Government of India.
- (e) The User Agency/Developer will submit the Detailed Project Report to the State Nodal Agency and the approval for project implementation

would be given by the State Nodal Agency through the Secretary (Power), Government of Mizoram, after examining the Detailed Project Report, if acceptable. A formal **Memorandum of Understanding** will be executed between the User Agency/Developer and the State Government for implementation of the project after the approval to the Detailed Project Report (DPR). A model **Memorandum of Understanding** is appended as **ANNEXURE-II**.

- (f) The user Agency/Developer shall oversee the category of projects as per schedule 1 of EIA notification 2006: and shall be responsible for obtaining environmental clearances from Ministry of Environment and Forests under the said notification.
- (g) Public hearing required for obtaining Environmental Clearance shall be conducted by Mizoram Pollution Control Board in accordance with the EIA notification as amended from time to time which shall be done only after getting explicit No Objection Certificate (NOC)/Consent of State Nodal Agency.
- (h) The user Agency/Developer, after clearing all environmental obligations from the Central Government shall obtain consent from Mizoram Pollution Control Board under water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act, 1981.
- (i) In case the project is to be discontinued/abandoned, communication must be given to the Nodal Department, Environment & Forests

Department, Land Revenue & Settlement and Mizoram State Pollution Control Board well in time.

- 9. Allotment of Projects :** The power projects have been divided into the following three categories for allotment to developers i.e. a Company or a Consortium of Companies whether in the Public or Private Sector.

Category-I : Small Hydro Projects up to 25 MW capacity.

Projects to be allotted through MOU Route.

Category-II : Medium Hydro Projects above 25 MW and below 100 MW.

Projects to be allotted through MOU Route.

Category-III : Large and mega Projects above 100 MW capacity.

Projects to be allotted through ICB/NCB/MOU Route for Public Sector Power Producers & Projects executed under PPP mode with State Government.

- (i) As a long term strategy, the Government shall make efforts for survey and investigation of the potential Hydro Project sites and for preparation of bankable Detailed Project Report (DPR) for future execution.
- (ii) An opportunity for Self Identified Projects by Independent Power Producer (IPP), apart from

those projects which have already been identified by Government sector/organizations, may be given on their own and also to prepare Preliminary Feasibility Report/Detailed Project Report on the same. Such Independent Power Producers (IPPs) may submit an application/suo moto proposal to the Government, after which Government may allot such projects after due consideration and the Independent Power Producer (IPP) shall be asked to sign a Memorandum of Understanding (MOU) with State Government for development of such projects.

- (iii) In view of the need to generate fund for the overall development of the displaced people due to the project, Cess of 1 paisa per Unit of the power generated will be charged from all such projects on Independent Power Producer (IPP) for meeting each of the following social development costs:
 - (a) Green cess
 - (b) Education
 - (c) Health
 - (d) Sustainable development.

However, projects below 25 MW will be exempted from payment of cess. Projects executed under PPP mode with State Government/State Government Undertakings will be exempted from payment of cess.

- (iv) An Upfront premium of Rs1.00 lakh per MW will be charged from all such projects on Private Developers for those projects of 25 MW

and above. 50% will be payable at the time of signing the Memorandum of Understanding (MOU), 25% at the time of signing the Implementation Agreement and the remaining 25% immediately at the time of financial closure. Private Developers who take up Projects under PPP mode with State Government and Public Sector Developers will be totally exempted from payment of this premium.

- (v) The incentives/concessions offered by the Ministry of New and Renewable Energy(MNRE) and incentives for power generating industries under North East Industrial and Investment Promotion Policy (NEIIPP), 2007 shall be applicable for Small Hydro Projects up to 25 MW and 10 MW respectively. The State Government will facilitate setting up of such projects under this Policy obtaining concurrence and sharing relevant information with the State Nodal Agency for Renewable Energy i.e. Zoram Energy Development Agency (ZEDA).
- (vi) The State Govt. shall encourage De-centralized Generation and Distribution for remote and inaccessible areas where grid connectivity is either not feasible or not cost effective and where the resources are available.

10. Empowered Committee: In order to expedite the project selection process and so as to facilitate the smooth implementation of this policy, Government of Mizoram will constitute an Empowered Committee with the following functions:

- (a) To determine the norms and procedure for se-

lection of bidders and other types of allottees of power projects within the policy parameters.

- (b) To finally select the developers of Power Plants of all categories under this policy.
- (c) To approve the terms and conditions of the Memorandum of Understandings (MOUs), Implementation Agreement/Letter of Allotment and other such documents as specified which are required to be executed by Government of Mizoram and the concerned developers.
- (d) To consider and approve the incentives, monetary or otherwise, which would be made available to developers under this policy.
- (e) To suggest amendments to this policy if considered necessary.
- (f) To undertake a periodic review of the implementation of projects.

11. **Free Power:** Royalty shall be levied from the allotted projects in the form of free power @13% of the deliverable energy during the period starting from the date of synchronization of the first generating unit. 12 % will be for the host State Government and 1% for contribution towards Local Area Development Fund of the Project as constituted by the State Government. The Developer will be responsible for Clean Development Mechanism (CDM) registration and share all Certified Emissions Reductions (CERs) with Government of Mizoram at mutually agree percentage. A tripartite committee consisting of the representative of the state Government, developers of the projects and a representa-

tive of the local authority or committee as the case may be will decide the schemes to be taken up in the area in a transparent manner.

12. **Ownership mode:** The project may be developed on Build, Own and Operate (BOO) basis or on Build, Own, Operate and Transfer (BOOT) basis or Build, Own, Transfer (BOT)/ Build Own, Operate and Maintain(BOOM) by Independent Power Producer (IPP) / under Public Private Partnership (PPP)/Joint Venture Mode. The ownership mode and share holding pattern will be mutually decided prior to allotment of the project between the Government of Mizoram and Developer.
13. **Right to Power Purchase:** Over and above the free power, the State Government will have the first right to purchase the power generated from the project if the State Government so desire. In case the State Government decides to purchase power from the project, a separate Power Purchase Agreement (PPA) will be entered into for such purchase of power between the State Government and the Developer(s) after tariff is fixed by the relevant Regulatory Commission.
14. **Equity Participation:** If the State Government so desire, it will enter into equity participation also. The quantum of equity shall be mutually decided between the State Government and the Developer. The State Government may also consider equity in lieu of land acquired and infrastructures so provide like road etc for the project.
15. **Compliance to Statutory Regulations:** The Developer/User Agency shall strictly comply with the

statutory regulations of the Central and State Governments while implementing the project. The Developer shall strictly comply with the provision of the Forest (conservation) Act 1980. The Developer shall also pay the cost of raising the Compensatory Afforestation including payment of the Net Present Value (NPV) of the forest land being diverted for non-forest purpose under the Forest (conservation) Act, 1980 if not exempted under any law or order of the Supreme Court of India. The provisions relating to labour welfare as in force under the Labour Laws applicable to Mizoram should be strictly adhered to by the Developer during the implementation/operation and maintenance of the Project. The provisions of the Electricity Act, 2003 as amended from time to time will apply in the implementation of Hydro-Electric Projects in the State. The developer shall also comply with EIA Notification 2006, Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981.

16. **Power Evacuation:** The existing local grid system may be insufficient for evacuation of generated power. In such scenario, it is the duty of the Developer to arrange evacuation system. However, in the event of utilizing the infrastructure of the State Government, necessary charges as mutually agreed shall be paid by Developer to the State Government. The entire cost of grid interfacing including cost of maintenance of the evacuation system will be the responsibility of the Developer.
17. **Trading and Sale of Power:** It shall be the responsibility of the Developer for the trading and sale of the power generated from the project. The

Developer(s) shall be free to dispose of power from the Projects, after allowing for royalty in the shape of free power and meeting the demand in the State. The State Government will not be in any manner responsible for the sale and trading of the power on behalf of the Developer.

18. **Transfer and Sale of Power Plant:** The Developer will not be allowed to sell and transfer the allotted Project or Power Plant to any other party/parties without the prior permission of the State Government.
19. **Land acquisition for the Project:** The land required for the construction, operation and maintenance of the project and for the associated works as assessed by the Developer shall be transferred by the State Government to the Developer on lease basis against payment of land revenue as per approved rate of State Government. The period of lease will be determined as per requirement from time to time. The State Government shall acquire land for the project on behalf of the Developer under the Land Acquisition Act, 1894 as in force at the expense of the Developer for such private lands within the State of Mizoram, as may be required from time to time by the Developer for construction, operation and maintenance of the project. Notwithstanding the provisions in the existing Revenue Acts and Rules, land lease can be considered for a period not exceeding 99 years based on merit or life of the project, as the case may be.
20. **Law and Order:** The State Government will be responsible for maintenance of general law and or-

der in and around Project area for security and safety of properties of the project, protection of life of the workers and experts/Engineers/Officers during execution, operation and maintenance of the project. However, if any special security arrangement is required by the Developer(s), such arrangements can be made at the cost of the Developer(s).

21. **Force Majeure**: The State Government shall not be responsible in any manner for the losses arising out of force majeure situation such as earth quake, flood, fire, external invasion, civil commotion; landslide etc. and no claim on such accounts by the Developers shall be entertained by the State Government.

22. **REHABILITATION AND RESETTLEMENT**: Rehabilitation and Resettlement plan where it is required shall be executed by the State Government as per the approved rehabilitation and resettlement plan to be fully financed by the Developer, keeping in view of the latest guideline issued by State Government and Government of India on the subject.

22.1 **Scope of coverage** : The following provision shall be applicable even if one family is affected by the development of a Hydro Power Project.

22.2 **Project Affected Families**: A Project Affected Family (PAF) shall mean a family whose place of residence or other property, or source of livelihood has been affected by the development of a hydro project and who have been residing in the affected zone for two years preceding the date of declaration

of notification under Section-4 of LA Act. The affected family would also include squatters.

- 22.3 **Agricultural Labourer:** A person normally residing in the affected zone for two years preceding the date of declaration of the affected zone and earns his/her livelihood principally by manual labour on agricultural land within the Project affected area.
- 22.4 **Non-Agricultural Labourer:** A person normally residing in the affected zone for two years preceding the date of declaration of the affected zone and who does not hold any land in the affected zone but earns his/her livelihood principally by manual labour or as rural artisan or a service provider to the community within the Project affected area.
- 22.5 **Squatters:** A family occupying government land in the affected zone without a legal title, at least for 5 years prior to the date of declaration of notification under Section-4 of L.A. Act.
- 22.6 **Rehabilitation and Resettlement Colonies:** This policy aims to provide built up houses to Project Affected Families (PAFs) who get displaced due to the development of hydro projects to the extent possible. However, wherever opted for, liberal House Construction Allowance would be given in lieu.
- 22.7 **Training and Capacity Building:** This policy also emphasizes the need to provide training to the Project Affected Families (PAFs) as well as local population for a sustained

livelihood. Special training programmes from it is aimed at providing the required skills to the local population would be undertaken by the Project Developers at least six months prior to commencement of construction. This is expected to boost the employability of the PAFs and other people residing in the vicinity of the project.

22.8 **Additional Provisions:** This Policy envisages additional provisions for Project Affected Families such as :

- scholarships for meritorious students,
- extension of medical facilities,
- marriage grants,
- subsistence grants,
- support for income generation schemes for cooperatives and self help groups,
- seed, pesticides and fertilizer subsidies, and irrigation support.

Besides the additional provisions mentioned above, the normally applicable provisions of the National Policy on Rehabilitation and Resettlement -2007, would be applicable.

23. The provisions not mentioned in this Hydro Electric Power Policy of Mizoram 2010 will be supplemented from the provisions of Hydro Power Policy 2008, Government of India.

ANNEXURE – I

LIST OF HYDRO-ELECTRIC PROJECTS

A. DPRs AVAILABLE:

1. Projects ranging 15 MW and above

| Sl. No. | Name of Project | Installed Capacity (In MW) | Location | |
|----------------|---------------------|----------------------------|-----------------|-----------|
| | | | Nearest Village | District |
| 1 | Kolodyne-II HEP | 460 | Lawngtlai | Lawngtlai |
| 2 | Tuivai HEP | 210 | Ngopa | Champhai |
| 3 | Bairabi Dam Project | 80 | Bairabi | Kolasib |
| 4 | Tuirini HEP | 38 | Sesawng | Aizawl |
| 5 | Tuivawl HEP | 42 | E.Phaileng | Aizawl |
| Total = | | 830 MW | | |

2. Projects ranging 1MW to 15MW:

| Sl. No. | Name of Project | Probable Installed Capacity (In MW) | Location | |
|----------------|-------------------------|-------------------------------------|-----------------|----------|
| | | | Nearest Village | District |
| 1. | Tlawva SHP | 5000 | Khawbung | Champhai |
| 2. | Kawlbem SHP | 3500 | Kawlbem | Champhai |
| 3. | Ngengrual SHP | 2000 | Thingfal | Lunglei |
| 4. | Tuikum SHP | 3500 | Serchhip | Serchhip |
| 5. | Kautlabung-II SHP | 1500 | Thenhlum | Serchhip |
| 6. | Khawiva-II SHP | 1000 | Serkawn | Lunglei |
| 7. | Tuipanglui-II SHP | 3000 | Tuipang'L' | Saiha |
| 8. | Mat Multipurpose Scheme | 3500 | Thenzawl | Serchhip |
| 9. | Tuisih SHP | 2000 | Ainak | Saiha |
| 10 | Khawchhaktuipui SHP | 3000 | Tualte | Champhai |
| 11 | Dialdawk SHP | 1000 | Lengpui | Aizawl |
| 12 | Iva SHP | 2500 | Vaphai | Champhai |
| Total = | | 31.50 MW | | |

3. Project ranging 100KW to 1MW:

| Sl. No. | Name of Project | Probable Installed Capacity (In MW) | Location | |
|----------------|-----------------|--------------------------------------|-----------------|----------|
| | | | Nearest Village | District |
| 1. | Rakilui MHP | 500 | Ainak | Saiha |
| 2. | Tamdil MHP | 500 | Saitual | Aizawl |
| 3. | Phaichar MHP | 200 | Ngur | Champhai |
| 4. | Mawngping MHP | 200 | Lamchhip | Aizawl |
| 5. | Thenhlum MHP | 700 | Thenhlum | Serchhip |
| Total = | | 2.10 MW | | |

4. Project below 100KW:

| Sl. No. | Name of Project | Probable Installed Capacity (In MW) | Location | |
|----------------|--------------------|--------------------------------------|-----------------|----------|
| | | | Nearest Village | District |
| 1. | Tuiching Micro HP | 100 | Hnahthial | Lunglei |
| 2. | Tuiriza Micro HP | 100 | Phullen | Aizawl |
| 3. | Saiphai Micro HP | 50 | Saiphai | Kolasib |
| 4. | Raifanlui Micro HP | 50 | Sialhawk | Champhai |
| Total = | | 0.30 MW | | |

B. PFRs AVAILABLE :

| Sl. No. | Name of Project | Probable Installed Capacity (In MW) | Location | |
|---------|---------------------------|--------------------------------------|-----------------|-----------|
| | | | Nearest Village | District |
| 1. | Tualte | 100 | Tualte | Khawzawl |
| 2. | Chiahpui-Chiahte Combined | 400 | Lengpui | Aizawl |
| 3. | Minlui | 100 | Rawlbuk | Lawngtlai |
| 4. | Lallen | 200 | W.Phaileng | Mamit |
| 5. | Mitthikokham | 1000 | Lungpher | Lawngtlai |
| 6. | Delui | 300 | Lungsen | Lunglei |
| 7. | Hnahthia & Piva | 2000 | Chhualung | Saiha |

| | | | | |
|----------------|--------------------------|-----------------|-------------|------------|
| 8. | Sekulhlui | 100 | Bungtlang | Lawngtlai |
| 9. | Tuidamlui | 100 | W.Bunghmun | Lunglei |
| 10. | Tuirumlui | 100 | Hrianghmun | Champhai |
| 11. | Tuisa Lui | 1000 | Mimbung | Champhai |
| 12. | Sangau Lui | 100 | Sangau | Lawngtlai |
| 13. | Rava Lui | 50 | Chhualung | Saiha |
| 14. | H.Tangerlui | 100 | Sangau | Lawngtlai |
| 15. | Cheului | 50 | Sangau | Lawngtlai. |
| 16. | Bualanu Khamlui | 50 | Vawmbuk | Lawngtlai |
| 17. | Tuikhurlui | 50 | Lungtian | Lawngtlai |
| 18. | Khawrawplui | 15 | Tuithumhnar | Lawngtlai |
| 19. | Tuiphai | 3000 | Hnathial | Lunglei |
| 20. | Samtar Lui | 200 | S.Tawipui | Lunglei |
| 21. | Chikhurlui | 15 | Lawngtlai | Lawngtlai |
| 22. | Limhuhva Lui | 200 | Vawmbuk | Lawngtlai |
| 23. | Marlui | 3000 | W.Phaileng | Mamit |
| 24. | Sunhlu Lui | 100 | S.Bungtlang | Lawngtlai |
| 25. | Tuithumlui | 100 | Dungtlang | Champhai . |
| 26. | Ulgalsurilui | 200 | Ulgalsurai | Lunglei |
| 27. | Ngengrual-III | 2000 | Thingfal | Lunglei |
| 28. | Ainaklui (DSI available) | 50 | Lungbun | Saiha |
| 29. | Kukisura | 200 | Borapansuri | Lunglei |
| 30. | Tuichawnglui | 1000 | Chawngte | Lunglei |
| Total = | | 15.88 MW | | |

C. PROJECTS UNDER INVESTIGATION:

| Sl. No. | Name of Project | Installed Capacity (In MW) | Location | |
|----------------|-----------------|----------------------------|-----------------|----------|
| | | | Nearest Village | District |
| 1 | Tuipui HEP | 38 | Biate | Champhai |
| 2 | Tuichang HEP | 102 | Hnathial | Lunglei |
| Total = | | 140 MW | | |

D. PROJECT IDENTIFIED:

| Sl. No. | Name of Project | Installed Capacity (In MW) | Location | |
|----------------|-----------------|-----------------------------|-----------------|-----------|
| | | | Nearest Village | District |
| 1 | Bairabi Dam-I | 45 | N. Lungleng | Aizawl |
| 2 | Ngengpui HEP | 25 | Ngengpui | Lawngtlai |
| 3 | Sekulh HEP | 15 | S.Bungtlang | Lawngtlai |
| 4 | Chhimitupui HEP | 640 | Sangau | Lawngtlai |
| 5 | Lungreng HEP | 815 | S.Lungleng | Sechhip |
| 6 | Mat HEP | 76 | Rotlang 'E' | Lunglei |
| 7 | Tut HEP | 27 | Rawpuichhip | Mamit |
| Total = | | 1643 MW | | |

E. OTHER PROSPECTIVE PROJECTS

| Sl. No. | Name of Project | Tentative Installed Capacity (In MW) |
|--------------|----------------------------|---------------------------------------|
| 1 | OTHER PROSPECTIVE PROJECTS | 1000 |
| Total | | 1000 MW |

| | |
|---|-------------------|
| TOTAL HYDRO POWER POTENTIAL IN MIZORAM (A+B+C+D+E) | 3662.78 MW |
|---|-------------------|

ANNEXURE-II

I Memorandum of Understanding between Government of Mizoram and(Name of Agency), for execution ofHydro Electric Project on river.....(Name of river) in Mizoram.

1. This agreement is made on this day of 2010, between the Governor of Mizoram, represented by the Secretary to the Government of Mizoram, Power & Electricity Department having its seat of Government at Aizawl, Mizoram (hereinafter referred as “The First Party” which expression shall, unless repugnant to the context or meaning thereof, include its successors and assignees, on ONE PART.

AND

The (Name of Agency) incorporated under the Companies Act, 1956 and also a generating company within meaning of the Electricity Act 2003, having its registered office at through the (Head of Agency or Authorized Signatory) duly authorized by (hereinafter referred to as “The Second Party” which expression shall include its successor(s), Administrator(s) and permitted assignee on the OTHER PART.

2. WHEREASHydro Electric Project (hereinafter referred to as “The Project”) on

riverDistrict of the State of Mizoram with a total installed capacity of MW is contemplated to be taken up for implementation considering **Clean Development Mechanism (CDM)**, and

3. WHEREAS the First party has decided that the Second Party should set up the said project in the State subject to establishment of techno-commercial viability and clearance of the project by Ministry of Environment & Forest (MOEF), Mizoram Pollution Control Board (MPCB) & Central Electricity Authority (CEA).
4. And WHEREAS the State Government has approved the engagement of the (Agency) to execute the said power project on BOOM/BOT/BOOT/PPP mode basis.

II. NOW THERE FOR AND IN CONSIDERATION OF PREMISES AND MUTUAL COVENANTS SET FORTH HEREIN THE PARTIES HEREBY AGREE AS FOLLOWS:

1. Now, therefore, it is hereby agreed between the First Party on one hand and the Second Party on the other hand that the latter shall execute the said generation project on BOOM/BOT/BOOT/PPP mode basis including CDM Registration and terms and conditions set out herein below.
2. That the Second Party shall examine the project in details and prepare a Preliminary Project Report (PPR) followed by a Detailed Project Report to es-

establish techno-economic viability of the project. The expenditure incurred for the above shall be part of the project cost and borne by the Second Party. The Second Party shall submit Preliminary Project Report (PPR)/Preliminary Feasibility Report (PFR) and the Detailed Project Report (DPR) to the First Party for examination and approval.

3. That the Second Party shall examine the Detailed Project Report, when DPR has already been prepared, to establish techno-economic viability of the project. The expenditure incurred for the above shall be part of the project cost and borne by the Second Party.
4. The Second Party shall be responsible for obtaining timely clearances, authorization and approvals required for the implementation of the project. The First Party will provide all necessary assistance in this regard.
5. The implementation of the scheme in its entirety would be automatically deemed to be void if techno-economic clearance is not accorded by Central Electricity Authority (CEA).
6. Any modification or changes suggested by Central Electricity Authority (CEA) shall be incorporated in the implementation Agreement with due consent of the First Party.
7. The Second Party shall supply 13% free power from the project to the First Party reckoned at Generating switch yard/Bus Bar. 12% will be for the host

State Government and 1% for contribution towards Local Area Development Fund of the Project as constituted by the First Party **and the Second Party and Government of Mizoram will share all Certified Emissions Reductions (CERs) generated by the Project at.....%.**

8. The Second Party will supply% of power generated from the Project at the tariff determined by relevant Electricity Regulatory Commission over and above the normal share of Mizoram as per the existing Central formula of sharing power.
9. Energy corresponding to 100units of electricity is to be provided free of cost every month to every Project Affected Families (PAF) notified by the State Government to be offered through the concerned distribution licensee in the designated resettlement area/ projects area for a period of 10(ten) years from the date of commissioning. The cost of balance unused electricity, if any, should be made available to Project Affected Families in cash or kind or a combination of both, at rates to be determined by the concerned authority.
10. The ownership of the project shall vest with Second Party.
11. Sale of Power from the project shall be the responsibility of the Second Party.
12. In case the Second Party does not implement the project under any circumstances, it shall hand over the project back to the First Party on as is where is

basis along with all the reports, other documents etc. free of cost.

13. The Second Party shall make available information regarding water discharge regularly to the First Party.
14. The Second Party shall be liable and responsible for all its acts, neglects, omissions and commission along with the acts, neglects, omissions and commission of its contractors, subcontractors and assignees.
15. The First Party or its agents or a party authorized by it shall be free to survey & investigate and implement projects of any nature and purpose upstream and downstream of the project.
16. The Second Party shall be liable and responsible for complying with all the environmental obligations and conditions.
17. The Second Party shall allow the First Party, its Officers/staff or authorized agents to use the roads and facilities such as Post Office, School and Dispensary etc. as per the implementing Second Party's policy, The State Government and its authorized agents shall be allowed to inspect the project and its site(s).
18. Any and all correspondence/demands made or notice to be sent or required to be made under this Agreement shall be in writing in English language, signed by the Party giving such notice (Claim or demand) and shall be delivered personally or by

any feasible mode or transmission coupled with sending original or registered post or E-mail to other parties at their addresses set forth herein below or at such other addresses as other party may subsequently notify.

19. a)% recruitment at the level of workmen (including Technical & Ministerial) required to be done, if any, will be done first from the land oustees and in case of non-availability of suitable candidate amongst land oustees, the recruitment will be done from other residents of Mizoram State whose names are registered on live register of any Employment Exchange located in the State subject to individuals fulfilling the qualification and job specification for the relevant post.
- b) All recruitment examination shall be conducted within the State of Mizoram.
- c) Recruitments in Group-C and Group-D posts and also in the level of contingency/labourer should be made as per the reservation policy of the State Government.
- d) The placement and posting of all new recruitments will be against the proposed project only.
- e) In regards to the recruitment in the categories of Group 'A' and 'B' which are newly sanctioned posts, the same shall be made generally as per the Government of India/Government of Mizoram Policy/Guidelines issued from time to

time, provided that the local candidates shall get preferences for recruitment subject to the fulfillment of the eligibility criteria in the posts filled up against the project from time to time. Further, the posting of all new recruits shall be preferably against the project subject to the existing norms of the Second Party. The Second Party shall intimate creation of all the new posts against the project to the First Party.

- f) The Second Party shall also utilize the services of suitable qualified Engineers having experience, from the State Government as first preference on deputation basis as per list enclosed at Annexure-III. The services of the officers on deputation shall be exclusively utilized against the activities of.....(Name of Project). The deputation terms applicable shall be as per the Government of India rules in force and as amended from time to time. The deputation of the officers shall be within the sanctioned post against the project.
- 20. That except for the major and special type of works, all other works will be kept open for local contractors of Mizoram, subject to their fulfilling eligibility criteria for the execution as per norms of the Second Party and on competitive bidding.
 - 21. That the Second Party will not make any kind of financial liabilities or other wise in the name of the First Party in the execution of the project.
 - 22. That the total land required for the construction, operation and maintenance of the project and for

the associated works as will be assessed by the Second Party and Power & Electricity Department shall be transferred by the First Party to the Second Party on lease basis against payment of land revenue as per approved rate of the State Government for free hold lands. The period of lease will be determined as per requirement from time to time.

23. The First Party shall acquire for the Second Party under Land Acquisition Act, 1894 as in force at the expense of the Second Party such private lands within the State of Mizoram, as may be required from time to time by the Second Party for the construction, operation and maintenance of the project for the period.
24. Rehabilitation and Resettlement plan, if any, or the oustees from the project shall be executed by the First Party as per the approved rehabilitation and re-settlement plan to be finalized and financed by the Second Party keeping in view of the latest guidelines issued by Government of India on the subject as per National Resettlement and Rehabilitation Policy-2007.
25. That the pre-construction activities of the project are to be started within.....months from the date of signing this agreement, subject to receive of all statutory clearances. The project construction works are to be started withinmonths from the date of signing this Agreement. Failure to start the pre-construction activities as stated above, the First Party reserves the right to review this Agreement. The decision of the First Party shall be final

and binding in this regard.

26. The provisions relating to labour welfare existing as in force under the Labour Laws/Acts should be strictly adhered to by the Second Party during the implementation of the project.
27. Project Headquarters of theHydro Power Project shall be located inside Mizoram and all the business activities of the project at the project level shall be transacted from Project Headquarter in Mizoram.
28. That the State Government would make proper arrangements to maintain general law and order in and around Project area for security and safety of (1) properties of the project (2) protection of life of the workers and experts/Engineers/officers during execution, operation and maintenance of the project. However, if any special security arrangement is required by the Second Party, such arrangements can be made at the cost of the Second Party.
29. The Second Party shall strictly comply with the provision of the Forest (Conservation) Act 1980(amended in 1988), Rules and Guidelines as amended from time to time, Environment (Protection) Rules, 1986 (amended up to May, 1994) as amended from time to time, Environmental Impact Assessment Notification of 1994 and amended to Notification of 1994 (issued in 1997). The Second Party shall also pay the cost of raising the Compensatory Afforestation including payment of the Net Present Value (NPV) of the forest land being di-

verted for non-forest purpose under the Forest (Conservation) Act, 1980.

30. The Second Party shall pay to the State; royalty on forest products, river bed materials and any other construction materials where such royalty/monopoly fee shall be applicable; as per prevalent rates.
31. The Second Party shall pay all statutory Central/ State Government taxes as applicable from time to time.
32. The State Government will be free to use the reservoir so created for development of tourism, fishery, inland waterways or as it deems fit in maintaining the best practices concerning reservoir safety and regulations concerning pollution.
33. The Second Party should bear the First Party's share of 10% of the RGGVY within a surface distance ofKm from the project site.
34. There shall be a Project Monitoring Committee of the State Government with Secretary (Power) or as decided by Government of Mizoram as Chairperson to oversee the progress of the Project and sort out matters of mutual interest in respect of the Project. The Second Party shall be represented in the Committee by an officer of the rank of Project Head.
35. ARBITRATION :
 - a. All differences or disputes between the parties arising out of or in connection with this agree-

ment shall be settled through Arbitration which shall be conducted in accordance with the provisions of Arbitration and Conciliation Act 1996 and any statutory notifications thereto. The decision of the Arbitrator shall be final and binding on the parties. The venue of the Arbitration shall be at Aizawl, Mizoram. The "Gauhati High Court" shall have exclusive jurisdiction in all matters arising under this Agreement.

- b. The Arbitrator shall reasonably decide in what proportion his fee and cost of Arbitration proceedings shall be borne by the parties.
 - c. Notwithstanding the existence of any question, disputes and difference referred to arbitration, the parties hereto shall continue to perform the respective obligations under this Agreement.
36. Having understood the implications of the terms and conditions above mentioned, set our hands on this agreement on the day herein above in presence of witness.

Signed By

Secretary (Power),
Govt. of Mizoram,
Aizawl

Date :

On behalf of the Governor
Mizoram

Signed By

(Authorized signatory),
.....
..... (Name & Agency)

Date :

On behalf of the Agency

Witness

1. _____
(Signature)
(Name and address)

2. _____
(Signature)
(Name and address)

1. _____
(Signature)
(Name and address)

2. _____
(Signature)
(Name and address)

ANNEXURE-III

LIST OF ENGINEERS TO BE TAKEN ON DEPUTATION FOR THE CONSTRUCTION OF HYDROELECTRIC PROJECT

| Phase I | | No of Posts |
|---|-------------------------------------|--------------------|
| (within 12 (twelve) months from the date of CCEA clearance) | Sub Divisional Officer (Electrical) | Nos. |
| | Sub Divisional Officer (Civil) | Nos. |

| Phase II | | |
|--|-------------------------------------|------|
| (within 24 (twenty four) months from the date of CCEA clearance) | Executive Engineer (Electrical) | Nos. |
| | Executive Engineer (Civil) | Nos. |
| | Sub Divisional Officer (Electrical) | Nos. |
| | Sub Divisional Officer (Civil) | Nos. |

| Phase III | | |
|--|--------------------------------------|------|
| (within 48 (forty eight) months from the date of CCEA clearance) | Chief Engineer (Civil) | No. |
| | Chief Engineer (Electrical) | No. |
| | Superintending Engineer (Electrical) | Nos. |
| | Superintending Engineer (Civil) | Nos. |
| | Sub Divisional Officer (Electrical) | Nos. |
| | Sub Divisional Officer (Civil) | Nos. |

Total No. of posts to be filled up on deputation :

| | |
|---|------|
| 1) Chief Engineer (Civil) | No. |
| 2) Chief Engineer (Electrical) | No. |
| 3) Superintending Engineer (Electrical) | Nos. |
| 4) Superintending Engineer (Civil) | Nos. |
| 5) Executive Engineer (Electrical) | Nos. |
| 6) Executive Engineer (Civil) | Nos. |
| 7) Sub Divisional Officer (Electrical) | Nos. |
| 8) Sub Divisional Officer (Civil) | Nos. |
| 9) Medical Officer | Nos. |