

Government of Assam

Policy for

Small Hydropower Development



***Assam State Electricity Board,
Guwahati***

March, 2007

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Small Hydropower Development

*Assam State Electricity Board,
Guwahati*

Prepared by : Alternate Hydro Energy Centre, IIT Roorkee
Sponsored by : Power Finance Corporation Ltd.

March, 2007

INDEX

SR. NO.	ITEM	PAGE
1.	Scope for Hydro Power development in Assam	1
2.	Participation & Prequalification	1
3.	Projects	1
4.	Process of allotment	2
5.	Facilitation to be provided by government	3
6.	Sale of power	4
7.	Wheeling charges	4
8.	Evacuation of power	4
9.	Banking	4
10.	Dispatch	4
11.	Royalty/Duty/Taxes	5
12.	Incentives by Central/State government	5
13.	Transfer of allotment	5
14.	Time limit for executing the project	5
15.	Role of ASEB/GENCO/DISCOMs/TRANSCO	6
16.	Role of Irrigation department, Government of Assam	6
17.	Regulatory oversight	7
18.	Due diligence	7
19.	Power to resolve difficulties	7
20.	Renovation, modernization and management of existing power plants	7
	Figure I: SHP sites in Assam	9
	Annexure I: List of identified SHP sites in Assam	10

GOVERNMENT OF ASSAM
POWER (ELECT) MINES & MINERALS DEPARTMENT
ORDERS BY THE GOVERNOR OF ASSAM

NOTIFICATION

Dated: March 2007

No. PEL.196/2002/199: - The Governor of Assam is pleased to notify the policy for Development of Small Hydropower (SHP) 2007 as below:-

1. SCOPE FOR SMALL HYDROPOWER DEVELOPMENT IN ASSAM

Assam has a hydropower potential of the order of 541 MW against which only about 2.00 MW has been harnessed so far from the Bordikharu Small Hydropower Project (that remains inoperative since April' 1999 due to technical snag). The Government of Assam (GOA) has decided to encourage generation of power through small hydropower (SHP) sources of energy and has framed a policy so that the development of this sector serves as an engine to achieve the objective of promoting the all-round development of the region by inducting private participation.

This policy shall be in operation from the date of its publication as notified by Order of GOA. All projects awarded within this period under this policy will be governed by this policy for their entire duration.

All Hydropower projects/stations with an installed capacity of up to 25 MW are eligible under this policy. The identified potential at present for development of small hydropower (SHP) projects is about 117 MW at about 88 identified locations as at Annexure "A". The policy further allows the development of any other new SHP sites identified by independent power producers (IPPs) / Users society

2. PARTICIPATION & PREQUALIFICATION

The state of Assam invites any qualified interested IPPs/ Users society to bid for identified projects for the development of this sector. There shall be a pre-qualification by the GOA of the bidders for the projects in the state. The pre-qualification shall be based on the balance sheets, annual reports and other reported evidence of past experience, financial and technical capacity etc. Weightage to be given on financial capacity, technical capability, past experience and other relevant attributes of the applicants. The guidelines for evaluation and passing score required for pre-qualification shall be specified in the bid documents inviting bids for pre-qualification. A merit list will be prepared by the GOA or its authorised representative based on pre-qualification criteria of the applications who qualified to bid for the identified project conforming to Clause-4.

3. PROJECTS

- 3.1 The list at Annexure "A" identified projects are available for development with indications of estimated capacities, and for which preparation of Pre feasibility Reports (PFR) or Detailed Project Report (DPR) is in progress. The Assam State Electricity Board. (ASEB)/GENCO or any other IPP/ Users society nominated by the Govt. of

Assam (GOA) will undertake to prepare the PFR/DPR in a time bound manner. Any feasible SHP potential site that has not been listed in the annexure may also be identified by the IPPs/Users society and prepare the PFR/DPR. The evacuation requirements including details of nearest sub-station will be specified in the DPR or pre-feasibility studies conforming to paragraph 8

- 3.2 The projects shall be offered for a period of 35 (thirty five) years from the date of the award at the end of which they shall revert to the GOA. Further extension beyond 35 years shall be considered on mutually agreed terms, as per the decision of the GOA.

4.0 PROCESS OF ALLOTMENT

- 4.1 The allotment of the project may be on the basis of competitive bidding and direct allotment to pre-qualified IPPs /Users society depending on the preparedness of the site.

- 4.2 The projects for which PFR/DPR is available shall be put on competitive bidding.

4.2.1 The projects shall be advertised in order to seek bids. Applications in response to the advertisement should be accompanied by a non-refundable draft of Rs. 0.25 lac for the projects of capacity below 1 MW, Rs. 1 Lac 1 to 5 MW project and Rs. 2 Lacs for projects above 5 MW project payable to ASEB/GENCO or as may be decided by the GOA.

4.2.2 All bidders will be subject to pre-qualification as provided in Paragraph 2.

4.2.3 All pre-qualified bidders will be provided with the PFRs/DPRs prepared by the ASEB/GENCO or any other IPP/Users society nominated by the Power Deptt. GOA.

4.2.4 Bids shall be invited for premium payable upfront to the Government of Assam per MW in the case of each project/site, subject to a minimum threshold premium of Rs. 1 lac per MW installed Capacity or part thereof. Bids received below the threshold premium will be summarily rejected.

4.2.5 Projects will be allotted to the bidders making the highest bids. The successful bidder shall be required to deposit the premium amount due within 2 months or any other specified period of receiving intimation regarding his bid being successful. The successful bidder may be permitted to provide 50% of the bid amount in excess of the threshold as a bank guarantee encashable at the time of actual or scheduled financial closure, whichever is earlier. However the bidder is to deposit full amount over and above the threshold amount at the time of actual or scheduled financial closure, whichever is earlier.

4.2.6 If more than one bidder bids the identical premium per MW for any site/station, a gradation list based on pre-qualification criteria described above shall be the basis of allotment.

- 4.3 The projects for which PFRs/DPRs are not available shall be allotted to the pre-qualified bidders.

4.3.1 The projects shall be advertised in order to seek bids. Applications in response to the advertisement should be accompanied by a non-refundable draft of Rs. Rs 0.25 lac for the projects of capacity below 1 MW, Rs. 1 Lakh 1 to 5 MW project and Rs. 2 Lakhs for projects above 5 MW project payable to ASEB/Successor Company.

4.3.2 All bidders will be subject to pre-qualification as provided in Paragraph 2.

4.3.3 The merit list of the bidders shall be prepared according to the prequalification criterion and the projects allotted to the bidders.

- 4.4 Any feasible SHP potential site that has not been listed in the annexure may also be identified by the IPPs /Users society and propose to the GOA for allotment along with self prepared verifiable feasible PFR/DPR.
- 4.5 The application fee and bid amount shall be payable as per paragraph 4.2.1 and 4.2.4.
- 4.6 These projects shall be allotted on first cum basis.

5. FACILITATION TO BE PROVIDED BY GOVERNMENT

- 5.1 For efficient interaction with other Government Department, the GOA shall declare ASEB/Successor Company as nodal agency and subsequently ASEB/GENCO shall constitute a technical body and a nodal officer for clearing of project proposals after detail scrutiny of technical aspects.
- 5.2 Application shall be disposed of within a period of 60 days from the date of application.
- 5.3 IPPs /Users society are required to obtain clearance from the Departments of Forests, Irrigation, Geology & Mining, Revenue, Environment, and District Administration. Police, Public Works Department (PWD), Aviation as the case may be. Wherever required techno-economic clearance of the Central Electricity Authority, shall be obtained by IPPs/Users society.

However, all documentation and required papers as well as clarifications shall be submitted by the IPPs/Users society to the Nodal Officer. Who shall be forward the same to concerned application to the concerned departments for the consideration and conveying their consent /clearance or comments if any within 30 days. If any department fails to respond within the stipulated time, the necessary clearance to the project will be deemed to be granted.

- 5.4 **Allotment of Land:** Optimum requirement of land for implementation of a particular project shall be allotted/sold at a premium / lease to decided case wise and shall continue a part of the bid document.
- 5.5 The matter of concerns for the projects/clearances etc, will be put up by the nodal officer before the Steering Committee and high powered committee regularly, who will be empowered by the GOA to resolve all project related matters.
- 5.6 Nodal Agency shall also monitoring the progress of the work, including investment vis-à-vis the state of works regularly.
- 5.7 A Steering Committee comprising of Secretary (Power), Secretary (Forest) or his representative, Secretary (Irrigation) or his representative, Secretary (Revenue) or his representative, CMD-ASEB/Successor Company shall be constituted by GOA to provide single window clearance for the project under this policy. Nodal officer will be the convener of the committee.
- 5.8 High Powered Committee under the chairmanship of Chief Secretary and Secretary (Forest), Secretary (PWD), Secretary (Industry), Secretary (Revenue), Secretary (Irrigation), Secretary (Water Resources), CMD (ASEB/Successor Company and

Secretary (Power) as members shall be constituted by GOA for redressal of problems and policy matters for the projects under this policy Secretary (Power) shall be the convener of the committee.

6. SALE OF POWER

The IPP /Users society can contract to sell power to any HT consumer within Assam (only up to and below 5 MW capacity), to local rural grids within Assam which are not connected to ASEB's/Successor Company's main grid, to rural power distribution entities (i.e. those which sell power to predominantly rural areas), to any consumer outside the state, or to the ASEB/Successor Company. Sales to the ASEB/Successor Company will be mutually negotiated. All sales will be approved, as may be required, by the Assam Electricity Regulatory Commission (AERC).

In case of power supply to any rural interior areas, where SHP project may come up, IPPs /Users society can make suitable arrangements for sale of power to a group of rural consumers in a stand-alone generation and distribution system subject to fulfillment of requirements of AERC.

7. WHEELING CHARGES

- 7.1 The infrastructure and facilities of ASEB/DISCOMs/TRANSCO, as may be available, will be made available to all IPPs/Users society for wheeling the generated energy.
- 7.2 Wheeling charges for wheeling the generated energy to bulk purchaser/third party consumers inside or outside the State will be as determined by the Assam Electricity Regulatory Commission (AERC).
- 7.3 No wheeling charges are applicable in cases of sales to the ASEB/Successor Company in case power is supplied directly to ASEB/DISCOMs.
- 7.4 The ASEB/DISCOMs/TRANSCO will prepare a standard wheeling and banking agreement draft consistent with this policy statement. This will be made available prior to any bidding for projects where applicable.

8. EVACUATION OF POWER:

ASEB/GENCO will determine the specifications of the evacuation facilities required, including the interconnection point and voltage and the same would be specified in the project information document provided in the application form. The ASEB/GENCO will carry out the implementation of evacuation facilities at charges to be mutually negotiated. The cost of transmission lines in excess of 5 km shall be borne by the IPPs/Users society and ASEB/GENCO on mutually agreed terms and conditions.

9. BANKING

Developers can avail of the facility of banking of energy within fixed period spans of 6 months. All terms and conditions of the banking shall be incorporated in banking agreement to be drawn with the IPPs/Users society. This shall be approved, as may be required, by the regulator.

10. DESPATCH

Priority will be accorded for dispatch into the grid by these IPPs/Users society ahead of merit order and any other source of supply, subject to any overall restrictions on the proportion of power that may be bought from such sources, which may be imposed by the Government/Regulator in the interest of keeping the overall cost of power purchase within reasonable limits.

11. ROYALTY/DUTY/TAXES

- 11.1 On all projects governed under this policy,
- a) For project upto 5 MW, there will be no royalty, provided entire energy generated is sold within the state of Assam.
 - b) For above 5 MW, a royalty @Rs. 0.25 per unit of net energy generated will be paid to GOA by IPPs/Users society. It may be reviewed after 5 years.
 - c) For power projects on irrigation canal fall/barrages/dams, a water cess @Rs. 0.05 per kWh per year shall be payable by IPPs/Users society to the irrigation department, GOA or otherwise as specified by the GOA for maintenance of the existing irrigation structures/facilities owned and operated by the irrigation department.
- 11.2 Electricity duty as per law will apply.
- 11.3 No further levies, taxes, charges other than those stipulated in this policy would be levied by the State Government and its IPPs/Users society or the Regulator on the IPPs/Users society governed by this policy, for a period of ten years from the date of this policy.

12. INCENTIVES BY CENTRAL/ STATE GOVERNMENT

- 12.1 No entry tax will be levied by the State Government on Power Generation and Transmission equipments except on building materials for projects.
- 12.2 The financial/fiscal incentives for small hydropower development available from Ministry of Non Conventional Energy Sources, Govt of India shall be facilitated/extended to IPPs/Users society.

13. TRANSFER OF ALLOTMENT

Free transfer of shares will be permitted in the companies allotted projects as per the procedure laid down in this document.

14. TIME LIMIT FOR EXECUTING THE PROJECT

- 14.1 IPP shall sign a Memorandum of Understanding (MOU) with Nodal Agency for the development of the project within a month of the issue of allotment letter by GOA
- 14.2 The IPPs/Users society make necessary applications for obtaining the statutory clearances of the project and approvals of the concerned authorities as described in Cl. 5 Sub Cl. 5 after carrying out the confirmatory surveys and investigations. The IPP/Users

society shall be responsible for completeness of all submissions within 6 months from the date of allotment or any other period deem fit by the GOA. Failure to do so within the stipulated time frame shall be treated as non-compliance with the requirement stipulated in this paragraph.

- 14.3 Nodal Agency shall accord the approval of the DPR/ application within 2 months from the submission. IPP shall enter into an implantation agreement with the nodal agency within one month from the date of approval of the project.
- 14.4 The IPP/Users society shall achieve the financial closure within 12 months from the date of receipt of all statutory approvals and clearances given by the State and Central Governments. Financial closure would imply firm commitments for financing the entire project, with all pre-disbursement conditions having been fulfilled and the loan documentation being complete.
- 14.5 The project should be made operational within 36 months from the date of receipt of all statutory approvals and clearances by the IPP/Users society.
- 14.6 The failure to reach any of the two milestones mentioned in 14.1 & 14.2 above will result in automatic cancellation of the allotment of the site, and forfeiture of upfront premium amounts. No compensation would be payable to the IPPs/Users society in such instance.
- 14.7 The failure to reach to milestone as in 14.3 above would result in a liability to pay penalty by the IPP to the GOA, computed at the equivalent royalty revenue that would have been payable to the GOA had the project met the milestone. In case the project enjoys an exemption from royalty in the initial years, the duration of royalty exemption would be reduced by the period of delay.
- 14.8 The IPP/Users society may surrender the allotment back to GOA if on completion of the DPR, within the stipulated time frame, it has grounds to establish that the project is not techno-economically viable. On such surrender, the GOA would refund any premium amount paid in excess of the threshold premium to the IPP/Users society.

15. ROLE OF ASEB/GENCO/DISCOMs/TRANSCO

- 15.1 The ASEB/GENCO/DISCOMs/TRANSCO will be responsible for preparing the standard wheeling and banking agreement draft (Paragraph 7), determination of evacuation requirements (Para 8), and overseeing banking, dispatch, and royalty arrangements (Paragraphs 9,10,11). The same shall be drawn before six month of commission of a SHP as per aforesaid para.
- 15.2 The ASEB/GENCO will be responsible for preparation of PFRs/DPRs (Para 3.1), carrying out the bidding process (Para 4) and monitoring of the development of allotted project delivery as per time schedules (Para 5 and 14).
- 15.3 The ASEB/GENCO will not participate in the bidding process. However, after allotment, upon request from the IPP/Users society, the ASEB/GENCO may consider participating as a minority partner or perform certain tasks for the bidder on a consultancy basis. Such participation would be independently negotiated between ASEB/ GENCO with the IPP/Users society and is not mandatory on the part of ASEB/ GENCO.

16. ROLE OF IRRIGATION DEPARTMENT, GOVT. OF ASSAM

- 16.1 The discharge available in the canals of Irrigation Schemes/projects will be let out by the Irrigation Department, Government of Assam based on availability of water in irrigation

canals/Rivers only. The release of water in canals will be under sole control of the Irrigation Department, Government of Assam and no claims for compensation on this account will be considered.

- 16.2 IPPs/Users society will be allowed to utilize acquired canal land (subject to availability) for setting up infrastructure for power generation on lease as per terms and conditions set forth by the Irrigation Department, Government of Assam. Initial lease period will be of 35 years. In case on non-availability of Government land, the Government at the IPPs request at acquisition cost will acquire by the IPP/Users society or private land.
- 16.3 IPP/Users society shall obtain consent from Irrigation Department, GOA for the design of works, which shall have the bearings on safety, and operation of the canals.
- 16.4 The cost of Remodeling/Improvement works of existing Irrigation Schemes/Projects due to the SHP project shall be borne by IPPs/Users society that may be necessary for setting up of SHP Projects (utilizing canal discharge).

17. REGULATORY ACTION

Aspects of this policy that require Regulatory approvals from the concerned regulatory commission would be subject to such approvals being given and would apply in the manner approved by the Regulator.

18. DUE DILIGENCES

The applicant/IPP/Users society shall be responsible for carrying out due diligence with regard to his compliance responsibilities under various applicable Central/State/other laws, rules and regulations, and ensure compliance with the same.

19. POWER TO RESOLVE DIFFCULTIES

In the event of a dispute, the interpretation of these guidelines made by the Government of Assam shall be final. In all such matters, to the extent practicable, an opportunity shall be given to affected stakeholders to be heard before the Government takes any decision.

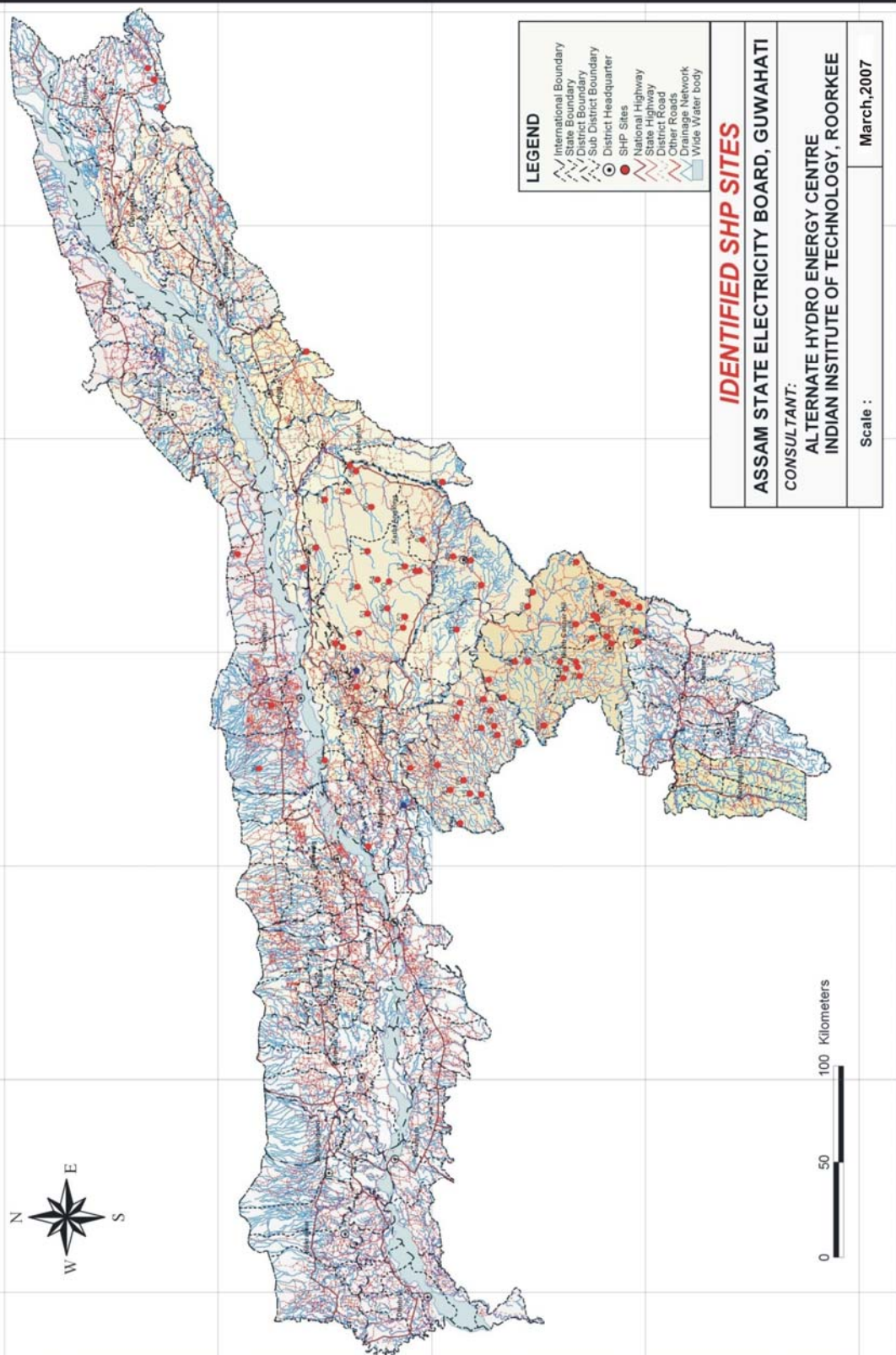
20. RENOVATIONS, MODERNISATION AND MANAGEMENT OF EXISTING POWER PLANTS

- 20.1 Small hydropower stations in Assam have outlived their original life span and some of them are working at sub optimum level or became defunct in the absence of due attention required to scheduled maintenance, renovation and modernization. This has resulted in unplanned outages and frequent breakdowns. As a result, availability factor and the Plant Load Factor of a number of plants are below satisfactory level. It is proposed to increase the operating efficiency of the existing plants through introduction of professional management and renovation and modernization programme. The process of renovation and modernisation involves substantial investment. The State proposes to throw open the renovation and modernisation of some of the existing SHP plants to private sector (joint sector) or NGOs or cooperative participation which can help in bringing in more efficient

management practices leading to greater availability of power. Many existing stations are in stand-alone mode and are encouraged to connect to the grid to increase plant load factor and its financial viability. However the priority to supply electricity to local area during peak hours (0600-0900 and 1600-2200 hours) will be there.

- 20.2 GOA will encourage renovation and modernization of those existing hydro plant owned by ASEB/GENCO/any other IPPs/Users society, which are technically conforming to the conditions of extension of operative life by more than 20 years at a fraction of the cost of New Plants. GOA will decide to intrude the private sector, or NGOs or cooperative societies or any Power Development Societies on case-to-case and merit basis.
- 20.3 Private Sector, or NGOs or cooperative will be allowed to operate/manage the plants wherever necessary. Such participation by the private sector or NGOs or cooperative may follow the following routes:
 - a) Lease, Rehabilitate, Operate and Transfer (LROT)
 - b) Joint ventures with ASEB/Successor Company;
 - c) Sale of existing plants to private sector or to any joint sector venture.

IDENTIFIED SHP SITES - ASSAM



IDENTIFIED SHP SITES

ASSAM STATE ELECTRICITY BOARD, GUWAHATI

CONSULTANT:
ALTERNATE HYDRO ENERGY CENTRE
INDIAN INSTITUTE OF TECHNOLOGY, ROORKEE

Scale : **March, 2007**

Sl. No.	Name of Scheme	Stream	Longitude Degl Min Sec Degl Min Sec	Latitude Degl Min Sec Degl Min Sec	Head (m)	Proposed Capacity (MW)
1	Bordhaharu	Bordhaharu	92 51 30 20	26 30 30	Kaeta Assongor	180
2	Chenari	Chenari	92 48 0 25	26 32 0	Debaring	200
3	Chenari-1	Chenari	92 48 0 25	26 32 0	Debaring	200
4	Chenari-2	Chenari	92 48 0 25	26 32 0	Debaring	200
5	Chenari-3	Chenari	92 48 0 25	26 32 0	Debaring	200
6	Chenari-4	Chenari	92 48 0 25	26 32 0	Debaring	200
7	Chenari-5	Chenari	92 48 0 25	26 32 0	Debaring	200
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101	Chenari-99	Chenari	92 48 0 25	26 32 0	Debaring	200
102	Chenari-100	Chenari	92 48 0 25	26 32 0	Debaring	200

List of Identified Small Hydropower Project in Assam

Sno	Name of Scheme	Stream	Longitude			Latitude			DISTRICT	Head (M)	Proposed Installed Capacity (MW)
			Deg	Min	Sec	Deg	Min	Sec			
1	Bordikharu	Bordikharu	93	5	30	26	20	30	Karbi Anglong	180	2.00
2	Dhansiri	Dhansiri	92	46	0	25	52	0	Darrang	9	20.00
3	lungnit-1	lungnit	93	23	0	26	4	30	Karbi Anglong	50	3.00
4	lungnit-2	lungnit	93	23	0	26	3	30	Karbi Anglong	44	3.00
5	dalaimea	dilaim	92	56	0	25	19	0	north cachar	79	6.00
6	jamuna	jamuna	93	31	45	26	2	30	Karbi Anglong	140	2.00
7	Myntriang-1	Myntriang	92	28	30	25	58	30	Karbi Anglong	200	6.00
8	Myntriang-2	Myntriang	92	28	30	25	58	30	Karbi Anglong	80	3.00
9	kalanga	kalanga	92	42	0	25	53	0	Karbi Anglong	80	4.00
10	disaidam	disai	94	24	45	26	35	10	Sivasagar	27	15.00
11	Janghanri	Janghanri	93	28	30	26	18	0	Karbi Anglong	120	2.00
12	klarang	lungnit	93	24	15	26	7	30	Karbi Anglong	80	4.00
13	patradisa	patradisa	93	7	0	26	8	0	Karbi Anglong	80	1.00
14	Dere	Dere	92	53	0	25	23	0	north cachar	140	1.00
15	UM-MAT	UM-MAT	92	20	15	25	49	15	Karbi Anglong	60	2.00
16	Amphi	Amphi	92	39	0	25	46	0	Karbi Anglong	80	6.00
17	Sunani	Sunani	92	27	39	26	6	0	Karbi Anglong	80	2.00
18	Jenum-1	Jenum	93	16	30	25	9	0	North cachar	80	4.00
19	Jenum-2	Jenum	93	14	15	25	6	30	North cachar	180	4.00
20	Jiri	Jiri	93	25	25	25	19	20	North cachar	60	1.50
21	Chapa nala	Chapa nala	92	50	30	26	21	0	Nogaon		0.75
22	Kaliani	Kaliani	93	43	0	26	30	0	Karbi Anglong	66	1.50
23	Amring	Amring	92	45	20	26	45	0	Karbi Anglong	79	20.00
24	Thar nala	Thar nala	92	53	30	25	18	30	North cachar	100	1.50
25	Paisa Nala	Paisa nala	93	6	0	25	2	30	North cachar	120	1.50
26	Chikhu Nala	Chikhu Nala	93	13	30	25	5	0	North cachar	80	1.50
27	Upper borjuri	Upper borjuri	93	1	30	26	25	0	Nagon	100	1.50
28	Ddigung nala	Selohi dung	93	3	0	25	2	0	Cachar	240	2.00
29	Bordikarai-1	Bordikarai-Can	93	26	0	25	49	0	Sonitpur		1.50
30	Bordikarai-2	Bordikarai-Can	93	24	0	26	36	0	Sonitpur		1.50
31	Bordikarai-3	Bordikarai-Can	92	43	50	25	43	30	Sonitpur		1.05
32	Dinar	Dinar nala	92	28	30	25	58	30	Karbi Anglong	40	0.50
33	Kohra	kohra nala	92	37	0	25	41	30	Karbi Anglong	60	0.75
34	Umjaring	Umjaring	93	6	0	25	2	30	Karbi Anglong	100	1.00
35	Umjaring	Umjaring	93	6	0	25	2	30	Karbi Anglong	100	0.75
36	Umjaring	Umjaring	93	6	0	25	2	30	Karbi Anglong	60	0.90
37	Riambatarai	Riambatarai	93	4	0	25	15	0	North kackar	60	0.55
38	Dalu	Apang	93	48	0	25	57	0	Cachar	40	0.50
39	Panbari	Panbari	92	27	30	26	48	30	Darrang	10	0.20
40	Janguan	Janguan	95	33	30	27	15	45	Dibrugarh	20	0.50
41	Manmaijon	Manmuar	95	44	30	27	19	45	Dibrugarh	20	0.50
42	Namdong	Namdong M	95	41	15	27	18	0	Dibrugarh	10	0.20
43	Khetri	Khetri	92	5	30	26	17	50	Kamrup	60	0.75
44	Bagijan	Bagijan	93	45	20	26	23	30	Karbi Anglong	5	0.10
45	Chelabour	Chelabour	93	12	30	26	12	30	Karbi Anglong	20	0.40
46	Danglangso	Danglangso	92	29	50	26	30	0	Karbi Anglong	20	0.40
47	Diphu	Diphu	93	26	0	25	49	0	Karbi Anglong	4	0.10
48	Diphu 2	Diphu nala	93	27	40	26	54	30	Karbi Anglong	20	0.20
49	Diphu 3	Dikrengiem	93	27	0	25	54	0	Karbi Anglong	20	0.30
50	Dirik chiring	Dirikchiring	93	41	0	26	17	0	Karbi Anglong	20	0.20
51	Horu horgati	Horu horgati	93	11	0	26	18	0	Karbi Anglong	20	0.40
52	Horu nala	Horu	93	10	0	26	7	30	Karbi Anglong	20	0.30
53	Kagironga	Bodiplunadi	93	29	30	26	32	30	Karbi Anglong	20	0.40
54	Kuliteranggha	Kuliterangghan	93	20	30	26	15	15	Karbi Anglong	20	0.20
55	Langchailit	Langchailit	93	19	0	25	46	0	Karbi Anglong	15	0.20
56	Langsomepi	Langsomepi	93	51	0	26	21	15	Karbi Anglong	10	0.10
57	Lankhipam	Lankhipam N	92	12	0	25	52	0	Karbi Anglong	40	0.75

58	Morjengnala	Morjengnala	92	34	45	25	35	30	Karbi Anglong	20	0.30
59	Paklangso	Paklangso	93	18	30	26	20	50	Karbi Anglong	6	0.10
60	Patradisa	Patradisa	93	20	0	26	12	0	Karbi Anglong	20	0.30
61	The dong	The dong N	93	6	30	25	53	0	Karbi Anglong	20	0.20
62	Un Ju	Un Ju	92	39	30	25	42	30	Karbi Anglong	20	0.20
63	Um Pani	Um Pani	92	21	15	25	54	50	Karbi Anglong	8	0.30
64	Um Sares	Um Sares	92	20	0	25	46	0	Karbi Anglong	20	0.40
65	Um Ser	Um Ser	92	24	0	25	51	0	Karbi Anglong		0.30
66	Langkidang	Langkidang	92	47	0	25	45	30	Nagon	20	0.30
67	Hansa pani	Hansa pani	93	2	30	26	27	0	Nagon	5	0.10
68	Barjuri	Barjuri	93	17	0	25	31	30	Nagon	20	0.15
69	Kai pani nala	Kai pani	93	13	0	25	33	0	Nagon	5	0.15
70	Dere nala	Dere nala	92	55	30	25	22	20	North kachar	20	0.50
71	Dijung	Dijung	93	12	45	25	1	45	North kachar	40	0.40
72	Dikrambi	Dikrambi	92	57	30	25	33	0	North kachar	20	0.20
73	Diyung-R	Diyung-R	93	4	30	25	10	40	North kachar	20	0.30
74	Dolong nala	Dolong nala	92	57	30	25	19	30	North kachar	40	0.60
75	Dolong nala	Dolong nala	93	2	30	25	9	30	North kachar	40	0.60
76	Harangthal na	Harangthal nal	92	57	30	25	24	0	North kachar	40	0.75
77	Induki nala	Induki nala	93	10	30	25	14	30	North kachar	40	0.60
78	Laisong	Jenum-R	93	18	30	25	12	30	North kachar	20	0.40
79	Langku	Langku	92	47	30	25	39	50	North kachar	20	0.30
80	Langku nala	Langku	92	57	30	25	36	40	North kachar	10	0.15
81	Langpher	Langpher	92	52	30	25	44	0	North kachar	20	0.20
82	Langting-2	Lahungdisa	92	39	40	25	28	30	North kachar	20	0.30
83	Mahu	Barasarang-N	93	4	30	25	11	0	North kachar	40	0.50
84	Mahu	mahu-R	93	9	30	25	13	30	North kachar	40	0.50
85	Mabong	Singplong Ddis	93	8	0	25	19	30	North kachar	20	0.20
86	Subojai nal	Sobojai nala	93	10	0	25	13	45	North kachar	20	0.20
87	Pungjan	Pungjan	93	52	30	26	23	0	Sivsagar	2	0.20
88	Killing valley	Killing	92	17	0	26	8	0	Karbi Anglong	14	1.00
89	Lungsung	Lungsung	92	54	52	26	21	7			0.75
90	Kakachang	Kakachang	93	36	0	26	34	50	Karbi Anglong	75	0.50

ACRONYMS

1. SHP	:	Small Hydro Power
2. IPP	:	Independent Power Producer
3. GOA	:	Government of Assam
4. MW	:	Mega Watt
5. kW	:	kilo Watt
6. DPR	:	Detailed Project Report
7. PFR	:	Pre-feasibility Report
8. ASEB	:	Assam State electricity Board
9. GENCO	:	Generating Company of Assam
10. PWD	:	Public Works Department
11. AERC	:	Assam Electricity Regulatory Commission
12. DISCOMs	:	Distribution Company of Assam
13. TRANSCO	:	Transmission Company of Assam
14. MOU	:	Memorandum of Understanding
15. NGO	:	Non Government Organisation