



No. /CREDA/SHP/SMD/18-19

Raipur, Dt. .05.2018

**Revised Techno-Economic Clearance (TEC)**

**SANCTION NO. : 6162/CREDA/SMD/SHP/07-08,**

**Dated : 27.03.2008**

**PROJECT NAME : GHAMARMUND SMALL HYDRO ELECTRIC PROJECT**

**CAPACITY : 21.0 MW**

CHATTISGARH STATE RENEWABLE ENERGY DEVELOPMENT AGENCY (CREDA) is pleased to accord Revised Techno-Economic Clearance (TEC) for Establishment of GHAMARMUND SMALL HYDRO ELECTRIC PROJECT (21.0 MW) to **M/s. G.S. Energies Pvt. Limited**, 6-3-1186/A/5/1, 1<sup>st</sup> floor, Behind Blue Moon Hotel, B.S. Maktha, Begumpet, Hyderabad-500 016 (A.P.). CREDA vide its sanction order no. 6162/CREDA/SMD/SHP/07-08, Dtd. 27.03.2008 has accorded permission for setting up of Ghamarmund Small Hydro Project of 21.0 MW capacity across Indravati River, near Village-Chitrakot, Tahsil-Jagadapur, District-Bastar. The proposed project envisages utilisation of flows in River Indravati and is designed as a "RUN OF THE RIVER" development and it is proposed to utilize the gross head of about 21.30 Mtrs. available in the River Indravati at the proposed location. The developer has submitted the Revised Detailed Project Report prepared by M/s. Katya Power Projects Pvt. Ltd., Hyderabad envisaging a design head of 22.0 Mtr. and design discharge of 36.03 Cumecs for each unit, according to which the install capacity is worked out to be 21.0 MW and accordingly Revised Detailed Project Report (DPR) is prepared. The developer has proposed 03 units of 7000 kW each.

1. This Revised Techno-Economic Clearance will be complete only after the developer obtains the various clearances from the other related departments and submits to this office in respect of this project.

The Revised DPR for GHAMARMUND SMALL HYDRO HYDRO Project envisages the following technical parameters:

Description	Ghamarmund Small Hydro Power Project
Name of the Developer	M/s. G.S. Energies Pvt. Limited., Hyderabad
Allotted Capacity	As per sanction order no. 6162/CREDA/SMD/SHP/07-08, Raipur Dt. 27.03.2008 approval has been accorded for Ghamarmund Hydro Power Project on Indravati River in Bastar Distt. to M/s. G.S. Energies Pvt. Limited., Hyderabad for implementation of 21.0 MW capacity project.
Installed Capacity	3x7000 kW
Location	Indravati River, near Village-Chitrakot, Tahsil-Jagadapur, District-Bastar (Chattisgarh)
Latitude - Weir	19°12'07"
Longitude - Weir	81°41'19"
Latitude - PH	19°11'14"
Longitude - PH	81°40'12"
Nearest Village	Ghamarmund
Tahsil	Jagadapur
District	Bastar
Type of project	Run-of-the River
M.W.L.	497.00 M
Tail Water Level	472.00 M
Design Head (Rated)	22.0 M
Design Discharge for each unit	36.03 Cumecs
Number of Units	03 (one unit of 7000 kW)
Estimated Project cost with IDC (Rs. Lakhs)	₹ 20,332.00
Type of turbine	Vertical full Kaplan
Estimated Energy	75.39 MU



**The completion cost shall not exceed the above cost except on account of the following:-**

- A) Interest during construction (IDC), and financial charges (FC) shall be as per actuals but not exceeding the amount as indicated above, unless revised by CREDA.
- B) Change in rates of Indian taxes and duties such as excise duty, sales tax, VAT, Custom Duty and levy of any other taxes / duties subsequent to issue of Techno-Economic Clearance.
- C) Change in Indian law resulting in change in the cost.

**2. The above clearance is subject to the following conditions:-**

- a. The revised techno-economic clearance (TEC) shall not be re-opened due to delay in financial closure.
- b. Tariff for sale of power to Successor Company of CSEB shall be fixed by CSERC in accordance with the agreement between the IPP and successor company of CSEB.
- c. Fulfillment of conditions stipulated in Central Electricity Authority (CEA) / Central Water Commission (CWC) / Central Board of Irrigation and Power (CBIT) / MNRE guidelines in respect of civil works at the stage of detailed design / execution.
- d. Any increase in the estimated cost due to design modification and geological surprises would be absorbed by the firm / IPP.
- e. The power house generating equipment shall be compatible for parallel operation with CSPTCL grid after interlinking. Otherwise, deemed energy shall not be committed at PPA stage.
- f. Operation and maintenance (O & M) charges for maintenance of inter connection shall be payable by the IPP to successor company of CSEB as per the directives of CSERC.
- g. In case, in future CSPTCL transmission system is required to be strengthened beyond interconnection facilities to handle the pool in power of CSPTCL and IPPs at the interconnection facilities, the IPP shall do the same as per the directives of CSERC.
- h. The interconnection point with CSPTCL grid and interconnection facilities at the interconnection point shall provided by IPP as per the directives of CSERC.
- i. Regarding T-Transmission the power from project will be interfaced at 132/33/11KV Sub Station as approved by CSPTCL/Utility, through 132KV s/c transmission line as per the directives of CSERC.
- j. The revised TEC is based on the reports and data furnished in the revised DPR and it is presumed that information furnished is accurate and has been collected reliably after carrying out detailed field investigations and surveys under the supervision of



competent personnel. The scrutiny of revised DPR is being done by the CREDA, however structural, hydraulic and mechanical performance and safety of the project shall be ensured by IPP /project authority.

- k. **Project promoter shall obtain all the statutory clearances before execution/ implementation of the project.**

Sr.No.	ITEM	AGENCY	REMARKS
1	WRD clearance	1. WRD (Water Resources Department)	Coordination with WRD for necessary approvals.
2	SEB Clearance	1.Successor company of CSEB	Coordination with successor companies of CSEB for necessary approvals.
3	Pollution Clearance (Water and Air)	State Pollution Control Board	Coordination with state pollution board for necessary pollution clearance (Water and Air)
4	Forest Clearance	1.State Govt. 2.Min. of E&F G.O.I. (if required)	Coordination with State Forest Deptt. and Min. of Environ. & Forest (MOE&F) if required for necessary approvals.
5	Rehabilitation & Resettlement of Displaced Families By Land Acquisition (if required)	1.State Govt. 2.Min. of E&F G.O.I.	Rehabilitation & Resettlement of Displaced Families By Land Acquisition
6	Tourism Clearance	Department of Tourism	Coordination with C.G. Tourism Board.

### 3. **Project completion**

- The project shall be completed within 24 months after award of main civil works.
- The Completion cost of scheme shall be submitted to CREDA for approval within 3 months from the Commercial Operation Date (COD) of the plant. The project promoter / project authorities shall give free accessibility to the CREDA officers/ staff to have on the spot assessment of various aspect of this project.

4. The above clearance is subject to following condition:-

1. A copy of the tender documents for civil and electro mechanical works have to be provided to CREDA for reference and records.
2. Monthly progress report should be submitted to CREDA before of following months.
3. The various conditions stipulated in the Govt. order and amended subsequently pertaining to this project and the stipulations imposed by other Government department/statutory authorities shall be strictly adhered to:

Sd/-

(S.M.Deshpande)

Chief Engineer, CREDA

No. 3338 /CREDA/SHP/SMD/18-19

Raipur, Dt. 11.05.2018

Copy for information to :

- 1) Managing Director, C.G. Power Distribution Company Ltd., Raipur (C.G.)
- 2) Managing Director, C.G. Power Trading Company Ltd., Raipur (C.G.)
- 3) Managing Director, C.G. Power Generation Company Ltd., Raipur (C.G.)
- 4) Managing Director, C.G. Power Transmission Company Ltd., Raipur (C.G.)
- 5) Managing Director, C.G. Electricity Holding Company Ltd., Raipur (C.G.)
- 6) Director (SHP), Ministry of New & Renewable Energy (MNRE), Block No.14, CGO Complex, Lodhi Road, New Delhi – 1100003.
- 7) Chief Engineer, WRD
- 8) ✓ M/s. G.S. Energies Pvt. Limited, 6-3-1186/A/5/1, 1<sup>st</sup> floor, Behind Blue Moon Hotel, B.S. Maktha, Begumpet, Hyderabad-500 016 (A.P.).



Chief Engineer, CREDA