

DIRECTORATE OF ENERGY
GOVERNMENT OF HIMACHAL PRADESH
SHANTI BHAWAN, PHASE-III, SECTOR-VI, NEW SHIMLA-171009(HP)

OFFICE ORDER

Directorate of Energy (DoE), Government of Himachal Pradesh, is pleased to accord Techno Economic Clearance (TEC) to Tranh Charroli SHP (2.00 MW) on Churdhar Tranh stream, a tributary of Sainj Khad in Yamuna Basin, Distt. Shimla, Himachal Pradesh, allotted to "M/s Hydro More Power (P) Ltd, T.R Verma Building, Sector-2, New Shimla - 171009", at an estimated cost of Rs. 1898.27 lac (**Rupees one thousand eight hundred ninety eight lakh and twenty seven thousand only**) including Interest During Construction (IDC), Escalation, Financial Charges (FC) and LADC @ 1% (one percent) of total project cost with the following stipulations:

- 1.i) The abstract of the Estimated Cost approved by DoE, GoHP is furnished at **Annex-I** and the Salient Features of the scheme are at **Annex-II**.
- ii) 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 at **Annex-I**, unless revised by DoE, GoHP while according concurrence under Section-8 of Indian Electricity Act 2003 after review of the financial package.
 - b) Change in rates of Indian taxes and duties such as Goods and Service Tax (GST), Custom Duty and levy of any other taxes/duties subsequent to issue of Techno Economic Clearance (TEC).
 - c) Change in Indian law resulting in change in the cost.
2. The Techno Economic Clearance (TEC) is subject to the fulfillment of the following conditions:
 - i) Completed cost/ Techno Economic Clearance (TEC) shall not be re-opened due to the following:
 - a) Non acquisition of land.
 - b) Non- finalization of Power Purchase Agreement (PPA).
 - c) Delay in financial closure.
 - ii) The final financial arrangement shall not be inferior to the financing arrangement projected in the Detailed Project Report (DPR) for TEC.
 - iii) The cost of the project cleared by the DoE, GoHP is indicative and shall have no binding on the regulator while fixing the tariff. The tariff of the project shall be regulated by the appropriate Electricity Regulatory Commission.
 - iv) The public issue expenses, if any, shall be reconsidered at the time of approval of completion cost based on documentary proof and in accordance with Security Exchange Board of India (SEBI) guidelines regarding regulation of public issue expenses.
 - v) Fulfillment of conditions stipulated in Central Electricity Authority (CEA)/Central Water Commission (CWC) guidelines in respect of civil works at the stage of detailed designs/execution.
 - vi) In case, changes are made in design parameters during construction due to site conditions or otherwise, the same shall be intimated and got concurred from DoE, GoHP before implementation of such changes.
 - vii) Any increase in the cost estimate due to design modifications and geological surprises would be absorbed by the Independent Power Producer (IPP) i.e. "M/s Hydro More Power (P) Ltd, T.R Verma Building, Sector-2, New Shimla - 171009".



- xvii) The IPP shall develop, operate and maintain the Project including the dedicated transmission system subject to compliance with the following:
 - a) Grid code and standards of grid connectivity.
 - b) Technical as well as Mechanical standards for construction of Electrical lines.
 - c) Norms of System Operation of the concerned State Load Dispatch Center (SLDC) or Regional Load Dispatch Center (RLDC).
 - d) Directions of the concerned SLDC or RLDC regarding operation of dedicated transmission line.
 - e) The IPP will only be allowed to inject power in HP system with the undertaking that necessary action to provide tele-metering to SLDC shall be provided by them and specifications required to be got approved from the office of SLDC, HP Load Dispatch Society, Shimla from compatibility point of view with existing Supervisory Control and Data Acquisition (SCADA) system.
 - xviii) The conditions on these lines shall have to be suitably included by the IPP in the PPA etc. apart from other standard conditions.
 - xix) The observations of DoE, GoHP and replies thereof shall form an integral part of the DPR.
 - xx) Minimum 15% release of water immediately downstream of diversion structure shall be ensured all the times including lean season as per prevailing GoHP notification. The necessary monitoring equipment as prescribed by the Pollution Control Board for the same shall be installed by the IPP during execution of the project.
 - xxi) The levels as specified and approved shall strictly be adhered to for construction of project, also the riparian distances within upstream and downstream projects as per allotment of projects or any other project specific directions / conditions shall be maintained.
 - xxii) The authenticity of benchmark considered for carrying out survey as ensured and intimated by IPP to DoE shall be the sole responsibility of the IPP.
 - xxiii) LADC/LADF amount and activities shall be implemented as per Power policy of HP Govt., 2006 and subsequent amendments thereof.
 - xxiv) The additional 1% (one percent) free power from the project shall be provided and earmarked for a Local Area Development Fund (LADF) as per HP Govt. Notification No. MPP-F(1)-2/2005-V dated 30.11.2009.
 - xxv) The TEC is based on the reports and data furnished by the IPP in the DPR and the relevant information provided by Himurja. It is presumed that information furnished is correct and has been collected reliably after carrying out detailed field investigations and surveys under the supervision of competent personnel. The scrutiny of DPR does not cover the examination of the detailed designs & working drawings of project components in regard to their structural, hydraulic and mechanical performance, safety and also of their positioning and fixing at site. This shall be ensured by the IPP as per standard norms & manuals.
3. The project shall be completed within 30 months from the date of start of the construction work.
 4. The completion cost of the scheme shall be submitted to DoE, GoHP for approval within 3 months from the Commercial Operation Date (COD) of the plant.
 5. The IPPs shall give free accessibility to the officers and representatives of DoE, Himurja and other relevant Govt. Departments, Commissions etc. to have on the spot assessment of various aspects of the project.
 6. The firm financial package and tie-up of balance inputs/clearances shall be completed within the period as stipulated in the GoHP Hydro Power Policy, 2006 and subsequent amendments thereof / Implementation Agreement (IA) / Supplementary Implementation Agreement (SIA).
 7. In case the time gap between the Techno Economic Clearance (TEC) of the scheme and actual start of work on the project is three years or more, a fresh Techno Economic Clearance (TEC) shall be obtained from DoE, GoHP before start of actual work.

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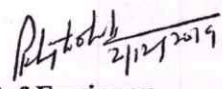
ANNEXURE-I

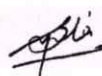
Tranh Charroli SHP (2.00 MW) in Distt Shimla of Himachal Pradesh allotted to "M/s Hydro More Power (P) Ltd, T.R Verma Building, Sector-2, New Shimla - 171009"

ABSTRACT OF COST ESTIMATE

Sr. No	Description of works	Amount (Rs. in lakh)	
(a)			
i)	Civil works i/c other Misc. Expenses	1097.99	} Price Level Aug, 2018
ii)	Electro Mechanical works	606.34	
iii)	Transmission works	45.00	
	Sub Total (a)	1749.33	
(b)			
i)	Interest During Construction (IDC)	102.97	
ii)	Escalation	13.47	
iii)	Financial Charges(FC)	13.71	
	Sub Total (b)	130.15	
	Total (a+b)	1879.48	
(c)	LADC @ 1% of (a+b)	18.79	
	GRAND TOTAL (a+b+c)	1898.27 lakh	

(Rupees one thousand eight hundred ninety eight lakh and twenty seven thousand only)


Chief Engineer,
Directorate of Energy, GoHP,
New Shimla-171009(HP)



ANNEXURE-II

Tranh Charroli SHP (2.00 MW) in Distt Shimla of Himachal Pradesh allotted to "M/s Hydro More Power (P) Ltd, T.R Verma Building, Sector-2, New Shimla - 171009"

SALIENT FEATURES

I. LOCATION

State	Himachal Pradesh
District/ Tehsil	Shimla / Chaupal
Village / Vicinity	Diversion weir site on Tranh Khad at EL \pm 1819.65 m and Power house on left bank of Tranh Khad with Maximum Tail Water Level (MTWL) at EL \pm 1607.50 m.
River/Basin	Tranh Khad / Sainj / Tons river, a tributary of Yamuna Basin
Accessibility	
• By Road	170 KM from Shimla located at Haripurdhar -Kupvi Road & 300 Km from Chandigarh.
• By Rail	BG-at Kalka (Haryana)
• Airport	Jubbel Hatti Airport
Geographical co-ordinates	Diversion site Power house
• Longitude	77° 33' 42" E 77° 34' 18" E
• Latitude	30° 50' 00" N 30° 49' 14" N
SOI topo sheet	53 F/9, F/5

II. HYDROLOGY

Name of stream/nallah	Tranh Khad
Tributary of/ Basin	Sainj Khad / Yamuna Basin
Catchment area	27.22 Sq. Km
Design discharge	1.20 cumecs
Design Flood	392 cumecs
HFL	Weir site Power House site
	EL \pm 1822.25 m EL \pm 1607.00 m

III. PROJECT COMPONENTS

A DIVERSION WEIR

Type	Drop type Trench weir
River Bed level	EL \pm 1819.65 m
Size	15.00 m (L) x 15.00 m
Width of Trash Rack	1.00 m
Depth	2.60 m
Design Discharge	1.20 cumecs plus flushing & OL discharge

B CONVEYANCE CHANNEL (Intake to Desilting tank)

Type	RCC Box type Channel
Size of channel	0.8 m x 1.0 m
Length	184.30 m
Velocity	2.58 m/sec.
Design Discharge	1.20 cumecs plus flushing & OL discharge

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Turbine(s)

Type Horizontal Shaft Pelton Turbines
Number Two
Rated output 1000 KW each
Speed 750 rpm

Generator(s)

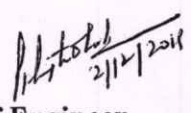
Type Horizontal Shaft Synchronous, Brushless
Number Two
Rated output 1000 KW each
Rated Voltage 3.3 kv
Overload Capacity 10 %
Power Factor 0.90
Rated Frequency 50 Hz

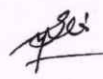
Switchyard

Size 20m x 15m
Elevation of bench 1609.00 m

G TAIL RACE

Type RCC Box channel
Shape Rectangular
Length 15.00 m
Size of channel 1.00 m x 1.00 m
Mini. Tail Water Level EL \pm 1607.30 m


Chief Engineer,
Directorate of Energy, GoHP
New Shimla-171009(HP)



Slope of channel
Water Level at end

1 in 100 m
El \pm 1817.15 m

C DESILTING ARRANGEMENT

Type
Size
Depth
Design Discharge
Silt Flushing Discharge
Particle size to be removed

Surface
25.00 m x 4.00 m
2.00 m deep plus hoppers of varying depth
1.20 cumecs plus flushing & OL discharge
0.40 cumecs
0.20 mm and above

D POWER CHANNEL

Type
Length
Size
Slope
Design discharge
Velocity
Slope of channel
Water Level at end

RCC Box type
2801.00 m
1.00 m x 1.20 m
1 in 680 m
1.20 cumecs plus OL discharge
1.31 m/sec
1 in 680 m
El \pm 1813.03 m

E FORBAY TANK

Type / Shape
Size
Full Supply Level (FSL)
MDDL
Bed level of Forebay
Storage Capacity
Peaking time

RCC Rectangular type
30.00 m x 3.00 m
El \pm 1811.37 m
El \pm 1808.77 m
El \pm 1806.00 m
237.00 cum
180 seconds

E PENSTOCK

Type
Number of main penstock
Number of branch penstock
Size of Main penstock
Length of Main penstock
Size of branch penstock
Length of branch penstock
Plate Thickness
Material
Velocity
C/L of penstock

Surface steel pipe
One
Two
800 mm ϕ
353.00 m
500 mm ϕ each
15.00 m
Varying between 10 mm to 16 mm
ASTM - A- 285 Gr. Grade-C
2.39 m/sec
El \pm 1808.27 m

F POWER HOUSE

Type
Size
Installed capacity
Maximum gross head
Net head
Center line of machine level
Power house crane

Surface Power House
24.00 m (L) x 13.00 m (W) x 8.00 m (H)
2.00 MW (2 units of 1000 KW each)
211.65 m
200.00 m
El \pm 1608.50 m
EOT 25/5 tonne capacity

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ANNEXURE-III

Tranh Charroli SHP (2.00 MW) in Distt Shimla of Himachal Pradesh allotted to "M/s Hydro More Power (P) Ltd, T.R Verma Building, Sector-2, New Shimla - 171009"

LIST OF STATUTORY AND ADMINISTRATIVE CLEARANCES REQUIRED

Sr.No.	ITEM	AGENCY	REMARKS
1.	WATER AVAILABILITY	1. State Govt. 2. CWC	Interaction with State Govt. Deptt. & CWC required. Relevant Irrigation Act of the State & Central Water Commission to be implemented.
2.	HPSEBL CLEARANCE	1. HPSEBL. 2. State Govt.	As per Indian Electricity Act, 2003.
3.	POLLUTION CLEARANCE WATER AND AIR	State/Central Pollution Control Board	Water (Prevention & Control of Pollution) Act, 1974 Air (Prevention & Control of Pollution) Act, 1981.
4.	FOREST CLEARANCE	1. State Govt. 2. MoEF & CC, GoI.	Coordination with State Forest Deptt./ Min. of Environment & Forest (MoEF & CC) regarding Forest (Conservation) Act, 1980.
5.	ENVIRONMENT & FOREST CLEARANCE	1. State Govt 2. MoEF & CC, GoI.	As per item (3) & (4) and Govt. Policy in force.
6.	REGISTRATION	Registrar of Companies.	Under Indian Companies Act, 1950.
7.	REHABILITATION & RESETTLEMENT OF DISPLACED FAMILIES BY LAND ACQUISITION	1. State Govt 2. MoEF & CC, GoI.	
8.	EQUIPMENT PROCUREMENT	Directorate General of Technical Development (India), Competition Commission of India	As per Import & Export Acts.

P. L. T. 21/12/2015
**Chief Engineer,
Directorate of Energy, GoHP, New
Shimla-171009(HP)**

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- 8 The DoE, GoHP reserve the right to revoke the concurrence if the conditions stipulated above are not complied with to the satisfaction of the DoE, GoHP or parameters are found changed at any stage.

BY ORDER OF THE GoHP

Plt. Ch. Engr.
2/12/2019
**Chief Engineer,
Directorate of Energy, GoHP,
New Shimla-171009(HP).**

Plt. Ch. Engr.
2/12/2019
No. DoE/CE(Energy)/TEC- Tranh Charroli /2019- 8664-72
Copy for information and necessary action to the:

Dated: 4/12/19

1. Principal Secretary (MPP & Power) to H.P. Govt., Shimla-171002.
2. Principal Secretary (NES) to H.P. Govt., Shimla-171002.
3. Secretary, Ministry of Non-Conventional Energy Sources (MNES), Block No.14,CGO Complex, Lodhi Road, New Delhi-110003.
4. Director, Environmental & Scientific Technologies, Narayan Villa, Near Wood Villa Palace, Shimla-171002.
5. General Manager, HPPTCL, Himfed Bhawan, Panjari, Below Old MLA Quarters, Shimla-171005.
6. Chief Engineer (SP), HPSEB Ltd, Uttam Bhawan, Dogra Lodge, Shimla-171004.
7. Chief Engineer (Commercial), HPSEB Ltd, Vidyut Bhawan, Shimla -171004.
8. Chief Executive Officer, Himurja, 8A-SDA Complex, Kasumpti, Shimla-171009.
9. M/s Hydro More Power (P) Ltd, T.R Verma Building, Sector-2, New Shimla - 171009.

Plt. Ch. Engr.
2/12/2019
**Chief Engineer,
Directorate of Energy, GoHP,
New Shimla-171009(HP).**

Plt. Ch. Engr.
2/12/2019

- viii) No additional cost shall be allowed due to Resettlement & Rehabilitation (R & R) Plan.
- ix) Normal operation life of the hydro power plant shall be as per provisions of CWC/CEA guidelines or Central Electricity Regulatory Commission (CERC)/ Himachal Pradesh Electricity Regulatory Commission (HPERC) regulations.
- x) The statutory and administrative clearances as per **Annex-III** shall be obtained before execution/ implementation of the project.
- xi) For evacuation of power, the interconnection point with the State grid and interconnection facilities at the interconnection point shall be provided, operated and maintained at the cost of the IPP.
- xii) The cost of providing and/or strengthening/additions etc. of the system at and beyond the Interconnecting Sub-station, which may also include the cost of replacement of switchgear/ protection and provision of shunt capacitors, strengthening of bus bars, apart from other works required at injection voltage level and other one or more successively higher voltages, civil works relocation of existing bays etc. shall be recovered by HPSEBL, as per the regulations of HPERC read with the clarifications/decisions by HPERC and/or any other competent authority as may be finally applicable. The share of IPP on this account shall be paid by the IPP to Himachal Pradesh State Electricity Board Limited (HPSEBL)/ Himachal Pradesh Power Transmission Corporation Limited (HPPTCL) as per the final decision of the competent authority.
- xiii) Whereas the HPSEBL/HPPTCL shall endeavor to provide the power evacuation system at the earliest, the scheduled date for providing evacuation arrangements shall be spelt out in the PPAs on case to case basis inter-alia, keeping in view the time lines indicated in the relevant plan and approved by HPERC.
- xiv) The powerhouse generating equipments as well as other electrical equipments to be provided by the IPP shall be compatible for parallel operation with the State grid after interfacing. The IPP shall be responsible for any loss of generation on this account.
- xv) O&M charges for maintenance of inter connection facilities at the interconnection sub-station shall be paid by the IPP to HPSEBL/HPPTCL throughout the period, the IPP runs the project and the same shall be reviewed at the beginning of every financial year.
- xvi) For evacuation of power the IPP shall interface this project at 33 kV level with 33/11, 2x1.60MVA sub-station Kupvi subject to following conditions:-
- i) In case the above proposed sub-station does not come up or is not completed by the time of commissioning of above SHEP, the IPP shall have to arrange at its own cost an alternative evacuation system. HPSEBL shall be free for taking any such decision in this regard as it deems fit.
 - ii) The IPP shall construct 33 kV dedicated line from their power house site up to 33/11 KV substation at Kupvi.
 - iii) The rest of the terms and conditions regarding O&M charges, interconnection facility, PPA etc. shall be governed by HPSEBL Regulations, Himachal Pradesh Electricity Regulatory Commission (Promotion of Generation from the Renewable Energy Sources and Terms and Conditions for Tariff Determination) regulations 2012
- xvii) The project line shall be provided, operated and maintained by the IPP at his cost as per normal conditions after obtaining approval of HP Govt. under Section 68(1) of Electricity Act, 2003.
- xvi) The above mentioned evacuation arrangements shall be subject to the HPERC approval of "Comprehensive area wise plan for augmenting and establishing of transmission/sub-transmission system for evacuation of power from small HEPs" which has already been submitted to HPERC. The Transmission/Distribution Licensee may however also evolve alternate system(s) depending on the site conditions and subsequent developments with the approval of HPERC.
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