

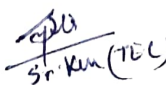
**DIRECTORATE OF ENERGY
GOVERNMENT OF HIMACHAL PRADESH
SHANTI BHAWAN, PHASE-III, SECTOR-VI, NEW SHIMLA-171009(HP)**

OFFICE ORDER

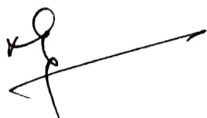
Directorate of Energy (DoE), Government of Himachal Pradesh, is pleased to accord Technical Concurrence (TC) to Kasol SHEP (5.00 MW) on Kasol Khad, tributary of Parvati river, in District Kullu of Himachal Pradesh allotted to "M/s Beena Butail, Butail Complex, Bundla Tea Estate, Palampur, Distt. Kangra-176061", at an estimated cost of Rs. 4757.00 lakh (Rupees four thousand seven hundred fifty seven lakh only) only including Interest During Construction (IDC), Escalation, Financial Charges (FC) and Local Area Development Fund (LADF) @ 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 Technical concurrence (TC) is subject to the fulfilment of the following conditions:-
 - i) Completed cost/ Technical concurrence (TC) 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 Beena Butail, Butail Complex, Bundla Tea Estate, Palampur, Distt. Kangra-176061".
 - 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.


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Sr. Asst. (TEC)

- 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) The power of Kasol SHEP (5 MW) can be evacuated subject to following conditions:-
 1. The joint evacuation of 10 MW power of Kasol and Grahani Kasol HEPs (5 MW each) can be evacuated on 33 kV D/C Barsaini – Malana- I line after commissioning of 33/132 kV Barsaini substation and 132 KV Barsaini-Charor D/C line by HPPTCL and operation of 33 kV Barsaini substation of HPSEBL with 33/132 kV substation of HPPTCL in integrated mode.
 2. IPP shall provide 33 kV substation/breaker with suitable protection at Kasol in the vicinity of existing 33 kV line route (Barsaini to Malana-I) at their cost by providing LILO arrangement of existing 33 kV D/C Barsaini to Malana-I and the length of 33 kV LILO line shall not be more than 500 mtrs.
 3. Both the IPPs (Kasol 5 MW and Grahani Kasol 5 MW) will construct 33 kV line or lay 33 kV underground cable in joint mode up to LILO point without disturbing the existing 11 kV line structure of HPSEBL and will execute the joint evacuation agreement.
 4. The IPPs shall provide control of breaker at LILO point and real time monitoring of electrical parameters to HPSEBL at 132/33 kV Jari (Malana-I) at their cost.
 5. IPPs are to deliver power at their interconnection points and will have to make arrangements for delivery of power at interconnection point by constructing dedicated line joint evacuation/paying charges and losses for the system of other system owners in to delivery point.
 6. To interconnection point, the arrangement is of the IPP. The deemed generation in the event of outage of HPSEBL system up to delivery point will not be acceptable.
- 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.
- xviii) 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.
- xix) 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.
- xx) The conditions on these lines shall have to be suitably included by the IPP in the PPA etc. apart from other standard conditions.
- xxi) The observations of DoE, GoHP and replies thereof shall form an integral part of the DPR.
- xxii) 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.
- xxiii) 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.
- xxiv) 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.
- xxv) The proposed arrangement of laying water conductor system with length 2160 m should be designed w.r.t. all necessary parameters of earth pressure/water pressure in empty/full condition, earthquake condition and with regard to all safety standards norms. The design should be vetted from an authorized & approved agency.
- xxvi) LADC/LADF amount and activities shall be implemented as per Power policy of HP Govt., 2006 and subsequent amendments thereof.
- xxvii) 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.
- xxviii) The TC 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 24 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/ Technical Concurrence (TEC/TC) of the scheme and actual start of work on the project is three years or more, a fresh Techno Economic Clearance/ Technical Concurrence (TEC/TC) shall be obtained from DoE, GoHP before start of actual work.
- 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


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

No. DoE/CE(Energy)/TC-Kasol/2021- 582-91

Dated: 26/04/2021

Copy for kind information and necessary action please, to the:-

1. Addl. Chief Secretary (MPP & Power) to H.P. Govt., Shimla-171002.
2. Addl. Chief 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. Deputy Commissioner, Kullu Himachal Pradesh - 176310.
6. General Manager, HPPTCL, Himfed Bhawan, Panjari, Below Old MLA Quarters, Shimla-171005.
7. Chief Engineer (SP), HPSEB Ltd, Uttam Bhawan, Dogra Lodge, Shimla-171004.
8. Chief Engineer (Commercial), HPSEB Ltd, Vidyut Bhawan, Shimla -171004.
9. Chief Executive Officer, Himurja, 8A-SDA Complex, Kasumpti, Shimla-171009.
- ✓ 10. M/s Beena Butail, Butail Complex, Bundla Tea Estate, Palampur, Distt. Kangra-176061.


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


AEE(TBC)

ANNEXURE-I

Kasol SHEP (5.00 MW) in District Kullu of Himachal Pradesh allotted to "M/s Beena Butail, Butail Complex, Bundla Tea Estate, Palampur, Distt. Kangra-176061"

ABSTRACT OF COST ESTIMATE

Sr.No.	Description of work	Cost (Rs. in lakh)	
a)			
i)	Civil works i/c other Misc. expenses	2836.27	} Price level March, 2020.
ii)	Electro Mechanical Work	1153.99	
iii)	Transmission Works	57.50	
	Sub-total (a)	4047.76	
(b)			
i)	Interest During Construction (IDC)	433.97	
ii)	Escalation	170.28	
iii)	Financial Charges	57.54	
	Sub-total (b)	661.79	
	Total (a+b)	4709.55	
(c)	LADC @ 1.0% of (a+b)	47.09	
	Grand Total (a+b+c)	4756.64	
	Say	₹ 4757.00 Lakh	

(Rupees four thousand seven hundred fifty seven Lakh only)


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


AEE(TEC)



ANNEXURE-II

Kasol SHEP (5.00 MW) in District Kullu of Himachal Pradesh allotted to "M/s Beena Butail, Butail Complex, Bundla Tea Estate, Palampur, Distt. Kangra-176061"

SALIENT FEATURES

I. LOCATION

State	Himachal Pradesh
District / Tehsil	Kullu
Village	Kasol
River/Khad	Kasol Khad
Vicinity	Diversion Weir on Kasol Khad at EL± 1810.00 m and surface power house on left bank of Kasol Khad with Tail Race Level at EL ± 1606.50 m near Village Kasol.

Accessibility	By Road	35 KM from Distt. H/Q Kullu 240 KM from Distt. Shimla
	By Railway	Nearest BG at Kirtpur (Pb.)
	By Air	Bhunter Airport

Geographical Co-Ordinates

	Longitude	Latitude
• Weir Site	77° 19' 36.78"E	31° 59' 29.97" N
• Power House Site	77° 19' 06.28"E	32° 00' 29.84" N

SOI Toposheet 53 E/5, 52 H/8

II. HYDROLOGY

Stream/nallah	Kasol Khad/nallah
Tributary of/ Basin	Kasol Khad / Parvati river
Catchment Area upto diversion site	45.20 sq.km.
Design Discharge	3.12 cumecs
Design Flood	226.62 cumecs
HFL	Weir site Power House site El ± 1811.80 m El ± 1606.00 m

III. PROJECT COMPONENTS:-

A. DIVERSION STRUCTURE / INTAKE

Type /Shape	Drop type trench weir
Size	16.00 m (L) x 2.30 m (W)
Depth	Varies from 0.80 m to 1.20 m
Design Discharge	3.12 cumecs plus flushing & Over Loading discharge
Track Rack level	EL ± 1810.00 m
Bed Slope	1 in 11.43
Size of Intake gate	1.20 (W) x 1.20 m (D)
Shingle flushing gate	1.00 m x 1.00 m

B. FEEDER / CONVEYANCE CHANNEL (Intake to De-Silting Tank)

Type/ shape	R.C.C. Box type channel
Size	1.50 m (w) x 1.70 m (D) (i/c Free Board)
Length	± 86.00 m
Slope	1 in 500 m

APC (TCC)

Design Discharge	3.12 cumecs plus flushing & Over Loading discharge
Velocity	1.87 m/sec
Top Level	EL ± 1809.90 m

C. DE-SILTING ARRANGEMENT

Type	Surface type open basin
Size	41.00 m (L) x 4.80 m (W) x 3.60 m (D)
Design Discharge	3.12 cumecs plus flushing discharge & Over Loading discharge
Particle size to be removed	± 0.20 mm and above
Flow velocity	0.24 m/sec.
Full Supply Level (FSL)	EL ± 1809.60 m
Size of Silt Flushing pipe	350 mm dia.

D. WATER CONDUCTER SYSTEM

i. POWER CHANNEL)

Type	RCC Box section
Size of channel	1.80 m x 1.60 m
Length of channel	101.00 m (Open channel 37.00 m) + 64 m power channel at outlet portal of HRT)
Bed Slope	1 in 500 m
Velocity	1.57 m/sec.
Design Discharge	3.12 cumecs plus Over Loading discharge
Full Supply Level at start	EL 1808.00 m
Bed Level at start	EL 1807.70 m

ii. HEAD RACE TUNNEL

Type/size	D-shaped, 1.80 m dia.
Length of Tunnel	2059.00 m
Bed Slope	1 in 550 m
Design Discharge	3.12 cumecs plus Over Loading discharge
Bed Level at start	EL 1807.60 m
FSL at start	EL 1807.90 m
FSL at end	EL 1799.50 m
Bed level at end	EL 1799.20 m

E. FOREBAY TANK

Type	Surface RCC rectangular
Size	40.00 m (L) x 5.00 m (W) x 6.00 m (H)
Design Discharge	3.12 cumecs
Live Storage capacity	562.00 cumecs
Peaking time	3 minutes
Top Level	EL 1800.00 m
FSL	EL 1799.39 m
MDDL	EL 1797.39 m
C/L of Penstock entry level	EL 1796.79 m

F. PENSTOCK

Type	Circular, Surface steel penstock
Number/size of main penstock	One / 1200 mm ϕ
Length of main penstock	444 m
Plate Thickness	Varying between 10 mm-22 mm
Velocity	2.76 m /sec
Material of steel liner	IS: 2062 Gr-B




Number of branches	Two
Size of branch penstock	25.00 m (each), 750 mm ϕ

G. POWER HOUSE

Type	Surface
Size	25.00 m x 15.00 m x 10.00 m
C/L of Jet	EL 1607.00 m
Installed Capacity	5.00 MW (2 units of 2500 kW each)
Max. Gross Head	192.39 m
Net Head	188.60 m
Power House Crane	25/2.5 Tonne

Turbine

Type	Horizontal/ Vertical axis Pelton Turbine
Number	Two
Rated Capacity	2500 kW (each)
Rated Speed	750 rpm

Generator

Type	Synchronous, Brushless Type
Number	Two
Rated Capacity	2500 kW
Power Factor	0.90
Rated Voltage	3.3 kV
Rated Frequency	50 Hz
Rated Speed	750 rpm
Overloading Capacity	10%

H. TAIL RACE

Type	Free Flow cut and cover channel
Size	1.50 m x 1.50 m
Length	23.00 m
Slope	1 in 400
Mini. Tail water Level	EL $\pm$ 1605.50 m


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


AEE (TEC)

ANNEXURE-III

Kasol SHEP (5.00 MW) in District Kullu of Himachal Pradesh allotted to "M/s Beena Butail, Butail Complex, Bundla Tea Estate, Palampur, Distt. Kangra-176061"

LIST 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 Latest 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) (DGTD), Chief Controller of Import & Export (CCI & E)	As per Import & Export Acts.

ACE (rec)

13/4/2011
Chief Engineer,
Directorate of Energy, GoHP,
New Shimla-171009(HP).