

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

OFFICE ORDER

In supersession to this office order endorsement no. DoE/CE(Energy)/TEC-Jiwa-II/2011-9149-57 dated 30.03.2012, Directorate of Energy (DoE), Government of Himachal Pradesh, is pleased to accord revised Technical Concurrence (TC) to Jiwa-II SHEP (1.75 MW) within elevation range of El 1580 m to El 1450.10 m against the allotted elevations of El 1580 m to El 1440 m on Jiwa nallah, a tributary of Sainj river in Beas basin, Distt. Kullu Himachal Pradesh, allotted to "M/s Behl Motors, Plot No-6&7, Industrial Area, Phase-III, Souli Khad, Distt Mandi, Mandi (H.P.)", at an estimated cost of Rs. 1920.00 lakh (Rupees one thousand nine hundred twenty lakh) only including Interest During Construction (IDC), Escalation, Financial Charges (FC) and LADC @ 1.00% of total project cost with the following stipulations:

1.
 - i) The abstract of the Estimated Cost approved by DoE, GoHP is enclosed at **Annex-I**, and the Salient Features of the scheme are enclosed 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 Technical Concurrence (TC).
 - 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 Concurrence.
 - 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) Fulfilment 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 "M/s Behl Motors, Plot No-6&7, Industrial Area, Phase-III, Souli Khad, Distt Mandi, Mandi (H.P.)"
 - 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 latest 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 Developer.
- 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/HPPTCL, 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 Developer on this account shall be paid by the Developer 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 Developer shall be compatible for parallel operation with the State grid after interfacing. The Developer 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 Developer to HPSEBL/HPPTCL throughout the period, the Developer runs the project and the same shall be reviewed at the beginning of every financial year.
- xvi) The power of Jiwa-II SHEP (1.75 MW) can be evacuated at Raila Spur of 11 kV Neuli Feeder emanating from the existing 33/11 kV, 2x3.15 MVA Sub-Station Sainj by making arrangement for the interconnection facilities near the JSV lift water scheme. The evacuation arrangement is subject to the following terms & conditions:-
1. IPP shall bear the cost of providing interconnection facilities and 11 kV HT Line from the power house to said interconnection point. Necessary right of way (ROW) for the HT Line and land for the interconnection facilities shall also be arranged by the IPP.
 2. Losses at 11 kV from interconnection point to 33/11 kV S/Stn. Sainj shall be borne by the IPP.
 3. No deemed generation shall be allowed.
- xvii) The project line shall be provided, operated and maintained by the Developer 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/CERC approval of "Comprehensive area wise plan for augmenting and establishing of transmission/sub-transmission system for evacuation of power from HEPs" which has already been submitted to HPERC. The Transmission/Distribution Licensee may however evolve alternate system(s) depending on the site conditions and subsequent developments with the approval of HPERC.
- xix) The Developer 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 Developer 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 Hydro generating units shall be capable of generating up to 110% of rated capacity (Subject to rated head being available) on continuous basis as per Sr. No 7 (Part-II) of Ministry of Power (Central Electricity Authority) notification No 12/X/STD (CONN) GM /CEA dated 15/10/2013 and HP Govt. Swaran Jayanti Energy Policy, 2021.
- xxi) The conditions on these lines shall have to be suitably included by the Developer in the PPA etc. apart from other standard conditions.
- xxii) The observations of DoE, GoHP on the DPR and replies thereof shall form an integral part of the DPR.
- xxiii) Minimum 15% release of water immediately downstream of diversion structure shall be ensured all the times including lean season as per prevailing GoHP notification/ HP Govt. Swaran Jayanti Energy Policy, 2021. 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.
- xxiv) 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.
- xxv) 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.
- xxvi) The proposed arrangement of laying Water Conductor System (WCS) i.e. Approach Channel, Power Channel with length of 100 m, 1300 m respectively and Penstock with length 140 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.
- xxvii) LADC/LADF amount and activities shall be implemented as per HP Govt. Swaran Jayanti Energy Policy, 2021 at chapter-V.
- xxviii) 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 and HP Govt. Swaran Jayanti Energy Policy, 2021 at chapter-V.
- xxix) The TC is based on the reports and data furnished by the Developer in the DPR and the relevant information provided therein. 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 Developer as per standard norms & manuals.
3. The project shall be completed within 24 months from the date of start of the construction work i.e. zero date and no additional time will be allowed on account of accordance of Revised Technical Concurrence of Jiwa-II SHEP (1.75 MW).
3. The completion cost of the scheme shall be submitted to DoE, GoHP for approval within 6 months of the Commercial Operation Date (COD) of the plant as per HP Govt. Swaran Jayanti Energy Policy, 2021.

4. The project promoters/project authorities 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.
5. The firm financial package and tie-up of balance inputs/clearances shall be completed within the period as stipulated in the HP Govt. Swaran Jayanti Energy Policy, 2021 and amendments thereof /Implementation Agreement (IA)/Supplementary Implementation Agreement (SIA).
6. In case the time gap between the Technical Concurrence (TC) of the scheme and actual start of work on the project is three years or more, a fresh Concurrence shall be obtained from DoE, GoHP before start of actual work.
7. The project developer shall submit monthly hydrological, meteorological data observed at the project site and monthly progress reports on the prescribed format along with expenditure actually incurred to DoE, GoHP, duly certified by statutory auditors till the Commercial Operation of the plant.
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 GoHP or parameters are found changed at any stage.

BY ORDER OF THE GoHP

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

No. DOE/CE(Energy)/TEC-Revised Jiwa-II/2022- 5617-25 Dated: 03/09/2022

Copy for information and necessary action to the:

1. The Chief Secretary (Power, NES) to H.P. Govt., Shimla-171002
2. The Secretary, Ministry of Non-Conventional Energy Sources (MNES), Block No.14,CGO Complex, Lodhi Road, New Delhi-110003.
3. The Director, Environmental & Scientific Technologies, Narayan Villa, Near Wood Villa Palace, Shimla-171002.
4. The Deputy Commissioner, Distt. Kullu, Himachal Pradesh – 175101.
5. The General Manager, HPPTCL, Borowalia House, Khalini, Shimla-171002.
6. The Chief Engineer (SP), HPSEB Ltd., Vidyut Bhawan, Shimla-171004.
7. The Chief Engineer (SO), HPSEB Ltd., Vidyut Bhawan, Shimla –171004.
8. The Chief Executive Officer, Himurja, 8A-SDA Complex, Kasumpti, Shimla-171009.
9. M/s Behl Motors, Plot No-6&7, Industrial Area, Phase-III, Souli Khad, Distt Mandi, Mandi (H.P.).

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

Revised Jiwa-II SHP (1.75 MW) in District Kullu of Himachal Pradesh allotted to "M/s Behl Motors, Plot No-6&7, Industrial Area, Phase-III, Souli Khad, Distt. Mandi (HP)"

ABSTRACT OF COST ESTIMATE

Sr. No.	Description of works	Amount (Rs. in lakh)	
(a)			
1.	Civil works i/c other Misc. Expenses	1034.24	} Price Level March, 2021
2.	Electro Mechanical works	536.04	
3.	Transmission works	59.96	
	Sub Total (a)	1630.24	
(b)			
1.	Interest During Construction (IDC)	187.69	
2.	Escalation	70.14	
3.	Financial Charges(FC)	12.79	
	Sub Total (b)	270.62	
	Total (a+b)	1900.86	
(c)	LADC @ 1% of (a+b)	19.01	
	GRAND TOTAL (a+b+c)	1919.87	

Say Rs. 1920.00 lakh

(Rupees one thousand nine hundred twenty lakh only)

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

AEE(TC)

Revised Jiwa-II SHP (1.75 MW) in District Kullu of Himachal Pradesh allotted to "M/s Behl Motors, Plot No-6&7, Industrial Area, Phase-III, Souli Khad, Distt. Mandi (HP)"

SALIENT FEATURES

1. LOCATION

State	Himachal Pradesh	
District/Tehsil	Kullu/Banjar	
Vicinity	Khaniyari, Kathiari, Siund, Sainj	
Access By Road	4.00 km- Sainj, Distt. Kullu	
Railway Station	215 km- Kiratpur Sahib (Pb)	
Airport	Bhuntar	
Proposal	Diversion site on Jiwa Nallah at El 1580.00 m near Khaniyari village and Power house on left bank of Jiwa nallah & opposite to village Kathiari near confluence of Barshanu Nallah in Tehsil Banjar with Invert level of Tail race at El 1450.10 m.	

Geographical co-ordinates

	At Weir site	At Power house site
• Longitude	77° 20' 32.92" E	77° 20' 6.40" E
• Latitude	31° 48' 35.93" N	31° 48' 0.12" N
SOI toposheet	53 E/5, 53 E/9	

2. HYDROLOGY

Name of stream	Jiwa nallah
Tributary of /Basin	Sainj river/Beas basin
Catchment area at Diversion site	150.00 Sq. km
Intercepted for power generation	30.00 Sq. km
Design Flood	471.48 cumecs
Design discharge	1.71 cumecs

HFL	At Diversion Weir	At Powerhouse
	El 1584.10 m	El 1450.00 m

III. PROJECT COMPONENTS

A. DIVERSION STRUCTURE

Type	Trench type weir
Size	14.00 m (L) x 1.20 m (W)
Depth	Varies from 1.20 m to 2.00 m
River bed level	El 1580.00 m
Top level of intake structure	El 1585.10 m
Design discharge	1.71 cumecs plus flushing and overloading discharge
Bed slope of trench	1 in 17.50
Bed slope of khad	1 in 10

B. WATER CONDUCTOR SYSTEM**(a) APPROACH CHANNEL (from Trench weir to Desilting tank)**

Type	Cut & Cover (rectangular)
Length	100.00 m
Size	1.20 m (Width) x 0.90 m (Water Depth)
Free board	0.50 m
Slope	1 in 250
Design discharge	1.71 cumecs plus flushing and overloading discharge
Velocity	2.05 m/sec.

(b) POWER CHANNEL (from Desilting tank to Forebay)

Type/ Material	Mild Steel circular conduit
Size	1.05 m internal dia.
Length	1300.00 m
Design discharge	1.71 cumecs plus overloading discharge
Velocity	2.16 m/sec.
Bed slope	1 in 357

C. DESILTING ARRANGEMENT

Type	Surface Hopper type
Size	20.00 m (L) × 5.00 m (W) × 2.50 m (H)
Particle size to be removed	0.20 mm and above
Flow through velocity	0.20 m/sec
Flushing discharge	0.34 cumecs

D. FOREBAY

Type	Surface
Size	25.00 m (L) x 8.30 m (W) x 2.00 m (D)
Live Storage Capacity	337.00 cum
Peaking storage time	3 minutes
Top level	El 1576.60 m
Full Supply Level (FSL)	El 1575.70 m
Min. Drawdown Level (MDDL)	El 1573.70 m
C/L of penstock	El 1570.55m

E. PENSTOCK

Type	Surface, Circular steel penstock
Number	One
Size	750 mm dia.
Length	140.00 m
Number of Branches	Two
Size of branch penstock	550 mm dia. each
Plate thickness	Varying between 6 mm to 8 mm
Velocity	4.23 m/sec.
Material of Steel Liner	ASTM 285 Gr "C"

F. POWER HOUSE

Type	Surface
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Size	22.50 m (L) x 11.50 m (W) x 9.00 m (H)
Installed capacity	1.75 MW (2 units of 875 KW each)
Gross Head	125.70 m
Net head	122.00 m
C/L of jet	El 1450.50 m
Capacity of crane	10/5 ton EOT/HOT

Turbines

• Type	Horizontal shaft Pelton
• Number of units	Two
• Capacity	875 KW each
• Speed	750 rpm

Generators

• Type	Horizontal shaft synchronous
• Number	Two
• Capacity	875 KW each
• Power factor	0.9 Lag
• Generation Voltage	3.3 kV
• Frequency	50 Hz.
• Speed	750 rpm
• Overloading capacity	10 %

G. TAIL RACE

Type	Rectangular section
Length	50.00 m
Width	1.20 m
FSD	1.20 m
Free Board	0.50 m
Invert level of Tail race	El 1450.10 m

H.	Construction period	24 months
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K. S. MISHRA
Chief Engineer,
Directorate of Energy, GoHP,
New Shimla-171009(HP).

AEE(TC)

ANNEXURE-III

Revised Jiwa-II SHP (1.75MW) in District Kullu of Himachal Pradesh allotted to "M/s Behl Motors, Plot No-6&7, Industrial Area, Phase-III, Souli Khad, Distt. Mandi (HP)"

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 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 Foreign Trade (DGFT)	As per Import & Export Acts.


Chief Engineer,
Directorate of Energy, GoHP,
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