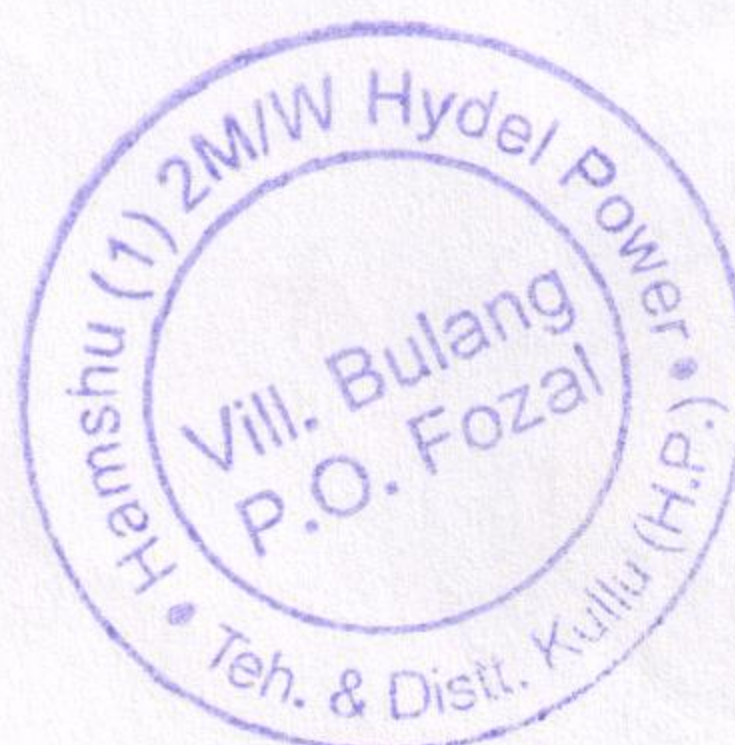


**DIRECTORATE OF ENERGY**  
**GOVERNMENT OF HIMACHAL PRADESH**  
**SHANTI BHAWAN, PHASE-III, SECTOR-I, NEW SHIMLA-171009(HP)**

**OFFICE ORDER**

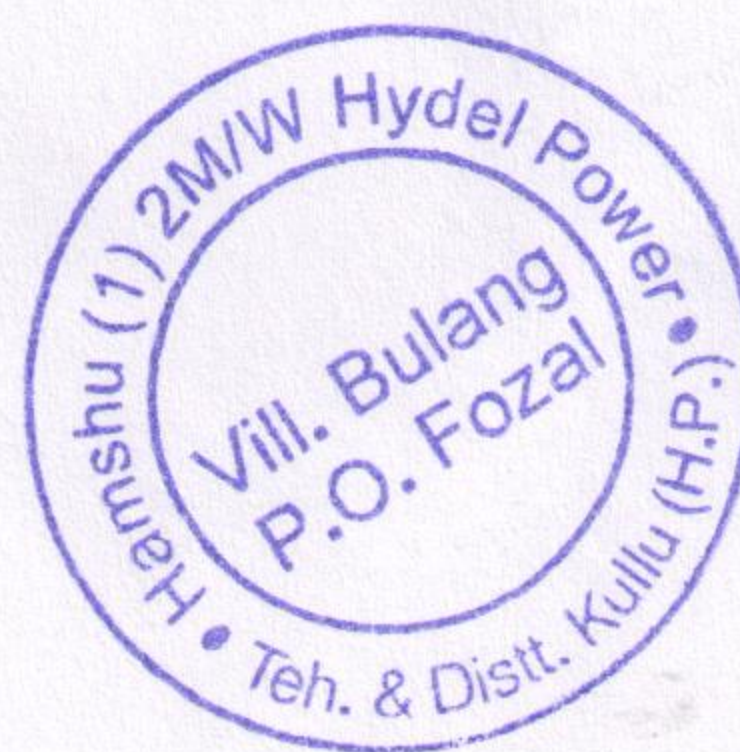
In supersession to Office Order No. DoE/CE(TEC)/TEC-Hamshu-I/2012-5345-53 dated 11.10.2012, Directorate of Energy (DoE), Govt. of Himachal Pradesh, is pleased to accord Revised Concurrence to Hamshu-I SHP (2.00MW) on Pharari nallah and Tundi nallah the tributaries of Beas river in Beas Basin, District Kullu, Himachal Pradesh, allotted to "M/S Hamshu Hydel Power, C/O Khayali Ram, Vill. Bulang, PO Fozal, Tehsil & District Kullu -175129 (HP)" at an estimated cost of Rs 1987.00 (Rupees one thousand nine hundred eighty seven lac) 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 completed cost of the project 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 in Annex-I, unless revised by GoHP/DoE while according concurrence under section 8 of Indian Electricity Act, 2003 after review of financial package.
  - b) Change in rates of Indian taxes/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.
- ii) 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-III.
2. The Concurrence is subject to the fulfillment of the following conditions:
  - i) Completion cost/Concurrence 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 the Independent Power Producer (IPP) i.e. "M/S Hamshu Hydel Power, C/O Khayali Ram, PO Fozal, Tehsil & District Kullu -175129 (HP)".
  - viii) No additional costs 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 CERC/HPERC regulations.
  - x) The statutory and administrative clearances as per Annex-II shall be obtained before execution/ implementation of the project.
  - xi) The Interconnection point with State grid and the 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 recoverable by HPSEBL/HPPTCL as per the regulations of HPERC read with the clarifications/decision by HPERC and/or any other competent authority as may be finally applicable. The share of IPP on this account shall be payable by the IPP as per the final decision of the competent authority.
- xiii) Whereas the HPSEBL/HPPTCL shall endeavor to provide the evacuation system at the earliest, the schedule 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 power house generating equipment as well as other electrical equipment to be provided by the developer shall be compatible for parallel operation with State Grid.
- xv) O&M charges for maintenance of interconnection facilities at the interconnection sub-station shall be payable 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 Project line shall be provided, operated and maintained by the IPP at his cost as per normal conditions after obtaining approval from HP Govt. under Section 68(1) of Electricity Act, 2003.
- xvii) The proposed evacuation arrangements shall be subject to feasibility of interconnection at interfacing point and further HPERC approval of "Comprehensive area wise plan for augmenting and establishing the transmission/sub-transmission system for the evacuation of power from small HEPs" which has already been submitted to HPERC. The Transmission/Distribution Licensee may however evolve alternative system(s) depending on the site conditions and subsequent developments, with the approval of HPERC.
- xviii) For evacuation of power the IPP shall interface this project with 33/220 kV pooling station planned at Fozal in joint mode with Pharari SHP at 33 kV level. The cost on account of this joint evacuation arrangement shall be shared by developers of these projects on proportionate basis.
- xix) The IPP shall develop operate and maintain the project including the dedicated transmission system subject to compliance of the following:
- a) Grid Code and standards of grid connectivity.
  - b) Technical 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 the necessary action to provide tele-metering to SLDC shall be provided by them and specifications required to be got approved from the office of SE, SLDC, HPSEB Ltd, Totu, Shimla from compatibility point of view with existing SCADA system.
- xx) The conditions on these lines shall also have to be suitably included by the developer in PPA etc, apart from other standard conditions.
- xxi) Minimum 15% release of water immediately down stream of diversion structure shall be ensured all the times including lean season as per Power Policy of HP Govt., 2006 and subsequent amendments thereof. The necessary monitoring equipment as prescribed by pollution Control Board for the same shall be installed by the IPP during execution of the project.
- xxii) LADC/LADF amount and activities shall be implemented as per Power Policy of HP Govt., 2006 and subsequent amendments thereof.





- xxiii) The additional 1% (one percent) free power from the project shall be provided and earmarked for Local Area Development Fund (LADF) as per HP Govt Notification No. MPP-F(1)-2/2005-V dated 30.11.2009 and subsequent amendments thereof.
- xiv) The Concurrence is based on the reports and data furnished by the IPP in the DPR and 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 broad technical aspects of the project proposal in the DPR have been scrutinized and it does not cover the examination of the detailed designs and working drawings of project components in regard to their structural, hydraulic and mechanical performance & safety which shall be ensured by the project authority/IPP.
- xxv) The observations of DoE, GoHP and replies thereof shall form an integral part of the DPR.
- 3 The project shall be completed within 24 months from the date of start of the construction works.
- 4 The completion cost of the scheme shall be submitted to DoE, GoHP within 3 months from the Commercial Operation Date (COD) of the plant.
- 5 The Project Promoters/Project Authorities shall give free accessibility to the officers and staff of DoE, GoHP 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 HP Govt. power Policy, 2006 and subsequent amendments thereof /Implementation Agreement.
- 7 In case the time gap between the Techno-Economic Clearance of the scheme and actual start of work on the project is three years or more, a fresh Techno-Economic Clearance 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.

BY ORDER OF THE GoHP

*[Signature]*

*[Signature]* 25/7/16  
Chief Engineer,  
Directorate of Energy, GoHP,  
New Shimla-171009(HP).

No. DoE/CE/TEC- Hamshu-I(R)/2016- 853-61

Dated: 02/05/2016

Copy for information and necessary action to the:

1. Addl. Chief Secretary (MPP & Power) to H.P. Govt., Shimla-171002(HP).
2. Addl. Chief Secretary (NES) to H.P. Govt., Shimla-171002(HP).
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(HP).
5. General Manager(C&D), HPPTCL, Borowalia House, Khalini, Shimla-171002(HP).
6. Chief Engineer (SO&P), HPSEB Ltd, Vidyut Bhawan, Shimla-171004(HP).
7. Chief Engineer (Commercial), HPSEB Ltd, Vidyut Bhawan, Shimla-171004(HP).
8. Chief Executive Officer, Himurja, 8A-SDA Complex, Kasumpti, Shimla-171009(HP).
- ✓ 9. M/s Hamshu Hydel Power, C/o Khayali Ram, Vill. Bulang, P.O. Fozal, Tehsil & District Kullu -175129 (HP)

*[Signature]*

*[Signature]* 25/7/16  
Chief Engineer,  
Directorate of Energy, GoHP,  
New Shimla-171009(HP).





## ANNEXURE-I

Hamshu-I SHP (2.00 MW) in District Kullu of Himachal Pradesh of "M/S Hamshu Hydel Power, C/O Khayali Ram, Vill. Bulang, PO Fozal, Tehsil & District Kullu -175129 (HP)".

## ABSTRACT OF COST ESTIMATE

Sr. No.	Description of works	Amount (In Rs. lac)	
(a)			
1.	Civil works i/c preliminary Expenses	1121.25	Price Level Nov., 2015
2.	Electro Mechanical works	565.00	
3.	Transmission works	78.50	
	<b>Sub Total (a)</b>	<b>1764.75</b>	
(b)			
1.	Escalation	64.79	
2.	Interest During Construction(IDC)	123.41	
3.	Financial Charges (FC)	14.36	
	<b>Sub Total (b)</b>	<b>202.56</b>	
	<b>Total (a+b)</b>	<b>1967.31</b>	
(c)	LADC @1.0 % of (a+b)	1986.97	
	<b>Grand Total (a+b+c)</b>	<b>1986.97</b>	
	Say	Rs. 1987.00 lac	

(Rupees one thousand nine hundred eighty seven lac only)

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





## ANNEXURE-II

Hamshu-I SHIP (2.00 MW) in District Kullu of Himachal Pradesh of "M/S Hamshu Hydel Power, C/O Khayali Ram, Vill. Bulang, PO Fozal, Tehsil & District Kullu -175129 (HP)".

## LIST OF STATUTORY AND ADMINISTRATIVE CLEARANCES REQUIRED

Sr. No.	ITEM	AGENCY	REMARKS
1.	WATER AVAILABILITY	1. State Govt. 2. CWC	Interaction between State Govt. Deptt. & CWC required. Relevant Irrigation Act of the State & Central Water Commission.
2.	SEB CLEARANCE	1. SEB 2. State Govt.	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. Min. of E&F G.O.I.	Coordination with State Forest Deptt./ Min. of Environment & Forest (MoE&F) regarding Forest (Conservation) Act, 1980.
5.	ENVIRONMENT	1. State Govt. 2. Min. of E&F G.O.I.	As per item (3) & (4) & 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. Min. of E&F G.O.I.	
8.	EQUIPMENT PROCUREMENT	DGTD, CCI&E	Import & Export Acts.

*[Signature]*

*[Signature]*  
Chief Engineer,  
Directorate of Energy, GoHP,  
New Shimla-171009(HP)





Hamshu-I SHP (2.00 MW) in District Kullu of Himachal Pradesh of "M/S Hamshu Hydel Power, C/O Khayali Ram, Vill. Bulang, PO Fozal, Tehsil & District Kullu -175129 (HP)".

## SALIENT FEATURES

<b>I LOCATION</b>			
State		Himachal Pradesh	
District/Tehsil		Kullu	
River/Khad		Pharari nallah tributary of Beas river.	
Vicinity		Bulang and fozal villages	
Proposal		Two Diversion Weirs on Pharari khad and Tundli nallah at EL $\pm$ 2060.00 m and Power House on right bank of Pharari khad at EL $\pm$ 1900.00 m.	
Accessibility	By Road	270 km from Shimla and 16 km from Kullu on Kullu- Dhobhi-Fozal Road	
	By Rail	BG - Kiratpur, NG - Jogindernagar(HP)	
	Airport	Bhuntar (Kullu)	
Geographical co-ordinates		<b>Pharari Nallah</b>	<b>Tundi Nallah</b>
Weir Site		32° - 05' - 52" N	32° - 05' - 36" N
		77° - 03' - 50" E	74° - 04' - 05" E
		32° - 05' - 52" N	77° - 04' - 23" E
Power House Site			
<b>II HYDROLOGY</b>			
Name of stream		Pharari nallah and Tundi nallah	
Tributary of/Basin		Fozal khad / Beas basin	
Total Catchment area		15.00 Sq km	
Design Discharge		1.58 cumecs	
Design Flood		<b>Pharari nallah</b>	<b>Tundi nallah</b>
		181.00 cumecs	160.00 cumecs
<b>III PROJECT COMPONENTS</b>			
<b>A DIVERSION WEIR</b>		<b>Pharari nallah</b>	<b>Tundi nallah</b>
Type		Trench type weir	Trench type weir
Trash rack/River bed level		EL $\pm$ 2060.00 m	EL $\pm$ 2060.00 m
Size		10.00 m x 1.50 m	10.00 m x 1.50 m
Depth		2.00 m	2.00 m
Design Discharge		1.62 cumecs	0.78 cumecs
<b>B CONVEYANCE CHANNEL (From Intake to Desilting tank)</b>		<b>Pharari nallah</b>	<b>Tundi Nallah</b>
Type		Cov. RCC Channel	Covered RCC Channel
Size		0.90 m x 0.90 m	0.70 m x 0.70 m
Length		$\pm$ 40.00 m	$\pm$ 20.00 m
Design Discharge		1.51 cumecs	0.73 cumecs
Velocity of flow		1.51 m/sec	1.74 m/sec
Slope		1 in 220	1 in 170
<b>C. DESILTING ARRANGEMENT</b>		<b>Pharari Nallah</b>	<b>Tundi Nallah</b>
Type		Surface, central silt gutter type	
Size		25mx3.60mx2.10m	15m x 3.00m x 1.25m
Design Discharge		1.51 cumecs	0.73 cumecs
Transition length		3.40 m	3.40 m
Particle size to be eliminated		0.20 mm and above	0.20 mm and above
Flushing discharge		0.30 cumecs	0.15 cumecs
<b>D. POWER CHANNEL (From desilting tank to forebay)</b>		<b>Pharari nallah</b>	<b>Tundi Nallah</b>
Type		Closed RCC channel	Closed RCC channel
Size		1.10 m x 1.10 m	0.80 m x 0.80 m





	Length	$\pm 600$ m	$\pm 550$ m
	Discharge carrying capacity	1.30 cumecs	0.63 cumecs
	Velocity	1.18 m/sec	1.12 m/sec
	Slope	1 in 700	1 in 500
<b>E.</b>	<b>FOREBAY TANK</b>		
	Type	Surface RCC tank	
	Size	24.00 m x 6.20 m x 2.00 m	
	Storage Capacity	288.00 cumecs	
	Peaking storage time	$\pm 180$ sec.	
	Full Supply Level(FSL)	EL $\pm 2059.00$ m	
	MDDL	EL $\pm 2057.00$ m	
	Center line of penstock intake	EL $\pm 2056.00$ m	
<b>F</b>	<b>PENSTOCK</b>		
	Type	Circular, surface steel penstock	
	Number/Size of main penstock	One / 700 mm dia.	
	Plate thickness	Varying between 8.00 mm to 18.00 mm,	
	Length	$\pm 440.00$ m	
	Velocity	4.16 m/sec.	
	Number of branches	Two	
	Size of branch Penstock	500 mm dia. each	
<b>G</b>	<b>POWER HOUSE</b>		
	Type	Surface	
	Size	27.00 m x 11.00 m x 12.00 m	
	Installed capacity	2.00 MW(2units of 1000 KW each)	
	Gross Head	$\pm 157.0$ m	
	Net head	$\pm 150.0$ m	
	C/L of TG sets	EL $\pm 1900$ m	
	Power house crane	25/5 T, EOT	
	<b>Turbine(s)</b>		
	• Type	Horizontal shaft Pelton wheel	
	• Number	Two	
	• Rated capacity	1000 KW each	
	• Turbine Speed	1000 rpm	
	<b>Generator(s)</b>		
	• Type	Horizontal shaft Synchronous	
	• Number	Two	
	• Rated Capacity	1000 KW each	
	• Frequency	50 Hz	
	• Power Factor	0.90 lag	
	• Rated Voltage	3.3 kV $\pm 10$ %	
	• Over loading capacity	20 %	
<b>H</b>	<b>TAIL RACE</b>		
	Type	Rectangular section,	
	Size	1.20 m x 1.20 m	
	Length	$\pm 40.00$ m	
	Bed Slope	1 in 200	

*[Handwritten signature]*

*[Handwritten signature]*  
 Chief Engineer,  
 Directorate of Energy, GoHP,  
 New Shimla-171009(HP).

