

Big Cost, Little Gain

A Preliminary Study of the 66 MW Dhaulasidh Hydro-electric Project in Beas River Basin, Himachal Pradesh



**HIMDHARA,
ENVIRONMENT RESEARCH AND ACTION COLLECTIVE**

SEPTEMBER 2013

This report is an account and analysis of the local and larger policy issues arising out of the 66 MW Dhaulasidh Hydro-electric Project proposed to be constructed on the Beas River in Hamirpur District of Himachal Pradesh

Cover Illustration : Dam site of Proposed Dhaulasidh HEP on Beas river

Glossary:

CEA- Central electricity Authority

DC- deputy Commissioner

DPR- Detail Project Report

EC- Environment Clearances

FC- Forest Clearance

EIA- Environment Impact Assessment

HEP- Hydro electric Project

HP- Himachal Pradesh

IPH- Irrigation and Public Health Department

MoEF- Ministry of Environment and Forest

MW- Mega watt

NoC- No Objection Certificate

R&R- Rehabilitation and Resettlement Plan (R&R)

R-O-R- Run off the River

SIA- Social Impact Assessment

SJVNL- Satluj Jal Vidut Nigam Limited

For more details:

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www.himdhara.org

I. Background

The Beas river originates from the Pir Panjal range near Rohtang Pass in Kullu and meets the Satluj at Harika Pattan south of Amritsar in Punjab. Its total length is 460 km and catchment area 20,303 sq km. The Beas has a total identified hydro power potential of 4604 MW which is 22% of the total hydro power potential of Himachal. Out of total hydro power potential 1634.50 MW (35.50%) has been harnessed.

Table-1: Basinwise Potential in H.P.

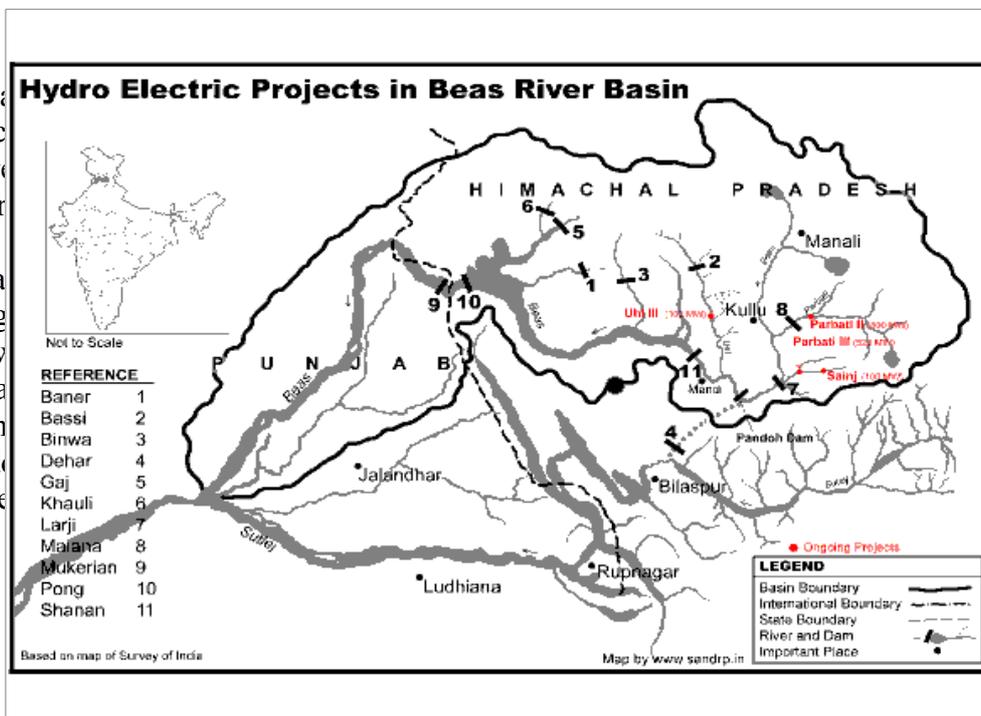
Basin	Hydro Power Potential
Beas Basin	4604.00 MW
Ravi Basin	2359.00 MW
Satluj Basin	9450.25 MW
Yamuna Basin	591.52 MW
Chenab Basin	3032.30 MW
Mini Micro Projects	750 MW
Total	20787.07 MW

(Source: http://www.hpseb.com/hydro_potential.htm)

Table:2- Status of the Hydro Power Projects on Beas river (In MW)

S.No.	Status	MWs
1	Under operation	16345.5
2	Under execution under State/Center/Private	1246
3	DPR Preparation	723
4	Under Investigation	857.5

On the Beas river, 11 hydro-electric projects are planned. These include the Sainj which is a dam in Mandi which diverts the water being discharged like Uhl, Binwa and again rejuvenates the last stretch between Pandoh and Punjab, are the



l, a total of 27 projects are under construction/ Pandoh and Binwa i.e. Pandoh and Binwa. Pandoh dam is a dam in Mandi. House before the dam. d with streams in the river is once again a serious threat to the river. projects, located in a district with a dam project.

http://sandrp.in/basin_maps/Hydropower_Projects_in_Beas_Basin.pdf

About Dhaulasidh HEP

The Dhaulasidh project is an upcoming hydro-electric plant on Beas River, Hamirpur District of Himachal Pradesh to be constructed by Satluj Jal Vidut Nigam Limited (SJVNL). Its capacity is 66 MW and is called a run-of-the-river (ROR) project. However, a dam of 70.75 m height from the river bed is proposed.

The initial cost of the project, as mentioned in the DPR, is Rs 497.67 crore as per prices in the year 2006, which has now been increased to Rs 774 crore. The construction time is expected to be 54 months.

The following are the dates of important events regarding this project:

Scoping Clearance	20.05.2010
Techno-Economic Clearance	25.06.2011
Public Hearings	15.09.2011 – 16.09.2011
Stage 1 Forest Clearance Recommendation	29.11.2011
Environmental Clearance Consideration	10.02.2012
Stage 1 Forest Clearance	06.03.2012
Environmental Clearance Reconsideration and Clearance	20.07.2012

The project has received both the Environment Clearance and the Forest Clearance with other clearances like techno economic clearance and conditional NoC from Irrigation and Public Health department (IPH) and also floated tenders for construction of the project. However, the project proponents have still not prepared the Rehabilitation and Resettlement Plan (R&R) and not announced the land rates at which private land is going to be acquired.

II. KEY IMPACTS OF THE PROJECT AND ISSUES OF CONCERN

1. SOCIO-ECONOMIC ISSUES

Table. 3 :- List of Impacts as per SIA report

S.No.	Issue	Numbers
1	No. of directly project affected villages	44
2	Project affected Hhs (Directly)	713
3	Private land to be acquired for the project	252.2 hectares
4	Hhs rendered landless	5
5	Hhs rendered marginal	559
6	Villages which will completely lose their grazing lands	7
7	Villages which lose grazing land in part	36
8	The household reared livestock	81%
9	Loss of IPH schemes and sewage treatment plant	17
10	Loss of bouries/water sources	38
11	Loss of watermills	11
12	Loss of cremation ground	23
13	Loss of temples and other common place	16

1.1 Land gobbling project of small capacity

The total land requirement for the project is 338 Ha, according to the EIA report. Out of this, 330 Ha will be submerged. However, both the DPR and the EIA mention frequently that the submergence area is 713.21 Ha. The officials at the SJVNL office said that the total area of the land required for the project is 520 Ha, most of which is government land. There is no clarity how much land will actually use for the project.



Illustration 1: Dhaulasidh Temple at the proposed dam site

The break-up of the land requirement as per the DPR is given below:

Forest Land	58.25 Ha
Govt Land	28 Ha
Private Land	252.2 Ha

For a ROR project and that too of only 66 MW capacity, even 330 hectare of land is quiet high, especially if we compare it with other projects. The table given below demonstrates that Dhaulasidh HEP

will require 8 to 250 times more land on a per megawatt basis to generate electricity, out of which 252 hectare is agricultural land which is a very scarce resource in a mountain state like Himachal Pradesh¹.

Table 4: Comparison of Land Required to Generate a MW of Electricity

HEP	Total Land required (Ha)	Capacity (MW)	Area (Ha)/MW
Miyar	69.94	120	00.58
Rampur	80.97	412	00.02
Malana-II	34.9	100	00.35
Lambadug	9.80	25	00.39
Dhulasidh	330	66	5.00

1.2 Loss of agriculture land

Agriculture and animal rearing is the mainstay of the affected areas of Hamirpur and Kangra districts. The important crops of the affected area are wheat and maize, and in around 8 of the affected villages where there are irrigation facilities available, vegetable crops like cabbage, cauliflower, brinjal and radish etc. are cultivated at a commercial scale. Out of the 252.2 ha. of private land that will be acquired, 10.2% of the land, or 25.7 ha., is said to be cultivable (according to the EAC minutes 10.02.2012). However, according to Social Impact Assessment (SIA) report, 48.88 ha of cultivated and 81.88 ha of cultivable land (lands which people used to cultivate before now left fallow) of farmers will be acquired. This comes to a total of 130.76 ha. of agriculture land which is huge, looking at the small fraction of geographical area under agriculture in a mountain state like Himachal Pradesh..

More than 30,000 fruit trees of mango, guava and citrus are standing on the private lands which are going to be submerged. These are just the numbers which the Revenue Department has marked for compensation which does not include all trees in the land to be submerged. In addition to the loss of agriculture land, around 11 houses will be submerged by the reservoir, especially in Pargana village.



Illustration 2: Agriculture fields in Palahi

The markers of the reservoir level in many villages like Pargana are touching the courtyards of the houses which are not being considered as 'under submergence'. Most people are not aware whether the markers indicate full reservoir level or danger level.

¹ Agricultural land in Himachal Pradesh is less than 10% of the total geographical area.

1.3 Loss Common resources

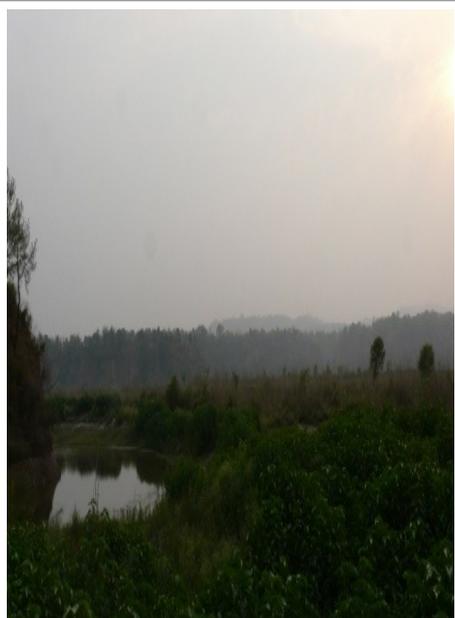


Illustration 3: Common lands in Palahi Village

The real impact in most villages, as far as land to be acquired is concerned, will be on the common lands or riverside lands. In all the villages we visited, livestock rearing was the key occupation and many villages breed the high yielding Murra buffaloes. In Palahi village we were told that almost 70% of the fodder needs are met from farms like wheat and maize straw and rice husk and the rest of the 30% from grazing lands and other sources. There does not seem to be much dependence on the market for fodder or animal feed unlike other parts of Kangra and this will be adversely affected as a result of the dam. Many Schedule Caste families in the area are dependent on selling of grass from these to be submerged lands and none of these families affected by the loss of fodder are included as PAFs (Project Affected Families).

The other impact would be on mule rearers of the area who also open graze their animals along side the river bed, where they also lift gravel and sand for local use/construction. For instance, in Sujjanpur's ward number 2 alone, 10 families are dependent on the river bed for sand mining and grazing their mules – these people are not being considered as PAFs by the project proponents.

1.4 Loss of other Livelihoods

According to the SIA report, around 42.71% of affected households are Scheduled Caste and have an income less than Rs. 5000 in comparison to 13.28% of general caste. It is also important to note that maximum loss in 3 economic activities i.e. agriculture (only under cultivation not barren lands), business (activities depend on river like sand, gravel boulders and fish catching) and local craft (depend on common resources like broom making, basket, leaves plate, mats etc.) are going to be borne by use they are going to be impacted the most without any compensation.



Illustration 4: Mule Grazing in lands falling in submergence area

1.5 Loss of water sources and other infrastructure facilities

This area falls in the drier region of Himachal, and so people are heavily dependent on the river and natural water sources like *bouries* (natural water springs) for drinking and irrigation schemes. The schemes administered by IPH department can be shifted upwards with huge cost but natural springs can't be reclaimed. Moreover, there is no mention of the IPH schemes downstream of the diversion dam that will be affected by more than 80% reduction in the flow of the river.

1.6 Loss of Accessibility to village

Bulli is a village on the Right Bank of the Beas and is positioned in a way that the waters of the Beas will submerge lands of this village from three sides, sparing one side which is the entry into the village

(which connects it to the left bank). This has received no attention in the EIA and SIA reports and there are no apparent E mitigation measures around this in the EMP (Environment Management Plan) report.

1.7 Rehabilitation Policy Absent and Silence on Compensation

Considering the extent of land being acquired and the detailed Social Impact Assessment carried out for the project, it would seem that a sound rehabilitation plan would have been evolved by the project authorities with transparency about the land rates as well as other compensation being offered. However, according to information provided under RTI, 2005 (ref: SJVNL/DSHEP/P&A/2013-682 dated 9-5-2013) the fact is that to this day there has been no official announcement of land rates and the project rehabilitation plan is yet to be announced.

After interacting with the local people it seemed that there was not much overt opposition to the project as a community and this was in most cases directly linked to the fact that the land losers were not really aware of the details of the project. In fact, most villagers said that were expecting very high rates of compensation. At some places this was expected to be at market price, and at others even three times the market price. A rough average of the compensation demanded is Rs 7.5 lakh per kanal (1 kanal equals to 384 square meters or 1/12th of an acre). In Balehu, they demand Rs 3 lakh per kanal because most of the land is uncultivated. In Laungni, there was a demand for monthly rent to the landowner for as long as the land remains submerged. Few villagers in Pargana demanded free electricity for the area.

The compensation plan mentioned in the DPR, where the rate was Rs 8000 per kanal, is almost 50-100 times less than what the affected villagers are expecting. SJVNL has cleverly not announced the land rates and neither a rehabilitation plan for the area has been declared while the Land Acquisition proceedings are in an advanced stage.

It also needs to be seen how the government plans to handle the matter, considering that the rates would be decided as per the 'Right to Fair Compensation and Transparency in Land Acquisition and Rehabilitation & Resettlement Act, 2013' – which would increase the project cost considerably. And the project is likely to face opposition if the expected rates are not given.

2. ENVIRONMENTAL ISSUES:

2.1 No cumulative impact assessment of the Beas river:

The Beas river is already overloaded with number of R-O-R and dam projects (refer map on page 3 of the report) without any assessment to understand the cumulative impacts of these on river health and ecology at the basin level. Again the three new proposed projects (Thana-Palaun, Triveni-Mahadev and Dhaulasidh) have been announced arbitrarily without any assessment. This stretch of the river flows through a water stressed area like Changar region and people are dependent on the Beas river for drinking and irrigation (**Annexure-1**). This is a region very prone to landslides and such a huge artificial pondage will have adverse impacts on agriculture and micro-climaitc conditions. This will also adversely impact aquatic ecology, surrounding vegetation and livelihoods of people.

2.2 Impact on Fish fauna

According to the EIA report, 20 fish species are found in the river flowing through the project area and of these, 2 species come under endangered and 3 species under vulnerable category. The major adverse impact of Dhaulasidh project will be on the population of those fishes which are migratory in nature like *Tor putitora* (Mahaseer) (endangered) and *Schizothorax richardsonii* (Snow trout). *On account of construction of dam at Pandoh, the population of snow trout in the river Beas between Mandi and Nadaun towns reduced from 10.2–13.5% prior to construction of project to 0.5 – 1% after project.* The

EIA claim that these fish will get acclimatized to the changed habitat without any substantive studies, seems to be far-fetched. Moreover, once the whole river will be dammed with the three new dams proposed between Pandoh and Pong, it would be too late to undertake mitigative measures even if detailed studies reveal serious impact due to their construction on the population these migratory fish.

2.3 Reservoir Impacts:

With the creation of the reservoir, there will be increased fog, frost and humidity in the area, leading to increased animal and plant diseases and mortality. There is no mention of these effects on agricultural productivity or health in the area. The EAC minutes note that no residential area is located within 1 km from the reservoir periphery. Therefore, increased incidences of malaria are not anticipated by them. However, the EIA mentions the increased risk of water-borne diseases, and the water level will rise up to the houses in certain villages.

2.4 Geological Fragility:

This region is also classified as Seismic Zone V, which makes construction of the dam a highly dangerous activity, especially for the downstream areas. In 1905, there was a major earthquake that occurred in the Kangra valley which measured 7.8 on the surface wave magnitude scale and killed more than 20,000 people. Recently on July 13th, 2013 Kangra was rocked by an earthquake of 4.5 magnitudes and on 2nd August, 2013 a moderate intensity earthquake measuring 5.4 on the Richter scale hit parts of Jammu and Kashmir, Punjab, Haryana and Himachal Pradesh.

3. COST-BENEFIT ISSUES

As per the DPR, the initial estimated cost of the project was Rs. 497.5 crores. It is this figure which was used to measure financial viability while assessing the feasibility of the project and granting of the techno-economic clearance by the Central Electricity Authority (CEA) (**Annexure-2**). At 2012 price level the cost of the project has increased by 55% and the estimated cost of the project at present is Rs. 774.1 crores. The estimated cost of generating per mega watt of electricity is coming to around Rs. 11.72 crores which is on higher side, if compared to other projects. For instance, Seli HEP proposed in the remote Lahaul and Spiti District has a per MW cost of around 9 crores. With “The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013” the cost of acquiring private land will get increased by four times and will further escalate per megawatt generation cost.

As mentioned before, this project will require 5 hectares of private land to generate 1 MW of electricity, which is quiet high if we compare it with other existing hydro projects like the Nathpa Jhakri project where it is 0.37 hectares. Looking at the submergence area of 330 hectares, the project will have diurnal peaking power for 3 hours only. Considering that the rate at which the state is able to sell each unit of electricity generated are drastically falling and have reached Rs.1.75 - 2/unit in 2013, the benefit accruing to the government is likely to be incommensurate compared to the cost. In the DPR, the revenue from the electricity generated has been calculated using the sale price of per unit varying from Rs. 2.5 to 4.5 and that too when the project cost was only around 500 crores. At current project cost, which is only likely to increase, the project cost-benefit ratio will be highly skewed.

From the point of view of the socio-economic and environmental impacts, the actual costs are likely to be much higher, further escalating the cost-benefit ratio. For instance, the extent of adverse impact on livelihood of local community of more than 700 families is quite huge in comparison to the 40 jobs created during the operational phase of the project.

4. PUBLIC CONSULTATIONS FOR NAMESAKE

During group discussions in the area we found that most of the locals had no idea that two Public Hearings had taken place in the area. Some knew that a “briefing” had been held in Sujampur, which representatives from the Panchayats had attended. A few mentioned a “camp”. There is a norm that project proponents announce the R&R package before the affected communities, through which communities come to know about the land rates and other benefits which helps them in decision making. In the case of the Dhaulasidh project, while notices under section 9 of the Land Acquisition Act, 1894 have been issued, the District Commissioners of Kangra and Hamirpur have still not fixed the land compensation rates, and the villagers had no clue as to how much compensation they would receive.

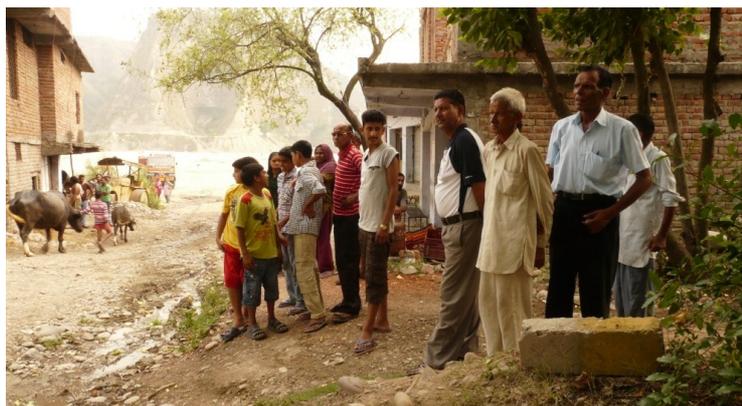


Illustration 5: Local people at Palahi showing the submergence marker

All Panchayats have issued NoCs for government land as well as the project in general, without any consultation with the people who will be affected (Annexure-3). Every Panchayat has issued NoCs with assurances that the DC will set the compensation rates apart from the fact that the affected families will get jobs with the project. Some Panchayats have included certain conditions along with the NoC, while others have given a blank check. According to Jai Chand, SJVNL had rejected all conditional

NoCs initially, such as Tipri's, but later accepted them. In the villages whose Forest land is going to be diverted to the project, NoCs under the provisions of the FRA advisory of the Ministry of Environment and Forests have been taken from the Gram Sabhas – however, few people in the villages knew of this. It is the Pradhans who issued this NoC and that too without the knowledge of the Forest Rights Act 2006 and its provisions.

A Gist of the key issues:

1. The 66 MW Dhaulasidh Project and its impacts need to be seen cumulatively with the two other projects that are planned in the last free flowing stretch of the Beas river between Pandoh and Pong dams
2. One of the major environmental impacts which has been overlooked completely is the wiping out of the migratory fish species like snow trout and Mahaseer in affected stretch of the river basin
3. The Project will submerge a huge land mass in comparison to the electricity it will generate. The project is using more than 5 hectare of land to generate 1 megawatt of electricity which is quiet high
4. The losses due to submergence of agricultural land, common land and other standing structures is quiet huge for a project with a capacity of 66 MW
5. The financial viability of the project is in doubt. It clearly show that the project is a waste of public money, with huge socio-economic and environment costs with little benefits in terms of revenue and livelihoods generation
6. In a context where selling prices of electricity to other state electricity boards are low, HP government is facing big problem in selling its increasing surplus of electricity to other states , to go such a financially un-viable projects is unjustifiable

Himachal Pradesh Govt.
IPH Department

NO.EE/IPHD/WA-II/ 10/2010-
To,

3621- 22

Dated 7/6/10

Sh. S.K. Mahjan,
Head of Project,
Dhaura – Sidh Hydro- Electric Project,
House No.113 Ward No. 1 Krishna Nagar,
Hamirpur (HP)- 177001

Subject:- No. Object certificate for Dhaura- Sidh Hydro- Electric Project.

Reference :- Your office letter No. SJVN.DSHEP.HOP (Sectt.) Env./ 2009-426-27 dated 10-2-2010.

In this connection, it is intimated that this office has No objection if the Dhaura Sidh Hydro- Electric Project is executed in District Hamirpur (HP) on River Beas. This No objection is subject to the following conditions:-

A) In the catchments of the project the following schemes already commissioned by the Irrigation & Public Health Department require displacement due to submergence.

(i) Lift Water Supply Scheme Seor Balla

Approximety Cost of its displacement is Rs. 55.00 Lakh

(ii) Lift Irrigation Schemes Dadu Bhulander

Approximately Cost of its displacement is Rs. 35.00 Lakh

(iii) Lift Water Supply Scheme Dadu Bhulander

Approximately Cost of its displacemaent is Rs. 25.00 Lakh

Total:- 115.00 Lakh

It is therefore, requested that a sum of Rupees 115.00 Lakh is required to be deposited with this office on account of displacement of structure as well as pumping machinery etc.

Executive Engineer,
IPH Division, Thural

Copy to the Superintending Engineer, IPH Circle
Dharamshala w.r.t. his office letter No. 2543 dated 25-5-10 for information please.

copy to IPH Sub Division Thural

Executive Engineer,
IPH Division, Thural

276

Himachal Pradesh
Irrigation Cum P.H. Department

No. EE/IPHD/THL/EA-I/RTI/2013/- 10147-48

Dated:- 2-9-13

To

Sh. Sumit Mahar,
VPO Kandbari,
Tehsil Palampur Distt. Kangra HP

Subject: -

Application of Sh. Sumit Mehar seeking information under RTI Act 2005.

The point wise information as desired by yourself is as under:-

Point No.1

Sr. No	Name of Scheme	Location	List/ Name of Village	Area irrigated	Cost of construction (mla.)
1	LIS Bag Alampur	(River Beas) 500 mtrs up stream to Sujampur Bridge	Alampur, Bag	115 Hect.	202.73
2	LWSS Seor Ballah	(River Beas) Village Chowki	Tipri, Jarundi, Dadkashor, Duhak, Maheshi, Bully, Bhatwan, Barsola, Chowki, Tihri, Proda, Soli, Jola, Keora	Water Supply Scheme	49.47
3	LWSS Doli Bhullander	(River Beas) Village Doli	Kuhan upper, Kuhan Lower, Kuhan Khas, Upper Doli, Lower Doli, Bhullander, Bhanena	Water Supply Scheme	14.77
4	LIS Dadu Bhullander	(River Beas) Village Dadu	Upper Dadu, Lower Dadu, Bhullander, Bhanena	72 Hect.	91.64
5	LIS Doli Kuhan Dol	(River Beas) Near Doli Village	Upper Doli, Lower Doli, Kuhan upper, Kuhan Lower, Doli Khas	97 Hect.	177.59
6	LIS Chowki Keor	(River Beas) Near Chowki Village	Chowki, Keor	76 Hect.	103.27
7	LIS Bully	(River Beas) Near Bully Village	Bully	22 Hect.	32.34

Point No. 2 :- 1 No NOC issued to Dhaula Sidh Hydro Electric Project vide this office letter No. 3621-22 dated 7-6-2010 (Photo Copy attached)

DA: - As above

Shiv
Public Information Officer
Cum-Executive Engineer,
&PH Division, Thural.

Copy forwarded to the Superintending Engineer, IPI Circle Dharamshala w.r.t. his office letter No. SE/IPHCD/WS-II/RTI/Sh. Sumit Mehar/2013-22228-32 dated 17-8-2013, for information please.

Public Information Officer
Cum-Executive Engineer.

DIRECTORATE OF ENERGY
GOVERNMENT OF HIMACHAL PRADESH

OFFICE ORDER

Directorate of Energy(DOE), Government of Himachal Pradesh is pleased to accord Techno Economic Clearance(TEC) to Dhautasidh HEP(66.00 MW) on Beas river in Beas basin, Distt Hamirpur, Himachal Pradesh, allotted to "M/S SJVN Ltd., Himtd Building, New Shimla-171009 (HP)" at an estimated cost of Rs. 497.67 crore (Rupees four hundred ninety seven crore sixty seven lac) only including Interest During Construction(IDC), Financial Charges(FC) and LADC @ 1.5% of total project cost with the following stipulations:

1. i) The completion cost of the scheme 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 DOE, GoHP 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, summary of the Financial Package as considered by DOE, GoHP is at Annex-II and the Salient Features of the scheme are at Annex-III.
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 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) Any increase in the cost estimate due to design modifications and geological surprises would be absorbed by the developer i.e. SJVN Ltd.
 - vii) No additional costs shall be allowed due to Resettlement & Rehabilitation (R & R) Plan.
 - viii) Normal operation life of the hydro power plant shall be as per provisions of CWC/CBA guidelines or CERC/HPERC regulations.
 - ix) The Techno Economic Clearance(TEC) is subject to clearance of the project as well as transmission line by MoEF, GoI from environmental and forests angle. The statutory and administrative clearances as per Annex- IV shall be obtained before execution/implementation of the project.

[Handwritten Signature]

1. 0.2.04. 2014

- 2
- x) The site specific seismic studies shall be expedited and their report shall be put up to the State/National Committee on Seismic Design Parameters for recommendations on seismic design parameters for detailed design of different components of the project.
 - xi) M/S SJVNL being a Central Public Sector Organization, the quantities involved in Civil and Engineering structures have not been examined in detail by DOE. Hence the correctness of quantities of civil works shall be the responsibility of M/S SJVNL.
 - xii) Fly ash and fly ash based products shall be used in the construction of various works, infrastructure facilities etc. in accordance with MoEF notification dated 14.09.1999 and its amendment dated 27.08.2003 and 03.11.2009 and further revision/ amendment, if any. The construction material surveys shall include the required investigations for use of Fly Ash and Fly Ash based products in various works, infrastructure facilities etc. and their feasibility shall be ascertained by M/S SJVNL.
 - xiii) For evacuation of power the project shall be interfaced with 132 kV D/C Dehar-Hamirpur existing line through LILO at Dhaulasidh HEP. LILO point shall be located at a place near Rungus.
 - xiv) The interconnection point with the state grid and the interconnection facilities at the interconnection point shall be provided, operated and maintained at the cost of the Developer.
 - xv) 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) Electricity Act, 2003.
 - xxiii) 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 the Pollution Control Board for the same shall be installed by the Developer during execution of the project.
 - xiv) LADC/LADF amount and activities shall be implemented as per Power Policy of the HP Govt., 2006 and subsequent amendment thereof.
 - xvi) The additional 1% (one percent) free power from 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.
 - xvii) The balance Geological explorations as per CEA/CWC guidelines be carried out before start of the execution of the project. Suggestions of Geologist as conveyed vide letter No. 6225 dated 30.03.2011 shall be taken care of by M/S SJVNL.
 - xviii) M/S SJVNL shall incorporate the suggestions/observations of DOE, GoHP on various chapters of the DPR viz. Hydrology, Power studies, financial analysis etc. and design aspects of project components during detailed design stage.
 - xix) The observations of DOE, GoHP and replies thereof shall form an integral part of the DPR. M/S SJVNL shall submit the updated DPR alongwith soft copy incorporating all modifications agreed during appraisal process to the DOE, GoHP, appropriate Electricity Regulatory Commission and State Transmission Utility.
 - xx) The TEC is based on the reports and data furnished by the developer in the DPR and it is presumed that the information furnished is correct and has been collected reliably after carrying out detailed field investigations and surveys under the supervision of the competent personnel. The scrutiny of DPR does not cover the examination of 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.
- 3 The project shall be completed within 54 months from the date of start of the construction works.
 - 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.
- 1 De

- 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 time period stipulated in the IA/ Power Policy of HP Govt., 2006 and subsequent amendments thereof.
 - 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 Monthly Progress Report of the project shall be submitted to Monitoring Cell of HP Govt./DOE. Three (3) copies of the semi-annual physical progress report of the scheme and expenditure actually incurred, duly certified by statutory auditors shall be submitted to the HP Govt./DOE till the Commercial Operation of the plant.
- 9 The DOE, GoHP reserve the right to revoke the concurrence if the conditions stipulated above are not complied with to the satisfaction of the HP Govt.

BY ORDER OF THE GOHP

Director,
Directorate of Energy, GoHP,
Khalini, Shimla-171002

NO:DOE/CE(Energy)/TEC-Dhulasidh/2011-1917-24

Dt: 25/6/11

Copy for information and necessary action to the:

- 1) Principal Secretary (MPP & Power) to HP Govt., Shimla-171002.
- 2) Secretary, Central Electricity Authority, Gol, Sewa Bhawan, R.K. Puram, New Delhi-110066.
- 3) Chairman cum Managing Director, HPSEBL, Vidyut Bhawan, Shimla-171004.
- 4) Chairman cum Managing Director, SJVNL, Himfed Building, New Shimla-171009.
- 5) Director, Environmental & Scientific Technologies, Narayan Villa, Near Wood Villa Palace, Shimla-171002.
- 6) General Manager, HPPTCL, Borowalia House, Khalini, Shimla-171002.
- 7) Chief Engineer (SP), HPSEB Ltd., Vidyut Bhawan, Shimla-171004.
- 8) Chief Engineer (Comm), HPSEB Ltd., Vidyut Bhawan, Shimla-171004.

Director,
Directorate of Energy, GoHP,
Khalini, Shimla-171002

CHECK LIST No - 13



कार्यालय ग्राम पंचायत टिप्परी

विकास खण्ड देहरा जिला कांगड़ा (हिप्र)

SD

क्रमांक.....

अज्ञापन पत्र

दिनांक 12-4-2010

प्रमाणित किया जाता है कि गांव पंचायत टिप्परी तहसील कांगड़ा जिला कांगड़ा S.J.V.N को श्रीलाल सिंह जल विद्युत परियोजना के निर्माण का स्वागत करती है।

ग्राम पंचायत टिप्परी का श्रीलाल सिंह परियोजना द्वारा किसी भी प्रकार की भूमि का अधिग्रहण करने पर किसी भी प्रकार की आपत्ति नहीं है।

ज्ञातः पंचायत S.J.V.N को श्रीलाल सिंह परियोजना के लिए अज्ञापन पत्र जारी करती है।



हस्ताक्षर.....
दिनांक.....

अनापीत - प्रकारा पत्र

पत्राचार किया जाता है कि

SJVNL का पत्र संख्या S/PDSH
EP/SM/Const/2010-11 के मुताबिक
यह जो ब्यास नदी पर Project
जग रहा है इस के जग के लिए
पत्राचार की तरफ से कोड में
आपने बड़ी आपने यह खुशी का ब्यक्त
है। अगर हमें Project में पत्राचार से
की विधि/सरकारी मुभी आपने भी
में पत्राचार की जग। इस में सहयोग
करने व अपना अनापीत प्रकारा पत्रा
है रही है बसों मुकसल की सहयोग
करना चाहिए होगा।

(Handwritten signature)
12/11/10

Addl. S.E. (Civil)
D.S.H.E.P. SJVNL
Hamirpur (H.P.)-177001