Himachal Pradesh Power Corporation Limited
(A State Government Undertaking)
Office of General Manager
Triveni Mahadev (78 MW) & Thana Plaun HEP (191 MW),
Kotli, Distt. Mandi-175003
Tel. No. 01905-281081, Email: - gmtpbnhppcl@gmail.com

Full Title of the Project: Diversion of 406.79 ha. of Forest land in favour of Himachal Pradesh Power Corporation, Ltd., Thana Plaun & Triveni Mahadev HEPs, HPPCL, Tehsil Kotli, Distt. Mandi, HP for the construction of Thana Plaun (191MW) HEP within the jurisdiction of Jogindernagar and Mandi Forest Divisions, Distt. Mandi. H.P.

Proposal No. : FP/HP/HYD/8255 /2014

Date of Proposal: November 29th, 2014

CHECK LIST SERIAL NUMBER: - 3

DETAILED NOTE ON THE PROJECT

Thana Plaun Hydro-electric Project (191MW) is conceived as storage cum run-of–the-river scheme. The project envisages the construction of concrete gravity dam across river Beas 85m. high above river bed level in the Mandi District of Himachal Pradesh, with a live storage capacity of 44.93 MCM to enhance the peaking benefits during the lean months.

The proposed Thana Plaun Hydro-electric Project located in Mandi District of Himachal Pradesh intercepts an area of 7378 sq km and lies between Longitude $76^0$15'E to $77^0$45'E and Latitude $31^0$45'N to $32^0$30'N. The entire catchment comprises mountainous terrain with steep hill slopes and is very thinly populated. The daily observed discharge data at the Beas River downstream of Pandoh Dam are available for January ’1980 to December 2011. The dam site is located at Longitude: $76^0$50’20.53” (E) and Latitude: $31^0$49’28.22” (N). The proposed layout has a dam toe type of arrangement. Therefore the complete project including the dam site and the underground powerhouse location are presently accessible from the Jogindernagar-Neri-Dharampur highway through existingun - metalled approach roads constructed by PWD.

The project site is approachable from Joginder Nagar in Distt Mandi and the distance of Dam site and Power house site is around 33 km and 35 km respectively and from Sujanpur-Tihra via Sujanpur- Sandhol - Dharampur Jogindernagar road Power House is 66 km and dam site is at 111 km via Mandi- Jogindernagar road.

Land required for this proposed Project falls in **22 nos. Panchayat’s comprising 53 nos. Muhals with approximately 709 nos. of Main Project Affected Families** and the same shall be benefited from the project by generation of employment and other sources.

Total land requirement of the proposed project is tabulated below:

Type of Land	**Area in ha.**
Forest Land	406.79
Private Land	38.37
Total	**445.16 ha**

Total length of reservoir becomes 16.5 km. along-with river Beas, 4.5 km along-with Rana Khad and 1.5 km along-with Arnodi khad from Dam site. The area under submergence is 341.38 ha. There are 5 no. of Quarry sites having area 45.94 ha and 2 no. of Dumping sites having area 10.35 ha.

The project layout comprises of a very short water conductor system on the right bank leading to an underground power house cavity located just downstream of the toe of the dam. Thana Plaun

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Hydro-electric Project is conceived as storage cum run-of–the-river scheme on the Beas River with a live storage capacity of 44.93 MCM to enhance the peaking benefits during the lean months. The live storage capacity is proposed to be created up by constructing a 106.70 m high (from deepest foundation level) and 221.250m long Concrete Gravity Dam near village Thana. The head works are located approximately 40 km downstream of Pandoh Dam in Mandi district of Himachal Pradesh State, about 1 km downstream of Kunkatar bridge. The design discharge is diverted through power intakes to 2 nos. of headrace tunnels leading to an underground power house through steel lined pressure shafts which are bifurcated near the power house. The power house cavity comprises of 3 nos. of main units of 50.33 MW each and 2 nos. of environmental units of 20 MW each with a total installed capacity of 191MW. The water coming out of the turbines is discharged back into the Beas River through 2 nos. of short tail race tunnels. The normal tail water level at the power house location is EL 634.00m with a gross head of 75.67m. The annual energy generation will be 668.07 GWh in 90% dependable year at 95% machine availability.

Utilization of the water available for power generation during a 90% and 50% dependable years are divided into (i) mandatory environmental flows to be released from the environmental units accommodated in the main power house itself and (ii) the balance to be utilized at the main power house. The diverted flows for power generation would be the assessed water available minus the environmental flows to be released from the Environmental units. The environmental releases are proposed to be utilized for power generation through 2 nos. of environmental units located in the Main underground Power house.

Salient features of the project are as follows:

General Manager
TM & TP HEPs HPPCL
Kotli, Distt. Mandi (H.P.)

Date: 28.11.2019
Place: Kotli