DIVERSION OF 0.6030HA.OF FORESTLAND FOR CONSTRUCTION OF BANUALA BAROOND-II SMALL HYDRO PROJECT 0.80 MW IN TEHSIL CHURAH DISTRICT CHAMBA (H.P)
FILE NO .. :**FP/HP/HYD/146882/2021**
DATE OF PROOSAL :3-10-2021

CHECK LIST -10

CERTIFICATE FOR MINIMUM USE OF FOREST LAND

This is to certify that the forest area involved in the proposal is unavoidable and barest minimum forest area i.e. 0.6030 hectare is proposed for diversion for the construction of Banuala Baroond II SHEP (0.80 MW)at Gram panchayat Charda in Distt. Chamba HP . Three alternatives have been considered for this project and adopted alternative I uses minimum forest land and details are as under;

Various Alternatives for the project

I) **Alternative I**

This is mainly a right bank alternative. The alternative involves construction of diversion structure at EL. 1700m on Chhurkhu nalla. The water conductor shall consist of channel 10 m lenght & 355 m long surface Penstock pipe on the right bank of the Churkhu nalla. Also the penstock alignment is on surface as there is steep slope & rocky terrain except some bends to the Penstock. The gross head available for the power generation shall be around 85m. This alternative envolvs the forest land of 0.6030 hectares and 18 numbers of trees cutting . The approved estimated cost of the alternative is 789 lacs.

II) **Alternative II**

This alternative involves construction of diversion structure on Chhurkhu nala at El.1700m on its left bank . The water conductor system of 50 m length from weir diversion upto forebay. The Penstock leads from the forebay to the Power house through loose rock and ocassionaly slidy portion and Also the some portion of the penstock passing through strethed area which leads to more laying length so keeping in view this there may be the loss of head which leads to the slightly less annual generation. In this Alternative 0.6087 hetares of land is utilising and 25 numbers of trees coming due to which the estimated cost of the scheme goes upto near about 806 lacs.

III) **Alternative III**

This is left bank alternative involves construction of diversion structure at EL. 1700m on the Churkhu nalla . The water of Chhurkhu nala Shall diverted through a 55 m long water conductor system to the forebay. The proposed Power house and penstock consist of loose strata which is vulnerable to landslides and most of the alignment of the components are coming in cultivated land and habitant area inspite of that forest land is more than earlier mentioned alternatives because of length of the transmission line and road increasing . In this alternative near about 0.7074 hectares of land is coming and 21 numbers of trees envolving. The estimated cost of this alternate stands about 812 Lacs .

In view of the advantages offered by the Alternative I, It has been taken up for preparing Detailed Project Report

A summarised view presented in table below:-

Sr. No.	Description	Alt-I	Alt -II	Alt-III
1	Forest land envolved in Project components	0.6030	0.6087	0.7074
2	Trees Coming in alignment of Project components	18	25	21
3	Estimated cost (in Lacs)	789	806	812

This shows that alternative I shall be use minimum forest cover, less cutting of trees and economically viavility

All alternatives are shown in drawing and enclosed

Place---- Chamba

Date-- 6/5/2022

For New Hydel Power

Authorised Signatory

Countersigned by :

Divisional Forest officer
Chamba Forest Division
Chamba