JOINT INSPECTION REPORT

LAND REQUIRED FOR PROPOSED DEVI-KOTHI HEP (16.00) M.W. HPSEBL AT BALSIO NALLAH IN TEHSIL CHURAH DISTRICT CHAMBA (H.P.)

Joint inspection of site for construction of proposed **Devi-Kothi HEP (16 M.W.)** Conducted on **07/2/2018** by the committee consisting of undermentioned officers of various departments . This is being constructed by HPSEBLtd. (State Government Undertaking). The project envisages generation of **16.00 MW** of electricity by utilizing the water discharge of **Balsio Nallah** in Tehsil:- Churah Distt:- Chamba (H.P.) The forest land is required for construction of **Devi Kothi HEP (16.00) MW** which comes in Majhoga , Galua , Sanol and Lowertein muhals in Tehsil:- Churah Distt:- Chamba (H.P.) . The water discharge from intake cum Diversion structure on Balsio Nallah at **EL ±1815.40** at about **50m d/s** the confluence of Chhawed, Chenni Nallah, an intake works , feeder/connecting channels (Rectangular , Open Channel) **4.40m** wide and **21.00m** long to and from **vortex type** Desilting Tank of dia **22.00m** and having orifice dia of **1.00m** , Head Race Tunnel **3x3 m** & **2740m** Long , a forebay **(65x25)** and having storage capacity of **± 3450 cum** at **EL ± 1810.05.** The water discharge is conveyed through Head Race Tunnel is **11.50 cumecs** . Forebay will be connected with surface circular steel penstock of main **dia 1.70m** and **280m** long and trifurcating into branches (3 no.) **1.00 m** dia and **20m** long (each) near surface power house **46x15x15.80 m** to feed three generating units on the right bank near village **Sanol** to generate **16.00 MW (3 x 5.33 MW)** power . The discharge will carried through open , rectangular type Tail Race Tunnel of size **3.00 x 3.20 m** of length **75.00m** at **± EL 1645.00** outlet will be located at Balsio Nallah. For the construction of its civil structures and other Components and Erection of Plant and Machinery , Operation and Maintenance of Power House the approach road **± 10 km** long will be required to be constructed for speed up the various work activities. The total forest land **9.739 hectare** is excluding underground tunnel involved for diversion under the provision of Forest Conservation Act, 1980 and Private Land **.4469 hectare** excluding underground tunnel is involved for construction of **Devi-Kothi HEP (16.00 MW)**

During the course of Joint inspection , the three alternatives proposals as presented on spot by the representatives of the HPSEBLtd.

Alternative No.-I

1. The proposal comprises of a trench weir **± 24m** long at left bank of Balsio Nallah at about **250 m** downstream of its confluence with chenni and chhawed nallah, a surface desilting tank , water conductor system comprising feeder / power channel **1095 m long** . This alignment is not viable. Since length of feeder channel is more than Alternatives II & III
2. The alignment falls of left bank of Balsio Nallah so it required more road length as compare to other alternatives II & III which is about **± 15 Km**
3. The left bank of Balsio Nallah is covered with thick rain fed forest and is not connected with road . So approach roads to all the components of the project will have to be constructed afresh through Dense Forest . For this , lot of green felling will involved creating problem of its clearance from the competent authorities on environmental grounds .
4. Though rocks are competent on left bank but it was found to be uneconomical considering the thick rain forest and inaccessibility of project components .
5. The proposal comprises the underground power house which is uneconomical than others alternatives II & III .

Alternative No.-II

1. The proposal comprises of a trench weir at **EL ± 1799 m** on the right bank of Balsio Nallah at about **250 m** downstream of its confluence with chenni and chhawed nallah . This proposal is rejected because the diversion structure can be shifted in very deep nallah .
2. The length of head race tunnel **± 2330 m** it is short than other alternatives I & III but the HRT below the village . So this is not viable .
3. The forest land involvement in this alternative is in the tune of **10.78414** hectare having **578** number of trees are falling in this alignment . This is not viable which is also more than others alternatives I & III.
4. The proposal comprises the capacity to generate **14MW** with net head of **± 143.5 m** . This is not viable by economical point of view .
5. A weak geology is found in underground head race tunnel . So this not viable for the construction of project.

Alternative No.-III

1. The alignment falls on the right bank by diverting the water from Balsio nallah at about 50 m d/s of chhawed and chenni nallah which is carried through feeder channel to vortex type desilting tank to head race tunnel to proposed power house near village :- **Sanol**
2. For the construction of its civil structures and other Components and Erection of Plant and Machinery , Operation and Maintenance of Power House the approach road **± 10 km** long will be required to be constructed for speed up the various work activities .
3. The forest land involvement in this alternative is **9.739 hectare** and having **405** number of trees are falling in this alignment , which is less as compare to other alternatives I & II .
4. The design head is increased by **± 20 m** which increase the capacity of project from **14 MW** to **16 MW** . So this is viable by economical point of view which is more than as compare to alternatives I & II .
5. The length of underground HRT is increased to **2740m** but it does not falls below the village . So this is viable for the construction of project **Devi-Kothi (16.00 MW)**

There are four dumping site which are used to dump the muck generate in the construction of the **Devi-Kothi HEP (16.00MW)** . Dumping areas have been identified at the outlet of the tunnel , adit site and intake area. Adequate provision of wire crates have been made for the stability of dump areas . After the completion of excavation , the dumping areas shall be leveled and plantation / land scaping will be carried out .

The above joint inspection committee examined the three alternatives marked in toposheet of Survey Of India , scale **1:50000 (as per Annexure – A)** for which forest land required for the construction of Projects components , Job facilities , dumping sites , Roads etc.

The following points were discussed by committee on the Alternative – III and it was observed that :-

1. Minimum forest land is proposed to be used for **Devi-Kothi (16 MW)** HEP Project Construction .
2. There will be no danger to rare and endangered species of Flaura and Fauna.
3. There are no archeological monuments or defense establishment's site.
4. There will not be any soil erosion .
5. No PWD roads & IPH scheme is involved .

The committee satisfied with the **Alternative – III** proposal as presented by Himachal Pradesh State Electricity Board Ltd. In view of minimum forest land use and trees felling in respected muhals and khasara numbers .

The Joint inspection committee after examining all three alternatives , therefore recommends **Alternative –III** for approval as per component – wise detail of total land given above and at the same time directs the HPSEBL not to use the Forest land before prior approval of central Govt. under Forest (Conservation) Act,1980.

DA: As above .

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