

Item No. 01

(Court No. 1)

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

Appeal No. 21/2021

Dr. Bharat Jhunjhunwala & Anr.

Appellant(s)

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 08.10.2021

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE BRIJESH SETHI, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Appellant: Mr. Ankur Sood, Advocate

**ORDER**

1. This Appeal has been preferred against Environment Clearance (EC) dated 26.08.2021 granted by MoEF&CC to the Vishnugad-Pipalkoti Hydro-Electric Project of 444 MW in an area of 141.568 ha by M/s THDC India Limited located at Village Haat, Tehsil Joshimath, District Chamoli, Uttarakhand.

2. The appellant has stated that Initially EC for the project was granted on 22.08.2007 for ten years, which was extended for three years and has been now extended upto 21.08.2021. However, the project has not been operationalized and is still under construction. The project is funded by the World Bank. Out of total cost of about Rs. 3800 Crores, more than 50% of the cost has already been incurred.

3. According to the appellant, Cost Benefit Analysis (CBA) is in favour of abandoning the project. Dispensing with of public hearing is not called for nor valid as the project is not completed to the extent of 50 %, as required for such exemption. EAC has not undertaken proper evaluation of the mitigation measures. It has gone by rapid EIA, ignoring the deficiencies, particularly impacts of soil erosion, blasting, decline in water quality, loss of aesthetic values and loss of aquatic biodiversity. These impacts have not been duly evaluated nor included in the CBA. The scope of the project has changed as noted in the EAC Minutes, in comparison to the 2006 DPR, as per information shown by the following table:-

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<b>Item</b>	<b>2006 DPR (Annexure A-13)</b>	<b>2021 EAC Minutes (Annexure A-12)</b>	<b>Change</b>
<b>DIVERSION TUNNEL</b>			
<i>Length</i>	490	559 m (494 m tunnel and 65 m cut & cover)	+69 m
<i>Diameter</i>	10	10.5 m, Circular	+0.5m
<i>Gates</i>	10m*10m	4 m * 10.5m, vertical lift fixed wheel	+58 sqm
<i>Invert level at entry</i>	1228	1224m	-4m
<i>Height</i>	15 m	24 m	+9 m
<i>Length</i>	46 m	40 m	-6 m
<i>Height</i>	6 m	7.5 m	+1.5 m
<i>Top EL</i>	1228	EL 1222.5 m	-5.5
<b>DIVERSION DAM</b>			

Length	89.3	98.85 m (NOF 31.85 m, OF 67 m)	+9.55 m
<b>SPILLING ARRANGEMENT</b>			
A. Sluices:			
Nos.	4	5	+1
Design Flood	8004	10840 m <sup>3</sup> /sec	+2836 m
Size of sluice	6.6*15	7.8m (W) * 16 m (H)	+25.8
<b>B. Diversion Cum Spillway Tunnel</b>	10	Diameter 10.5 (Φ), Circular	+0.5 m
Length	490	100 m	-390 m
Design Discharge	1074	1578 m <sup>3</sup> /sec	+504
Gate	2+1, 4.1 m * 10 m	2+1 no., 4 m* 10.5 (Vertical lift fixed wheel gate)	+ 1 sqm (4.1x10>4x10.5)
<b>DESILTING CHAMBER</b>			
Size	350*16m*20.6 m	390m (L) * 16 m (W) * 21.25 m (H)	+ 17240
Gates	2.5*2.85	3 Nos. 1.8 m*2.12 m (Vertical lift slide gate)	-3.309
<b>HEAD RACE TUNNEL</b>			
Diameter	8.8 horse shoe	8.8 m Circular	Shape change
Velocity	3.56	3.76 m/sec	+0.2
Bed slope (average)	1.208	1:121 (upstream of Maina River 1:321) Downstream of Maina River)	-8.087

<b>UPSTREAM SURGESHAFT</b>			
Height (from HRT invert)	130	154 m	+24 m
Top EL	1305	1309 m	+4 m
Orifice level	1185	1165 m	-20m
Tunnel invert	1175	EL 1155 m	-20m
Maximum surge level	1304	1307.42m	+3.42m
<b>PRESSURE SHAFT</b>			
Length of each PS	351/36.7	466.4 m/51m	-0.41893466
<b>POWER HOUSE</b>			
Size of P/H cavern	127*20.3*50	146m*20.3m*48m	+13357.4
Size of transformer cavern	112*16*24.5	140.3m*15m*25.5 m	+9760.75
Service bay level	1041	EL 1036m	-5
<b>D/S SURGE TANK</b>			
Size	120*12*27	150m (L)*13m (W) * 27 m (H)	+13770
Minimum surge level	1026.5	1022.37 m	-4.13
<b>TAIL RACE TUNNEL</b>			
a) Size	8.8	9.1 m (Φ), (Circular)	+0.3
d) Min. TWL	1027.2	1028.2 m (with 10% load)	+1

e) TRT invert level	1025	EL 1020.6 (at Outlet) crest level of weir at outlet is 1027 m.	-4.4
<b>SWITCHYARD</b>			
e) No. of bays in the switchyard	8	7 bays	-1
d) Size of Potyard	40*60m	40m*84m	+960

4. The Project has also undergone design review as per THDC progress report of July 2021. The appellant has also presented following tables to show that only 10% of the total constructions have been done and not 50% as claimed:

**Table No. 1**

<b>S. No.</b>	<b>Work</b>	<b>Present status of the project as per CEA July 2021 report (Annexure A-16)</b>	<b>Analysis</b>	<b>Percent completed</b>
1.	De-silting chambers	3 De-silting Chambers benching 40% completed	-	40.0
2.	HRT-TBM commissioned but no progress	Heading excavation of HRT by DBM has been completed 739 out of 960m. TBM has been commissioned. During operation of TBM in the RBM zone, big boulders have been encountered, which has been hampered TBM operation. To overcome this problem two	Length of Head Race Tunnel is 13.4 km. of this (1) 739 m DBM; and nil HRT has been completed as TBM is hampered. Thus 739/13400+ 5.5% is complete	5.5

		<i>approach adits are being constructed to reach the cutter head.</i>		
3.	<i>Tail Race Tunnel</i>	<i>In TRT, heading excavation 443 m out of 3070m completed</i>	<i>Although this is only excavation, yet giving benefit of doubt we may consider <math>443/3070=14.4\%</math> complete.</i>	14.4
4.	<i>Barrage</i>	-	<i>As per our information zero work is done. Silence in CEA Progress report confirms this.</i>	0.0
5.	<i>Electro-mechanical works</i>	<i>Supply works of Rs. 167.60 Crore has been completed.  Total project cost is 4397 Crore.</i>	<i>The cost of Electro-mechanical works was 473.64 Crores out of project cost of 2031.64 Crore as per TEC (Annexure A-17) Pro-rata the cost of Electro-mechanical works will be 1024 crore at project cost of 4397 Crore of this 167.60 Crore of 16.3% is completed.</i>	
6.	<b>Average</b>			15.2

**Table No. 2**

<b>EAC minutes 29<sup>th</sup> July 2020</b>  <i>Annexure A-6)</i>	<b>THDC progress report July 2021</b>  <i>(Annexure A-14</i>	<b>CEA Report July 2021</b>  <i>(Annexure A-16)</i>
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<p><i>Physical progress of major works including Financial progress as on 30<sup>th</sup> June, 2020 is as under:</i></p> <ul style="list-style-type: none"> <li>• <i>25% of Civil &amp; Hydro Mechanical works completed.</i></li> <li>• <i>28% of Electro Mechanical works completed.</i></li> </ul> <p><i>Overall investment is Rs. 1971.95 Cr.</i></p>	<p><i>Total expenditure is 2271.35 Cr.</i></p>	<p><i>Vishnugad Pipalkoti</i></p> <p><i>THDC 21.08.2008</i>  <i>4x111-444 MW Broad features Dam – 65m High 89.3 m long, concrete gravity HRT 13.4 Km, 8.8 dia Horse shoe shape P. House Underground 124m X 20.3m x 50m Turbine Francis SWYD – 13.8/420 KV Cost : Original 2491.58 Latest: 4397.8</i></p>
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5. In view of above contentions, we find it necessary to issue notice to the MoEF&CC and the Project Proponent (PP). Notice may be sent by e-mail by the Registry directly as well as the appellant may also serve Notice on the said parties along with a set of papers. Response may be filed within one month.

6. We also direct the MoEF&CC to obtain and file an Expert opinion from the EAC for River Valley and Hydro-Electric Projects within two months by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

List for further consideration on 10.02.2022.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

Brijesh Sethi, JM

Dr. Nagin Nanda, EM

October 8, 2021  
Appeal No. 21/2021  
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