



# FRIENDS HIM ENERGIES

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Ref. No. ~~FHE~~ SHP/Sul-IV-6027

Date: 8/11/2017

To

The Dy. Chief Engineer  
Director of Energy, GOHP,  
Shanti Bhawan, Phase III, Shimla - 9



Subject: - Revised Detailed Project Report (DPR) of Siul-IV SHP (4 MW) in District Chamba of HP - TEC thereof.

Ref: - Your office letter NoDOE/CE (Energy)/TEC/Siul IV(SHP)2017-2336-37 dated 19/6/2017.

Respected Sir,

Please refer to your above mentioned letter dated 19.06.2017. Para wise comments on DPR observations of Siul-IV SHP of (4MW) are submitted herewith as under:-

Sr. No	Comments from DOE	Reply
1	GENERAL	
i	Copy of MOU if signed with HP Govt. or allotment letter be supplied	Copy of Allotment letter is attached.
ii	NOC-cum-Water availability certificate be obtained from state I & PH department and submitted.	NOC-cum-Water availability certificate is attached.
iii	Soft copy of the DPR may be supplied.	Soft & hard copy of revised DPR is in the CD & attached.


Manoj Kumar

Ct. (Energy) 18/11/17  
Atul, Manoj, Pooja  
TEC  
Power S.I.

Dy. CE (TEC)

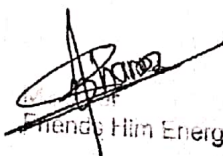
A. Kaur (TEC)

2	HYDROLOGICAL & POWER STUDIES	
i	Observed data of khad/nallah should be measured/recorded covering minimum two lean seasons and one monsoon season and Power studies also carried out after deducting 15% mandatory discharges and appended in the DPR.	<p>Daily observed data of Siul Khad/nallah at weir site is available from 2<sup>nd</sup> Oct 2015 to 30/6/2017 for a period of about 18 months. This includes two lean seasons and one monsoon season. ( Enclosed as Annexure -5 in the DPR Page. No.177 )</p> <p>Power study has been carried out considering transposed discharge data at weir site. Transposed discharge data obtained from discharge data at Baira weir site on the basis of catchment area proportion.</p> <p>However separate study has been undertaken to justify the IC on the basis of observed discharge data. Details of which is attached as Annexure I. Installed capacity worked out to be 4MW with load factor of about 59.12%. With reference to the Note (1) in the allotment letter this value is within range and hence should be acceptable.</p>
3	DRAWINGS	
i	General layout plan and longitudinal section of the scheme be prepared on the contour plan in 1:5000 scale with 2 to 5m contour interval supplied.	Drawing in the required scale is supplied in the DPR
ii	HFL at power house be marked on the drawing	HFL at power house is at EL1748.00 and is marked in the drawing and attached as Annexure II.
4	COST ESTIMATE AND FINANCIAL ANALYSIS	

  
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i	<p>Sellable Energy be calculated by deducting fixed outage @ 5%, formation losses @0.5%, auxiliary consumption @ 0.5% and transmission losses @2% and free power as per MOU/award letter i.e. (6% +1%) for first 12 years, (15%+1%) up to 30<sup>th</sup> years and (24% + 1%) thereafter from 31<sup>st</sup> to 40<sup>th</sup> years respectively</p>	<p>Financial analysis has been done as per CERC guidelines-2017-18. Generation in 75% dependable year for 95% machine availability worked out to be 20.75Gwh.</p> <p>Total outage and losses worked out to be 5%(fixed outage)+0.5%(formation losses)+0.5% (auxiliary consumption)+2% (transmission losses)=8%</p> <p>Net sellable energy is <math>20.75 \times (1 - 8/100) = 19.09 \text{Gwh}</math></p> <p>Liveliest tariff worked out to be Rs3.78 after considering (6% +1%) for first 12 years, (15%+1%) up to 30<sup>th</sup> years and (24% + 1%) thereafter from 31<sup>st</sup> to 40<sup>th</sup> years respectively</p> <p>Revised financial analysis is attached as Annexure 15.2 Page .No . 181 in the DPR</p>
ii	<p>Completed cost of the project be calculated by i/c Escalation, IDC, Financial charges and LADC/LADF (as per HP Govt. Power policy 2006 and subsequent amendments thereof).</p>	<p>Completed cost of the project has been calculated to be Rs3912.59 lakh as given in Annexure 15.3. Page .NO. 181 in the DPR It includes Escalation, IDC and LADC/LADF. As Financial charge is very small it was not included.</p> <p>However revised financial analysis with 1% financial charge as requested is attached</p>
iii	<p>Sale rate has not been mentioned in the DPR. Same may be supplied.</p>	<p>Sale rate is <u>Rs3.78</u> per unit with 14% return on equity. With revised calculation as per Annexure III liveliest tariff worked out to be <u>Rs 3.81 per unit.</u></p>

  
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iv	Liveliest tariff is on higher side. Same may be reviewed and supplied.	Liveliest tariff worked out to be Rs3.78 per unit as per CERC guidelines 2017-18. With revised calculation as per Annexure -15.6 levelised tariff worked out to be Rs 3.81 per unit.
V	Financial analysis be revised in view of aforesaid changes & all the projections be given up to 40 years.	Revised financial analysis attached. As Annexure - 15 Page .No. 181 in the DPR
5	TRANSMISSION WORKS	It is proposed to evacuate the power generated at Suil -IV small hydro project to the substation at Suil-IV project near village Kihar by a single circuit 33kv transmission line mode and from Suil -IV SHP (5 MW) to 33 KV HPSEB Sub Station at Salooni ( 18km from Suil -1 SHEP ) in a joint mode. This has also been marked in the Chapter-10 under Para <u>Power Evacuation</u>

It is requested that clarification given above for the observations raised in your letter will be favorably considered and further action may be taken to accord TEC of the DPR of Suil -IV SHP (4 MW) District Chambha.

Thanking you,

Yours faithfully

  
Manager  
Friends Hm Energies  
Nitin Ramsharan

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Enclosures:-

1. Copy of Allotment letter
2. Copy of NOC of I&PH
3. Soft in the CD & hard copy of revised DPR
4. Copy of Annexure -I and II