

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 262/TL/2023

Coram:

**Shri Jishnu Barua, Chairperson
Shri Arun Goyal, Member
Shri Ramesh Babu V, Member**

Date of Order: 2.08.2024

In the matter of:

Application for grant of transmission licence as specified under the CERC (Procedure, Terms & Conditions for grant of Transmission licence and other related matters) Regulation, 2009, for grant of transmission licence for Wangtoo-Jhakri portion of 400 kV Baspa Jhakri Transmission line.

And

in the matter of:

JSW Hydro Energy Ltd.,
4th Floor, NTH Complex, A-2, Shaheed Jeet Singh Marg,
Qutub Institutional Area, New Delhi 110067

.... Petitioner

Versus

1. Central Transmission Utility Ltd.,
"Saudamini", Plot No.-2, Sector-29,
Gurgaon-122 001, Haryana
2. HPSEB Ltd.,
Vidyut Bhawan, Shimla - 171004, H.P.
3. Haryana Power Purchase Centre,
Vidyut Sadan, IP No.: 3&4, Sector-14,
Panchkula, Haryana -134113
4. Punjab State Power Corporation Ltd.,
The Mall, Patiala-147001
5. UP Power Corporation Ltd.,
Shakti Bhawan, 14, Ashok Marg, Lucknow-226001



6. Jaipur Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Janpath, Jaipur-302005
7. Ajmer Vidyut Vitran Nigam Limited,
Vidyut Bhawan, Panchsheel Nagar,
Makarwali Road, Ajmer-305004
8. Jodhpur Vidyut Vitran Nigam Limited,
New Power House, Industrial Area,
Jodhpur-342003
9. Grid Controller of India Limited (GCIL),
B-9 (1st Floor), Qutab Institutional Area,
Katwaria Sarai, New Delhi-110016
10. Northern Regional Load Dispatch Centre (NRLDC),
18-A, Shaheed Jeet Singh Sansanwal Marg,
Katwaria Sarai, New Delhi-110016

.... Respondents

Parties Present:

Shri Aman Anand, Advocate, JSWHEL
Shri Aman Dixit, Advocate, JSWHEL
Ms. Natasha Debroy, Advocate, JSWHEL
Shri Anurag Agarwal, JSWHEL
Shri Kartikey Rastogi, Advocate, HPSEB
Shri Sunil Kanojiya, NRLDC
Shri Gaurav Singh, NRLDC
Shri Alok Mishra, NRLDC
Shri Ajit Yadav, NRLDC
Shri Siddharth Sharma, CTUIL
Shri Akshyavat Kislay, CTUIL

ORDER

JSW Hydro Energy Limited (JSWHEL) (formerly known as Himachal Baspa Power Company Limited (HBPCL) (hereinafter referred to as 'Petitioner'), has filed the present Petition for grant of transmission licence for Wangtoo-Jhakri portion of 400 kV Baspa -Jhakri Transmission line under the Central Electricity Regulatory Commission (Procedure, Terms and Conditions for grant of Transmission Licence and other related matters) Regulations, 2009 (hereinafter referred to as "Transmission Licence Regulations").

2. The Petitioner has made the following prayer:

- i. To consider the submissions made in the application and grant a transmission license as advised by HPERC, for 35.22 km Wangtoo -Jhakri portion of 54.78 km Baspa-Jhakri D/C Transmission line.*

Petitioner's submissions:

3. The Petitioner has mainly submitted as follows:

- (a) The Petitioner owns, operates, and maintains 300 MW (100 MW *3) Baspa II HEP and 1045 MW (261.25 MW* 4) Karcham Wangtoo H.E.P (KWHEP) in the state of Himachal Pradesh.
- (b) Baspa II HEP is a 300 MW plant situated on the River Baspa with three units each of 100 MW and it achieved COD on 08.06.2003.
- (c) Baspa II HEP COD on 08.06.2003. Since it has been supplying power to HPSEBL, generation tariff for the same is being determined by HPERC.
- (d) The associated transmission line of Baspa II HEP has been considered as part of the capital cost of the generating station since its inception by the HPERC. KWHEP achieved COD on 13.09.2011 and has been supplying the power generated to PTC India Ltd., supplying the same to HPPC, PSPCL, UPPCL & Discoms of Rajasthan.
- (e) Prior to COD of KWHEP, a LILO arrangement was made on the associated transmission line of Baspa II HEP, for evacuation of power from KWHEP, since Karcham Wangtoo-Abdullapur 400 kV DC transmission line was not ready.
- (f) The LILO portion and Karcham Wangtoo-Abdullapur 400 kV DC transmission line is owned by Jaiprakash Powergrid Limited.
- (g) This Commission has granted a transmission license to Jaypee Powergrid Ltd. vide its order dated 01.10.2007 in Petition no. 44/2007 for construction and maintenance of the transmission lines and facilities to be used for evacuation of power from Karcham Wangtoo HEP to the CTU's Abdullapur sub-station located in the state of Haryana, including the LILO on 400kV D/C Baspa-Nathpa Jhakri transmission line at Wangtoo.

- (h) The Transmission tariff for Jaypee Powergrid Ltd., including the LILO on the associated transmission line from Baspa II HEP, was approved by this Commission vide its order dated 07.05.2015 in petition no. 37/TT/2011. As such, beyond the LILO at Wangtoo, up to the Jhakri substation, inter-state power is being transmitted on the ~ 35 km portion of the line in question.
- (i) HPSEBL filed a Petition no. 29 of 2017 with HPERC and the said Petition was disposed by HPERC vide its Order dated 08.12.2017.
- (j) During Tariff truing up and MYT proceedings of Baspa II HEP, HPERC in its orders dated 31.10.2018, 29.06.2019 and 07.07.2020 advised the Petitioner & the Respondent CTUIL to discuss and take future steps in this regard.
- (k) The Petitioner, vide its status report dated 27.07.2020 informed HPERC about the steps taken on the subject.
- (l) Vide its order dated 16.05.2023, HPERC has again directed the Petitioner to file requisite Petition with the appropriate Commission within three months of the order stating that it is the responsibility of Petitioner to file a separate Petition against the Karcham Wangtoo-Jhakri portion of Baspa Jhakri Transmission Line.

Hearing dated 13.12.2023

4. Learned counsel for the Petitioner submitted that since Baspa II HEP has been supplying power to the HPSEB, the associated transmission lines of Baspa II HEP have been considered as part of the capital cost of the generating station and the generation tariff of said HEP is being determined by the HPERC. However, prior to the commissioning of the Karcham Wangtoo HEP, a LILO was made on this associated transmission line (400 kV Baspa – Jhakri D/C line) of Baspa II HEP for evacuation of power from Karcham Wangtoo HEP since the Karcham Wangtoo Abdullapur 400 kV D/c transmission line was not ready. As a result, beyond the LILO at Wangtoo, up to the Jhakri sub-station, an inter-State power is being transmitted on the portion (~35 km) of the Baspa-Jhakri D/c line (54.78 km). Learned counsel for the Petitioner also referred to HPERC's order dated 16.05.2023 in Case No. 2/2023 wherein HPERC has directed the Petitioner to file

a requisite petition before the CERC for determination of capital cost and tariff in respect of Karcham Wangtoo-Jhakri portion of Baspa Jhakri transmission line.

5. In response to a specific query to the representative of CTUIL present during the course of the hearing regarding the flowing of inter-State power on the Karcham Wangtoo-Jhakri portion, the representative of CTUIL submitted that CTUIL is yet to examine the Petition and be granted some time to examine the same. Considering the submissions of the Petitioner and the representative of CTUIL, the Commission directed as under:

(a) The Petitioner to implead CTUIL, HPSEBL and the beneficiaries of the Northern Region as Respondents and to file a revised memo of parties.

(b) The Petitioner to clarify the aspects of planning and execution of the LILO of Nathpa Jhakri-Baspa 400 kV D/C line at Karcham Wangtoo. Whether the LILO was a temporary arrangement or a permanent arrangement?

Petitioner's submissions:

6. In compliance with the RoP for hearing dated 13.12.2023, the Petitioner impleaded CTUIL, HPSEBL, and the beneficiaries of the Northern Region. Further, vide affidavit dated 27.12.2023, the Petitioner has submitted that in the year 2002, CEA provided clearance to PGCIL to construct a LILO on the transmission line from Baspa to Nathpa Jhakri line at Wangtoo to evacuate power from the Karcham Wangtoo project after its commissioning as the transmission line had the capacity available for such evacuation. The CERC vide order dated 01.10.2007 in Petition No. 44/2007 granted Inter-State transmission licence for 25 years to JPL (a JV company promoted by Jaiprakash Power Ventures Limited and PGCIL), with the permission to construct a LILO on the line. Hence the LILO is not a temporary arrangement but a permanent arrangement. Power from the Karcham Wangtoo Project is sometimes evacuated through the LILO of the transmission line from Karcham Wangtoo to Nathpa Jhakri in case of transmission constraints in the Wangtoo Abdullapur Line.

Hearing dated 27.02.2024:

7. During the hearing dated 27.02.2024, the Commission directed the CTUIL to submit the minutes of the meeting of the Standing Committee in which the construction of LILO on Baspa II- Nathpa Jhakri transmission line at Karcham Wangtoo Generation Switchyard was discussed and agreed upon.

CTUIL's submissions:

8. CTUIL vide affidavit dated 05.04.2024 submitted that the LILO on Baspa II- Nathpa Jhakri transmission line at Karcham Wangtoo Generation Switchyard was discussed and agreed in the LTOA meeting held on 03.11.2006, which was held along with the 21st Standing Committee Meeting on 03.11.2006 at NRPC, New Delhi. The scheme covered in the petition was also discussed in the Meeting dated 09.04.2007 for LTOA Application of M/s PTC for evacuation of power from Karcham Wangtoo HEP in the Northern Region.

Hearing dated 10.04.2024:

9. During the hearing, the learned counsel for the Petitioner submitted that the CTUIL had not furnished its recommendations, for the grant of a transmission licence to the line under Section 15(4) of the Electricity Act, 2003. Further, the representative of the CTUIL submitted that the recommendations of CTUIL would be relevant only for the inter-State transmission lines/ elements, and if the Commission so directs, CTUIL will file the details / information relating to the planning part and line utilization. In response to the Commission's query, the representative of CTUIL submitted that the concerned segment carries the ISTS flow on a seasonal basis. Considering the submissions made by the learned counsel and the representative of CTUIL, the Commission admitted the Petition and directed the Respondents to file their replies to the Petition, if any, and also the CTUIL to submit its specific recommendations for the grant of a transmission licence to the Petitioner along with other relevant details.

CTUIL's submissions:

10. CTUIL vide affidavit dated 10.05.2024 has submitted below:

- (a) The subject transmission scheme was originally dedicated in nature and later, part transmission system (Transmission System associated with K. Wangtoo HEP) was given ISTS status. Therefore, in terms of the mandate of Regulation 93 of the CERC Tariff Regulations, 2024, for consideration of the nature of the transmission system to be declared as ISTS, the matter has to be referred to CEA/NRPC by CTU and shall subsequently file the details of the deliberation with respect to the subject-matter.
11. The Petitioner has served the copy of the Application on the Central Transmission of Utility of India Limited (CTUIL) as required under Section 15(3) of the Act and Regulation 7(6) of the Transmission Licence Regulations. CTUIL, vide its letter dated 21.05.2024, has recommended the grant of a transmission licence to the Petitioner.

Hearing dated 12.06.2024:

12. In response to the query of the Commission with regard to any inter-State power flow on the Karcham Wangtoo-Jhakri portion, the learned counsel for the Petitioner submitted that prior to furnishing its recommendations for the grant of a transmission licence, CTUIL had also obtained and examined the requisite power flow data on that portion of the line from NRLDC. Considering the submissions made by the learned counsel and to understand the nature of power flow on the subject line, the Commission directed the Petitioner to implead GCIL and NRLDC and also directed the parties to file the following information on an affidavit:
- (a) Petitioner to submit a copy of Form II posted on its website along with the date of posting in terms of Regulation 7 of the CERC (Procedure, Terms, and Conditions for Grant of Transmission License and other related matters) Regulations, 2009, read with the order dated 22.01.2022 in Petition No. 1/SM/2022 along with posting date.
- (b) NRLDC to submit the following:
- (i) Details of generating stations whose power flows through the Karcham Wangtoo- Jhakri line under different scenarios of high hydro, low hydro, peak, and off-peak conditions.

(ii) The percentage usage of the Karcham Wangtoo-Jhakri portion of 400 kV Baspa to Jhakri Transmission line as an inter-State transmission system.

(c) CTUIL to clarify that since Shongtong HEP and Tidong HEP are planned to be evacuated via 400kV Jangi PS (ISTS) - Wangtoo S/s (HPPTCL) - Panchkula (PG), in such case, how the Karcham Wangtoo-Jhakri portion of 400 kV Baspa to Jhakri transmission line will be used for evacuation for power of these HEPs, as submitted by CTUIL in its recommendation.

13. In compliance with the RoP for hearing dated 12.06.2024, the Petitioner has impleaded the GCIL and NRLDC as a party to the present Petition. The Petitioner has also submitted a copy of Form II posted on the Petitioner's website on 18.06.2024.

NRLDC's submissions:

14. The Respondent NRLDC vide reply dated 25.06.2024 has submitted as below:

(a) The details of generating stations whose power flows through the line are as below:

Sl. No.	Different Scenarios			Name of Generating Station whose power flows through 400 kV Karcham Wangtoo Jhakri line
	Power flow Direction	Season	Peak/ Off-peak Conditions	
1	Karcham Wangtoo to Jhakri	High Hydro	Peak	(i) Baspa HEP and (ii) Karcham Wangtoo HEP
2		High Hydro	Off-peak	(i) Baspa HEP and (ii) Karcham Wangtoo HEP
3		Low Hydro	Peak	(i) Baspa HEP and (ii) Karcham Wangtoo HEP
4		Low Hydro	Off-peak	(i) Generating stations of HP, injecting power at Wangtoo (HP) S/s (ii) Sorang HEP (iii) ISTS power wheeling from Abdullapur (PG) S/s through Kala Amb. (PG) S/s
5		Observed sometimes during the day in Low Hydro Season		(i) Nathpa Jhakri HEP

(b) The percentage usage of the subject transmission line as ISTS for the year 2023 is shown below:

Sl. No.	Month	Peak/ Off-peak Conditions	Percentage usage of 400 kV Karcham Wangtoo - Jhakri line as ISTS
1	January 2023	Peak	92%
2	(Low Hydro Season)	Off-peak	92%
3	August 2023	Peak	78%
4	(High Hydro Season)	Off-peak	79%

CTUIL's submissions:

15. CTUIL vide affidavit dated 03.07.2024 has submitted as under:

- (a) CTUIL, vide its Licence recommendation dated 21.05.2024, has already submitted the data provided by NRLDC (From Jan'23-Jan'24), from which it is evident that there is power flow of multiple generators in the portion of Karcham Wangtoo – N. Jhakri portion of Baspa - N. Jhakri line and this line section has bi-directional nature of power flow. Further, during the peak hydro season, it transfers about 400-430 MW hydro generation from K. Wangtoo to N. Jhakri HEP.
- (b) In addition to the above, power from other future hydro projects in the upper Sutluj basin (like Shongtong HEP & Tidong HEP) has been planned to be pooled through the Wangtoo Substation of HPPTCL. Since the Wangtoo Substation is interconnected to K. Wangtoo HEP (Wangtoo S/s implemented by LILO of K. Wangtoo-Abdullapur 400 kV D/c line) and with injection of future hydro generators in cases like contingency/Seasonal scenarios etc, some part of power may be wheeled through subject LILO portion (portion of Karcham Wangtoo – N. Jhakri portion of Baspa - N. Jhakri line).
- (c) Further, the CTU's recommendation for licence was primarily based on the present nature of power flows as per the data provided by NRLDC.

Hearing dated 04.07.2024:

16. After hearing the learned counsel for the Petitioner and taking into account the information filed by NRLDC and CTUIL, the Commission further directed NRLDC to furnish the following information:

- (a) The formula for calculating the percentage usage of the 400 kV Karcham - Jhakhri line as ISTS.
- (b) The power of Baspa (in MW) flowing from Karcham to Jhakri and Karcham to Abdullapur for all months of the year 2022 and 2023.
- (c) The power (in MW) of Karcham flowing from Karcham to Jhakri and Karcham to Abdullapur for all months of the year 2022 and 2023.
- (d) Monthly % utilization of the Karcham -Jhakri portion of the 400 kV Baspa to Jhakri transmission line as an inter-State transmission system for the years 2022 and 2023, along with generation details used in the calculation.
- (e) As per the MoM of the meeting held on 3.5.2024 in NRPC to discuss the nature of lines as dedicated/ISTS/Not ISTS status and as per the CTUIL recommendation letter dated 21.5.2024, during peak hydro conditions, power of about 400-430 MW flows through the Karcham Wangtoo-Nathpa Jhakri portion of Baspa- Nathpa Jhakri D/c transmission line. Since the generation capacity of the Baspa HEP itself is 300 MW, how the percentage usage of the subject line as ISTS could be in the range of approximately 80-90%, as submitted by the NRLDC.

NRLDC's submissions:

17. NRLDC vide additional affidavit dated 19.07.2024 in compliance to the RoP for hearing dated 04.07.2024 has submitted as below:

- (a) **The formula for calculating the percentage usage of the 400 kV Karcham -Jhakri line as ISTS.**

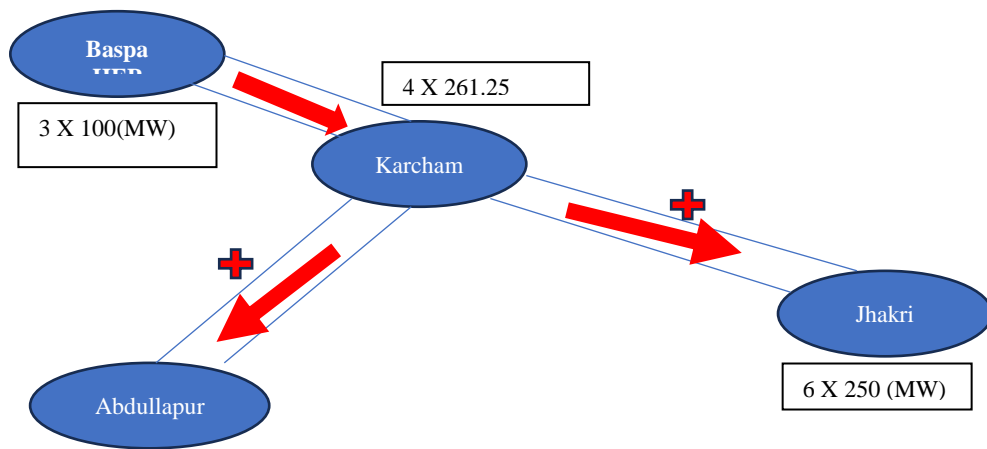
Scenario	Direction of power flow in 400kV Karcham to Abdullapur Section	Direction of power flow in 400kV Karcham to Jhakri Section	Formula for computing % Usage of the 400kV Karcham - Jhakri line as ISTS
1.	+	+	$(\text{Karcham Generation}) / (\text{Karcham} + \text{Baspa Generation}) * 100$
2.	+	-	100%

3.	-	+	[1 – (Baspa Generation + Injection at 400kV Wangtoo S/S from 220kV side) / (Power flow of 400 kV Karcham - Jhakri D/C)] *100
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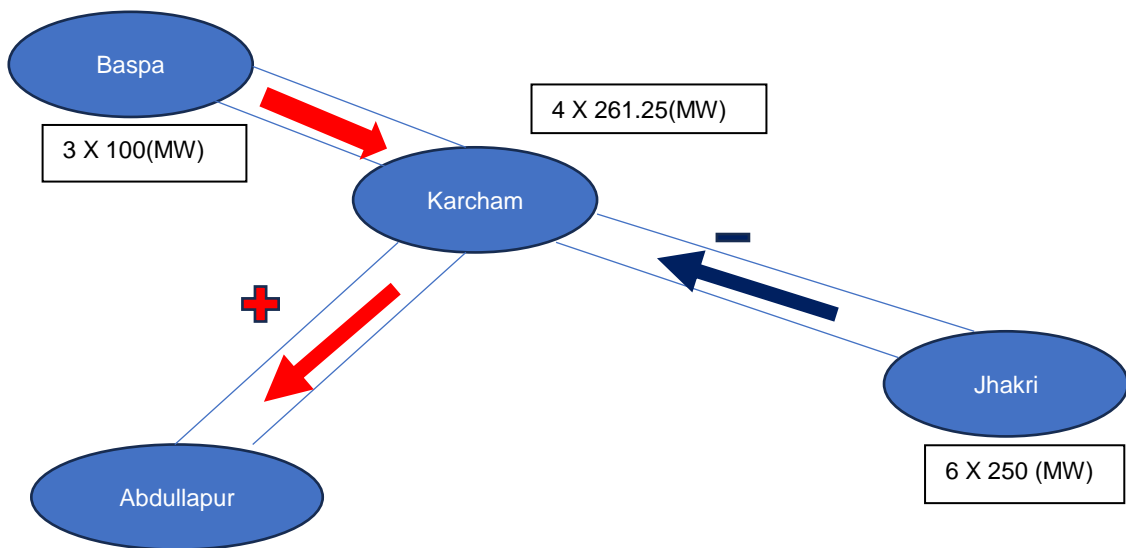
+ve sign denotes power flow from first station to second station on the line and
-ve sign denotes reverse flow.

(b) The above three scenarios have been depicted below.

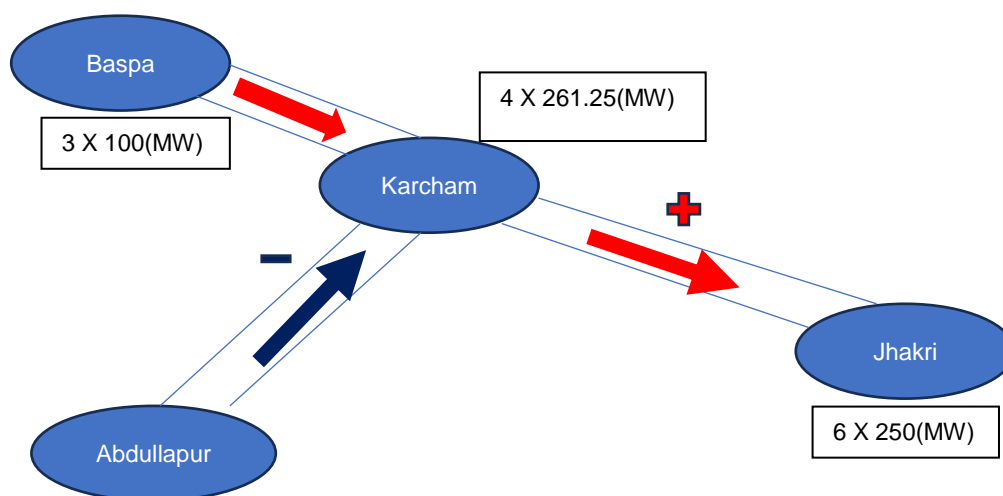
Scenario – 1



Scenario – 2

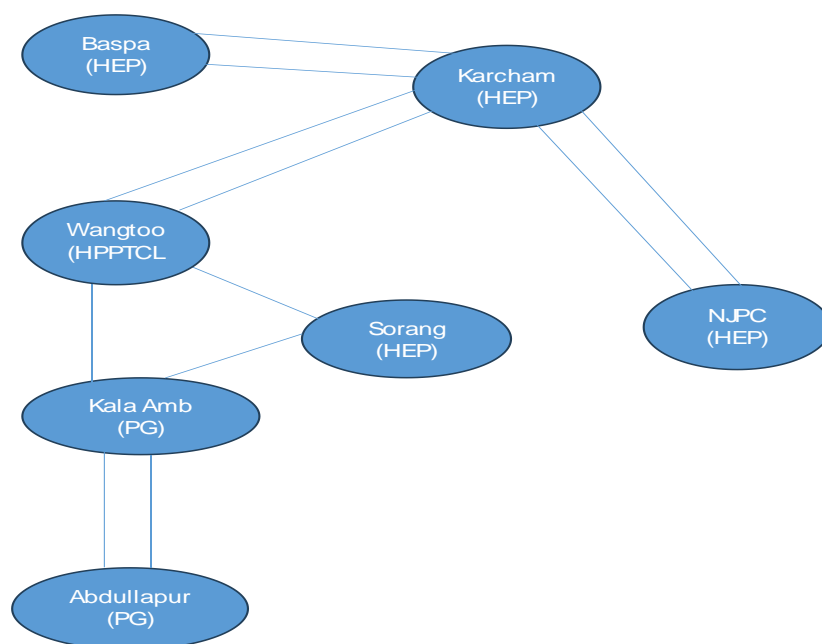


Scenario - 3



(c) The 400 kV Karcham -Abdullapur (PG) D/c line has been LIL0ed at Kala Amb (PG), Sorang HEP and Wangtoo (HPPTCL) substations. The diagrams depicted above have been simplified for ease of understanding. The complete schematic network diagram as per current connectivity status is shown below.

Complete schematic network diagram of Baspa -Karcham complex



(d) **The power of Baspa (in MW) flowing from Karcham to Jhakri and Karcham to Abdullapur for all months of the year 2022 and 2023.**

The monthly utilization of lines as ISTS is calculated based on the Monthly PSS/E Transmission Pricing base case which is prepared as per CERC Sharing Regulations, 2020.

The power of Baspa (MW) flowing from Karcham to Jhakri and Karcham to Abdullapur has been calculated as per the available data in the Monthly Transmission Pricing base case for the year 2022 and 2023.

Month / Year	Baspa Generation (MW)	Karcham Generation (MW)	Power of Baspa flowing from Karcham to Jhakri (MW)	Power of Baspa flowing from Karcham to Abdullapur (MW)
Jan-22	51	91	51	0 (Scenario-3)
Feb-22	116	589	0 (Scenario - 2)	116
Mar-22	154	1049	0 (Scenario - 2)	154
Apr-22	49	360	25	23
May-22	73	584	18	55
Jun-22	163	1180	47	116
Jul-22	174	1107	30	144
Aug-22	330	1141	53	277
Sep-22	330	1143	40	290
Oct-22	292	1036	16	276
Nov-22	48	1042	0 (Scenario - 2)	48
Dec-22	136	0	136	0 (Scenario-3)
Jan-23	40	0	40	0 (Scenario-3)
Feb-23	35	0	35	0 (Scenario-3)
Mar-23	215	0	215	0 (Scenario-3)
Apr-23	84	991	0 (Scenario - 2)	84
May-23	212	505	78	134
Jun-23	326	1014	55	271
Jul-23	330	1122	50	280
Aug-23	330	1060	69	261
Sep-23	198	1115	46	152
Oct-23	83	212	83	0 (Scenario-3)
Nov-23	60	149	60	0 (Scenario-3)
Dec-23	88	0	45	44

(e) The power of Karcham (MW) flowing from Karcham to Jhakri and Karcham to Abdullapur has been calculated as per the available data in the Monthly Transmission Pricing base case for the year 2022 and 2023:

Month / Year	Baspa Generation (MW)	Karcham Generation (MW)	Power of Karcham flowing from Karcham to Jhakri	Power of Karcham flowing from Karcham to Abdullapur
Jan-22	51	91	91	0 (Scenario-3)
Feb-22	116	589	0 (Scenario -2)	589
Mar-22	154	1049	0 (Scenario -2)	1049
Apr-22	49	360	187	174
May-22	73	584	145	439
Jun-22	163	1180	338	842
Jul-22	174	1107	191	916
Aug-22	330	1141	184	958
Sep-22	330	1143	138	1004
Oct-22	292	1036	58	978
Nov-22	48	1042	0 (Scenario -2)	1042
Dec-22	136	0	0	0
Jan-23	40	0	0	0
Feb-23	35	0	0	0
Mar-23	215	0	0	0
Apr-23	84	991	0 (Scenario -2)	991
May-23	212	505	185	319
Jun-23	326	1014	172	842
Jul-23	330	1122	170	953
Aug-23	330	1060	221	839
Sep-23	198	1115	261	854
Oct-23	83	212	212	0 (Scenario-3)
Nov-23	60	149	149	0 (Scenario-3)
Dec-23	88	0	0	0

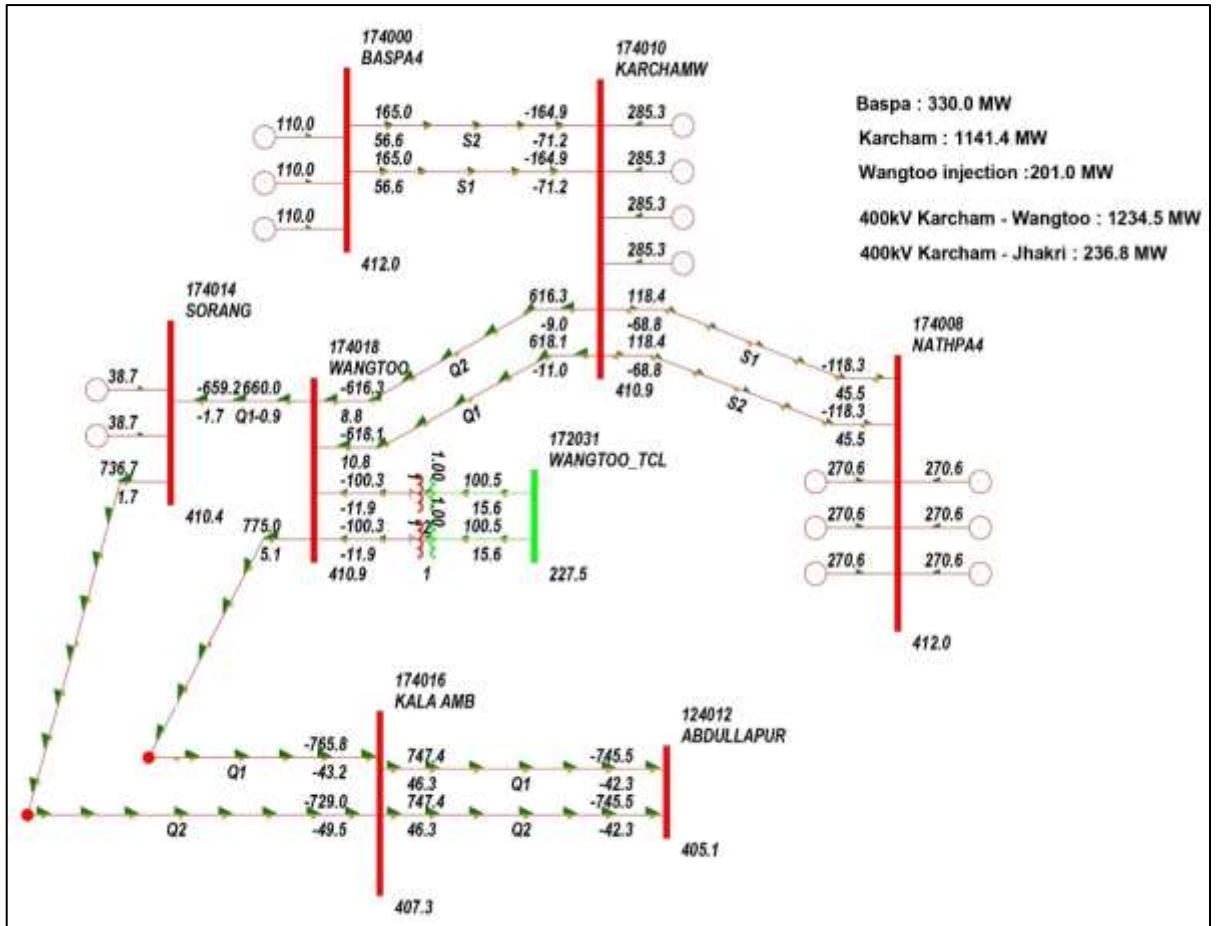
(f) Monthly % utilization of the Karcham -Jhakri portion of the 400 kV Baspa to Jhakri transmission line as an ISTS for the years 2022 and 2023, along with generation details used in the calculation:

Month / Year	Baspa Generation (MW)	KWHEP Generation (MW)	Injection at 400kV Wangtoo S/S from 220 kV Side (MW)	400kV Karcham - Jhakri D/C flow (MW)	% Utilization of the Karcham - Jhakri portion as ISTS	Scenario
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Jan-22	51	91	63	404	72%	3
Feb-22	116	589	53	-4	100%	2
Mar-22	154	1049	77	-104	100%	2
Apr-22	49	360	74	212	88%	1
May-22	73	584	82	163	89%	1
Jun-22	163	1180	74	385	88%	1
Jul-22	174	1107	80	222	86%	1
Aug-22	330	1141	201	237	78%	1
Sep-22	330	1143	209	178	78%	1
Oct-22	292	1036	174	74	78%	1
Nov-22	48	1042	39	-129	100%	2
Dec-22	136	0	19	213	27%	3
Jan-23	40	0	0	306	87%	3
Feb-23	35	0	4	308	88%	3
Mar-23	215	0	0	215	0%	3
Apr-23	84	991	73	-5	100%	2
May-23	212	505	137	263	70%	1
Jun-23	326	1014	215	228	76%	1
Jul-23	330	1122	165	220	77%	1
Aug-23	330	1060	69	289	76%	1
Sep-23	198	1115	140	307	85%	1
Oct-23	83	212	46	368	65%	3
Nov-23	60	149	12	240	70%	3
Dec-23	88	0	0	45	0%	1

(g) Baspa HEP evacuates its power up to the Karcham HEP switchyard through the 400 kV Baspa-Karcham D/C transmission line. At Karcham HEP, there are multiple 400 kV transmission lines connected to different stations:

- i. Two 400 kV transmission lines to Jhakri HEP.
- ii. Two 400 kV transmission lines to Wangtoo (HPPTCL) Substation (on the Karcham - Abdullapur section).
- iii. Two 400 kV transmission lines to Baspa HEP.



****PSS/E snapshot of August 2022 Base case in Karcham Complex**

(h) The above snapshot of the August 2022 scenario illustrates that the power flow through the 400 kV Karcham – Jhakri D/C transmission line is 237 MW, while the generation at Baspa HEP is 330 MW. Following clarifications regarding the power distribution with the above example case:

$$\begin{aligned} \text{Share of power of Baspa flowing in 400kV Karcham – Jhakri section} &= \\ &= \left(\frac{\text{Generation of Baspa}}{\text{Generation of Baspa} + \text{KWHEP}} \right) * \text{Power flow} \\ &\text{on 400kV Karcham – Jhakri D/C} \\ &= \left(\frac{330}{330 + 1141} \right) * 237 = \sim 53 \text{ MW (which is much less than 237} \\ &\text{MW)} \end{aligned}$$

(i) It shows that not all the power generated by Baspa flows exclusively through the Karcham – Jhakri section. Instead, it is distributed according to the network's operating condition and Load Generation Balance (LGB). Hence, even during the high loading of 400kV Karcham - Jhakri ~ 400-430

MW, the share of power of Baspa flowing on it may be less as per the LGB and the prevailing network conditions.

Hearing dated 22.07.2024:

18. During the hearing, Learned counsel for the Respondent, HPSEB submitted that HPSEB, as such, has no objection towards the present application filed by the Petitioner. Considering the submissions made by the Petitioner and Respondents, the Commission reserved the matter for Order.

Analysis and Decision

19. We have considered the submissions of the Petitioner and Respondents.
20. Section 14 of the Act provides that the Appropriate Commission may, on an application made under Section 15 of the Act, grant a licence to any person to transmit electricity as a transmission licensee in any area as may be specified in the licence.
21. The Petitioner has approached the Commission for the grant of a transmission licence for 35.22 km Wangtoo-Jhakri portion of 54.78 km Baspa-Jhakri D/C Transmission line in accordance with the provisions of the Transmission Licence Regulations as advised by HPERC.
22. The Petitioner has submitted proof of service of the copies of the application to the CTUIL and the Respondents (beneficiaries) and proof of web posting of the complete application. The Petitioner has further undertaken to pay the applicable licence fee upon the grant of transmission licence in terms of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012.
23. The Petitioner made the Application as per Form-I and paid a fee of Rs. One lakh as prescribed by the Central Government. The Petitioner published Form II on its website for inviting public objections/ suggestions. No objections have been received from the general public to the notices.
24. We have noted that HPSEBL had filed Petition No. 29/2017 before the HPERC. The relevant extract of the HPERC order dated 28.10.2017 is as under:

“This Petition has been filed by the Himachal Pradesh Electricity Board Ltd. (hereinafter referred as “the petitioner” or “the HPSEBL”) invoking section 62 and 86 of the Electricity Act, 2003 for exclusion of the cost of 400 kV Wangtoo-Jhakri portion of 400 kV Baspa-Jhakri Line from the Capital Cost of Baspa HEP and seeking direction to M/s Himachal Pradesh Baspa Power Company Ltd. (HBPCL) (formally known as M/s JPVL) (hereinafter referred is “the Respondent”).

(a) To get the portion of 400 kV Wangtoo-Jhakri D/C Line declared as the inter-State Line; and approach the Central Electricity Regulatory Commission, for determination of tariff, for the said portion;

(b) To exclude the cost of 400 kV Wangtoo-Jhakri portion of 400 kV Baspa-Jhakri D/C Line, from the Capital Cost of Baspa-II Project and file the petition for determination of tariff for Baspa-II, HEP, based on the revised cost; and

(c) To get SEMs installed at the Wangtoo Sub-Station on both incoming 400 kV Baspa-Wangtoo Transmission Lines to facilitate metering and billing at this point on actual transmission losses of 0.65%, being applied presently.

*2. We may refer to a few factual aspects, which would be relevant to decide this petition. The facts in brief of the case **as per submissions made by the petitioner**, are as under:-*

.....

(g) Energy generated by Baspa-II HEP is being transmitted through 400 kV Double Circuit transmission lines from Baspa-II HEP to interconnection point i.e. 400 kV Sub-station of CTU (Powergrid) at Nathpa-Jhakri. These lines have been constructed by M/s Jaiprakash Industries Limited and their construction cost forms part of tariff being determined by the Himachal Pradesh Electricity Regulatory Commission (HPERC). Since the HPSEBL is purchasing the entire power generated by Baspa-II HEP, the entire ARR inclusive of these lines is being paid by the HPSEBL to the IPP.

.....

(j) Karcham-Wangtoo HEP has come up on bar w.e.f. 12th May 2011 and the portion of 400 kV Baspa-Jhakri Double Circuit transmission line between Wangtoo and Jhakri is being utilized for evacuation of Karcham-Wangtoo HEP Power as well since then. In the near future some other IPPs and Open Access Customers are likely to be connected to this system and, therefore, the transmission charges are payable to this portion by all its users. Presently, the HPSEBL alone is paying the tariff for this portion and is getting no refund from other users, in order to recover the charges from the concerned user of the system.

.....

5. In response to the petition, the Respondent has questioned the maintainability of this petition, stating that-

(ii) the Wangtoo-Abdullapur Line has been in operation since 01.04.2012 and all evacuation from Karcham Wangtoo HEP is intended to be done through this corridor only. The LILO at Wangtoo, on the Baspa-Jhakri Line, which was construed purely as a matter of matter of a temporary interim arrangement, has become redundant for the purposes of power evacuation from Karcham Wangtoo HEP and is presently only serving the purpose of better grid reliability;

10. Bearing the above finding in mind, we find the only question before us for consideration is whether this petition is maintainable for non-joinder of parties and whether the direction can be given to the respondent, as prayed for, to get the portion of 400 kV Wangtoo-Jhakri D/C line declared as inter-State, transmission line; and to approach the Central Electricity Regulatory Commission, for determination of tariff,

for the said portion. Since both the issues are interwoven, we are taking and deciding them simultaneously.

.....

13. The Hon'ble Central Electricity Regulatory Commission in para 14 of its order dated 07.05.2015 (Supra), in the matter of approval of transmission tariff for Transmission system associated with evacuation of power from Karcham-Wangtoo HEP, as reproduced in para 6 (a) of this order, has stated that after construction of LILO, the transmission line from Karcham-Wangtoo to Nathpa Jhakri still remains an inter-state transmission line, as it is connected to the Inter-connection Facility of the CTU and the power is evacuated through it from Karcham-Wangtoo for Inter-State transmission. The LILO at Wangtoo is permanent arrangement and has become integral part of the Inter-State Transmission System of Sutlej Basis. Further the capital cost of Baspa-II HEP has been approved from the date of Commercial Operation of the Units, i.e. 24.05.2003 (Unit-1), 29.05.2003 (Unit-2) and 08.06.2003 (Unit-3) by the HPERC vide order dated 24.02.2007, passed in Petition No. 38 of 2005, and also in the subsequent orders for Baspa-II HEP. The Baspa-II HEP capital cost is inclusive of Baspa-Nathpa Line and bays at Jhakri Switchyard.

.....

16. We are, therefore, of the considered opinion that the CTU, the CEA and NLDC are the necessary parties, the petition without impleading them is not maintainable, and further in light of the forgoing discussion and the Hon'ble CERC Order dated 07.05.2015, since the parties themselves have agreed as per the undertaking of M/s JPVL, for LILO of Baspa -Jhakri 400 kV D/C Transmission Line at Wangtoo, final decision for metering arrangement for Baspa-II HEP energy and payment of transmission charges etc. by the concerned agencies shall be taken by the Appropriate Regulatory Commission. Accordingly, after decision of Appropriate Commission, a Supplementary Agreement is to be entered into between HPSEBL and M/s JPVL.”

As per the above, HPSEBL had filed the above Petition before the HPERC seeking the declaration of 400 kV Wangtoo-Jhakri D/C Line as the inter-State Line and also a direction to the Petitioner to approach the Central Electricity Regulatory Commission for determination of tariff for the subject portion of transmission line, so that the cost of 400 kV Wangtoo-Jhakri portion of 400 kV Baspa-Jhakri D/C Line may be excluded from the Capital Cost of Baspa-II Project. HPSEBL was of the view that the 400 kV Baspa-Jhakri Double Circuit transmission line between Wangtoo and Jhakri is being utilized for evacuation of Karcham-Wangtoo HEP Power as well. In the near future some other IPPs and Open Access Customers are likely to be connected to this system and, therefore, the transmission charges are payable to this portion by all its users. The HPERC found that the said petition is not maintainable without impleading CTUIL, CEA and NLDC.

25. We have also noted that the Petitioner filed a true up petition for the years 2019-20 to 2021-22 and midterm review for FY 2022-23 to FY 2023-24 at HPERC. The HPERC vide Order dated 16.05.2023 directed as under:

“4.23 The Petitioner has failed to comply with the directive issued by the Commission in order dated 31.10.2018 and accordingly the Commission in Order dated 29.06.2019 provided additional three months time to both the parties to take action in the matter and decide the future steps.

4.24 However, no action was taken by the Petitioner. Consequently, vide Order dated 07.07.2020, the Commission again directed the parties to undertake suitable measures and provide a status report within one month.

4.25 The Petitioner provided the status report on the matter to the Commission on 27.07.2020. The Status report mentions that the Petitioner held meetings with the HPSEBL to discuss the matter on 02.09.2019 and 12.12.2019. In the Status Report, the Petitioner has requested the Commission to advise methodology for the recovery of loss of ARR, if Tariff approved by CERC is substantially low as against the Tariff being allowed under HPERC Tariff Regulations.

4.26 In regard to the Status Report provided by the Petitioner, the Commission observes that it is neither under the purview nor the powers of this Commission to comment on the impact of Order by any other Commission. Once the Order has been issued by the Appropriate Commission, the Commission may consider all the facts in the matter for appropriate adjustment of the cost.

4.27 The Commission has already discussed the matter in detail in Orders dated 08.12.2017 and 31.10.2018 (ibid).

4.28 The Commission further asked the Petitioner to clarify the reasons for not filing the Petition on the matter of Capital Cost exclusion of Karcham-Wangtoo-Jhakri portion of Baspa Jhakri Transmission Line before the CERC. In response, the Petitioner in its reply dated 02.03.2023 stated that to the best of the Petitioner's understanding, the Commission in the earlier directions nowhere directed the Petitioner to file a Petition before the CERC, Further, the Petitioner stated that it has written a letter to Northern Regional Power Committee (NRPC) on 27.02.2023 to include the agenda for the Capital Cost of Wangtoo Jhakri Transmission Line in the next OCC meeting and once the issue is taken up, the Commission shall be informed/ approached for necessary order/ directions in this respect.

4.29 Until the matter is clarified and an order is issued by the Appropriate Commission, the Commission feels that at this stage it is inappropriate to exclude the Capital Cost of Baspa Jhakri LILO Transmission Line at Wangtoo from the overall Capital Cost of Baspa-II HEP. In spite of several observations of the Commission made in the previous Orders, the Petitioner has failed to undertake suitable measures to resolve the issue and file a separate Petition with the Appropriate Commission for determination of capital cost and tariff against the said Transmission Line. It is made clear that the responsibility of filing of the separate Petition against the Karcham Wangtoo – Jhakri portion of Baspa Jhakri Transmission Line before the CERC rests solely with the Petitioner as the asset is owned by the Petitioner. Therefore, the Commission directs the Petitioner to file the requisite Petition with Appropriate Commission (i.e. CERC in this case) within three months of issuance of this Order else the Commission shall be constrained to disallow the cost of this transmission asset on notional basis from the next financial year i.e. FY 2024-25 onwards. Also, the Commission shall ensure that cost recovered through tariff from HPSEBL over the period since declaration of the asset as interstate would be adjusted in the next tariff order with carrying cost as

applicable from time to time. The Petitioner is directed to update the Commission regarding the filing of the Petition with the Hon'ble CERC."

As per the above, HPERC observed that until an Order is issued by the Appropriate Commission, it is inappropriate to exclude the Capital Cost of Baspa Jhakri LILO Transmission Line at Wangtoo from the overall Capital Cost of Baspa-II HEP and despite several observations of the HPERC made in the previous Orders, the Petitioner has failed to undertake suitable measures to resolve the issue and file a separate Petition with the Appropriate Commission for determination of capital cost and tariff against the said Transmission Line. Therefore, the HPERC directed the Petitioner to file the requisite Petition with Appropriate Commission (i.e., CERC in this case) within three months and accordingly, the Petitioner has approached this Commission for a grant of transmission licence of the subject transmission line covered under the present Petition.

26. We have noted that the Petitioner owns, operates, and maintains 300 MW (100 MW *3) Baspa II HEP in the state of Himachal Pradesh, which achieved COD on 08.06.2003. Since then, it has been supplying power to HPSEBL and the generation tariff for the same is being determined by HPERC. The associated transmission line of Baspa II HEP, i.e., 400 kV Baspa- Jakhri D/c line has been considered as part of the capital cost of the generating station. Since HPSEBL is purchasing the entire power generated by Baspa-II HEP, all the charges for the said transmission line from Baspa to Jhakri are also being paid by HPSEB. A LILO arrangement was made on the associated transmission line of Baspa II HEP, for evacuation of power from KWHEP. The said LILO of 400 kV D/C Baspa - Nathpa Jhakri transmission line has been executed by an ISTS transmission licensee (JP Powergrid) and is part of ISTS. This Commission has granted a transmission licence to the Jaypee Powergrid Ltd. vide its Order dated 01.10.2007 in Petition no. 44/2007 for construction and maintenance of the transmission lines and facilities to be used for evacuation of power from Karcham Wangtoo HEP to the CTU's Abdullapur sub-station located in the state of Haryana, including the LILO on 400kV D/C Baspa-Nathpa Jhakri transmission line at Wangtoo.

In view of the above, it is clear that associated transmission system of the Baspa HEP i.e. 400 kV D/C Baspa - Nathpa Jhakri transmission line was planned and executed and also currently being maintained as a dedicated transmission line of the Baspa II HEP, which has been LILoed at Karcham Wangtoo. .

27. The Petitioner has served the copy of the Application on the Central Transmission of Utility of India Limited (CTUIL) as required under Section 15(3) of the Act and Regulation 7(6) of the Transmission Licence Regulations. CTUIL, vide its letter dated 21.05.2024, has recommended the grant of a transmission licence to the Petitioner. The Relevant portions of the said letter dated 21.05.2024 are extracted as under:

“This is with reference to Petition No. 262/TL/2023 filed by M/s JSW Hydro Energy Limited (JSWHEL) before Hon'ble Commission for grant of Transmission License for Karcham Wangtoo-N. Jhakri portion of Baspa - N. Jhakri 400 kV D/c transmission line. Background about the transmission scheme is as below:

- *Baspa II HEP (300 MW), a deemed GNA grantee is connected to the Grid through Baspa Nathpa Jhakri 400 kV D/c dedicated transmission line. Further, as informed by M/s JSWHEL, the generation tariff of Baspa-II HEP is being determined by the Himachal Pradesh Electricity Regulatory Commission (HPERC).*
- *Further, for evacuation of power from Karcham Wangtoo HEP (1045 MW), LILo of 400 kV Baspa Nathpa Jhakri D/c line at K. Wangtoo generation switchyard & K. Wangtoo - Abdullapur 400 kV D/c transmission line was agreed & implemented. Beyond, N. Jhakri HEP (1500 MW), evacuation is being carried out through 400 kV D/c lines to Nallagarh & Abdullapur ISTS Stations. M/s JSW Hydro Energy Ltd. was granted Connectivity & LTA for 1045 MW & 880 MW respectively for K. Wangtoo HEP under CERC Connectivity Regulations, 2009. The above transmission system was implemented to evacuate power in a reliable manner to the different beneficiaries. Subsequently, total 1045 MW Connectivity quantum of K. Wangtoo was also transitioned under CERC GNA Regulations.*
- *For evacuation of power from Karcham Wangtoo HEP, LILo of Baspa N. Jhakri 400 kV D/c line at K. Wangtoo HEP and K. Wangtoo Abdullapur (PG) 400 kV D/c line was implemented by Joint venture company viz. M/s Jaypee Power Grid Ltd. (a joint venture company of POWERGRID and Jaiprakash Hydro Power Ltd.)*
- *The transmission system associated with K. Wangtoo HEP was agreed in the minutes of Long Term Open access meeting held along with Standing Committee meeting of Northern Region Constituents on 3/11/2006 & 12/03/2007. Extract of the minutes are enclosed at Annexure-I.*
- *Subsequently, M/s Jaypee Power Grid Ltd. applied for inter-state transmission license. Hon'ble CERC vide order dated 17/8/2007 in Petition No. 44/2007 granted the transmission license to M/s Jaypee Power Grid Ltd stating that as the following transmission system shall be required for evacuation of power from other generating stations located in the Satluj river basin, the same shall not be treated as the "dedicated" transmission system:*
 - *LILo of Baspa - Nathpa Jhakri 400 KV D/c Line at Karcham Wangtoo*

- Karcham Wangtoo - Abdullapur 400 kV D/c line (Quad)
- Now, based on HPERC's direction, M/s JSWHEL filed application for the grant of a Inter- state transmission license for Karcham Wangtoo-N. Jhakri portion of Baspa - N. Jhakri 400 kV D/c transmission line.
- At present, though the line section (Karcham Wangtoo N. Jhakri portion of Baspa N. Jhakri line) has bidirectional nature of flows but during peak hydro condition, power of about 400-430 MW flows through the Karcham Wangtoo- N. Jhakri D/c line. In addition to above, power from other future hydro projects in the upper Sutluj basin (like Shongtong HEP & Tidong HEP) shall also be pooled at Wangtoo Substation of HPPTCL, which was implemented through LILO of K. Wangtoo-Abdullapur 400 kV D/c line. Some portion of this additional power in future shall also be wheeled through the Karcham Wangtoo- N. Jhakri portion of Baspa - N. Jhakri D/c transmission line under different seasonal/load-generation scenarios.
- The Transmission Grid Map is attached at Annexure-II.
- Further, in the CERC (Terms and Conditions of Tariff) Regulations, 2024, it has been mentioned that "Existing intra-state transmission lines other than Natural ISTS lines, as certified by CEA based on the recommendations of the STU and RPC, shall be considered as ISTS systems, provided that these transmission lines are being used for evacuation and transfer of inter-state power on a regular basis as identified by CTU in consultation with the concerned RPC and RLDC."
- This is to mention that 400 kV Baspa N. Jhakri D/c transmission line was originally developed as dedicated line and subsequently, LILO part of the above line associated with K. Wangtoo HEP was given ISTS status. Though the subject transmission line i.e. Karcham Wangtoo - N. Jhakri portion of Baspa - N. Jhakri line is not an intra-state tr. line, however, to deliberate on the nature of the transmission system as dedicated/ISTS/non-ISTS, the matter was referred to NRPC. Accordingly, a meeting was held on 03/05/2024 by NRPC (Minutes enclosed at Annexure-III) to deliberate on this issue.
- During the meeting, NRPC deliberated that earlier NRPC used to certify the conversion of intra state to ISTS status but it is not applicable for secretariat to decide as of now. Now, CEA will certify the same under clause 93 of Tariff Regulation-2024. CEA deliberated that transmission license for Karcham Wangtoo - N. Jhakri portion of Baspa N. Jhakri 400 kV D/c transmission line may not be granted based on the clause 93 of CERC tariff regulation -2024 as it does not cover the provision for dedicated lines. However, CTU may use the precedence adopted in finalization of ISTS status to LILO portion of Karcham Wangtoo line and Karcham Wangtoo- Abdullapur line. NRPC also submitted that CTU may recommend the Transmission license for the subject portion based on the data of power flow provided by NRLDC.
- CTU during the meeting submitted that as per data provided by NRLDC (From Jan 23- Jan'24) there is power flow of multi generators in the portion of Karcham Wangtoo N. Jhakri portion of Baspa - N. Jhakri line.
- It is also to mention that as per the NRLDC data [year 2023] (copy enclosed), the Line section (Karcham Wangtoo - N. Jhakri portion of Baspa N. Jhakri line) has bidirectional nature of power flows involving flows from various Hydro Generators. Further during the peak hydro season, it transfers about 400-430 MW hydro generation from K. Wangtoo to N. Jhakri.
- Accordingly, as per deliberations in NRPC, considering the nature of power flow from multiple hydro generators as well as details furnished by M/s JSWHEL, CTU, in line with Section 15(4) of the Electricity Act, 2003, recommends the grant of the

Transmission license to M/s JSWHEL for the subject transmission scheme i.e. 400kV Karcham Wangtoo N. Jhakri portion of Baspa - N. Jhakri 400 kV D/c transmission line (Beyond LILO point for K. Wangtoo HEP on N. Jhakri section)."

As per the above, CTUIL, based on the data provided by NRLDC (From Jan 23-Jan'24) submitted that there is power flow of multi generators in the portion of Karcham Wangtoo -N. Jhakri portion of Baspa - N. Jhakri line. Considering the deliberations in NRPC and the nature of power flow from multiple hydro generators as well as details furnished by Petitioner, CTUIL has recommended the grant of the Transmission licence to the Petitioner for the subject transmission scheme i.e., 400kV Karcham Wangtoo N. Jhakri portion of Baspa - N. Jhakri 400 kV D/c transmission line (beyond LILO point for K. Wangtoo HEP on N. Jhakri section

28. NRLDC has submitted the details of generating stations whose power flows through the subject line and the percentage usage of the subject transmission line as ISTS as submitted by the NRLDC for the year 2023 is as below:

Sl. No.	Different Scenarios			Name of Generating Station whose power flows through 400 kV Karcham Wangtoo Jhakri line
	Power flow Direction	Season	Peak/ Off-peak Conditions	
1	Karcham Wangtoo to Jhakri	High Hydro	Peak	(i) Baspa HEP and (ii) Karcham Wangtoo HEP
2		High Hydro	Off-peak	(i) Baspa HEP and (ii) Karcham Wangtoo HEP
3		Low Hydro	Peak	(i) Baspa HEP and (ii) Karcham Wangtoo HEP
4		Low Hydro	Off-peak	(i) Generating stations of HP, injecting power at Wangtoo (HP) S/s (ii) Sorang HEP (iii) ISTS power wheeling from Abdullapur (PG) S/s through Kala Amb. (PG) S/s
5	Jhakri to Karcham Wangtoo	Observed sometimes during the day in Low Hydro Season		(i) Nathpa Jhakri HEP

Sl. No.	Month	Peak/ Off-peak Conditions	Percentage usage of 400 kV Karcham Wangtoo - Jhakri line as ISTS
1	January 2023	Peak	92%
2	(Low Hydro Season)	Off-peak	92%
3	August 2023 (High Hydro Season)	Peak	78%

29. NRLDC submitted the monthly % utilization of the Karcham Wangtoo-Jhakri portion of the 400 kV Baspa to Jhakri transmission line as an ISTS for the years 2022 and 2023, along with generation details of Baspa HEP and KWHEP as follows:

Month / Year	Baspa Generation (MW)	KWHEP Generation (MW)	Injection at 400kV Wangtoo S/S from 220 kV Side (MW)	400kV Karcham - Jhakri D/C flow (MW)	% Utilization of the Karcham - Jhakri portion as ISTS
Jan-22	51	91	63	404	72%
Feb-22	116	589	53	-4	100%
Mar-22	154	1049	77	-104	100%
Apr-22	49	360	74	212	88%
May-22	73	584	82	163	89%
Jun-22	163	1180	74	385	88%
Jul-22	174	1107	80	222	86%
Aug-22	330	1141	201	237	78%
Sep-22	330	1143	209	178	78%
Oct-22	292	1036	174	74	78%
Nov-22	48	1042	39	-129	100%
Dec-22	136	0	19	213	27%
Jan-23	40	0	0	306	87%
Feb-23	35	0	4	308	88%
Mar-23	215	0	0	215	0%
Apr-23	84	991	73	-5	100%
May-23	212	505	137	263	70%
Jun-23	326	1014	215	228	76%
Jul-23	330	1122	165	220	77%
Aug-23	330	1060	69	289	76%
Sep-23	198	1115	140	307	85%
Oct-23	83	212	46	368	65%
Nov-23	60	149	12	240	70%
Dec-23	88	0	0	45	0%

NRLDC has submitted that the monthly utilization of lines as ISTS is calculated based on the Monthly PSS/E Transmission Pricing base case, which is prepared as per the CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 and its amendments thereof. NRLDC has calculated the power of Baspa (in MW) flowing from Karcham to Jhakri and Karcham to Abdullapur as per the available data in the Monthly transmission Pricing base case for the year 2022-23.

With regard to power distribution, NRLDC has submitted that Baspa HEP evacuates its power up to the Karcham HEP switchyard through 400 kV Baspa-Karcham D/C transmission line. At Karcham HEP, there are multiple 400 kV transmission lines connected to different stations:

1. Two 400 kV transmission lines to Jhakri HEP.
2. Two 400 kV transmission lines to Wangtoo (HPPTCL) Substation (on the Karcham - Abdullapur section).
3. Two 400 kV transmission lines to Baspa HEP.

The share of power of Baspa HEP which is flowing through the 400kV Karcham - Jhakri section of the 400 kV D/C Baspa-Jhakri transmission line has been calculated using the following formula:

$$\text{Power flow on 400kV Karcham – Jhakri D/C} = \left(\frac{\text{Generation of Baspa}}{\text{Generation of Baspa} + \text{KWHEP}} \right) * \text{Total Power Flow}$$

30. We have perused the calculations carried out by NRLDC to estimate Baspa Power flowing through Karcham-Jhakri line. We observe that the formula used by the NRLDC for the calculation of the share of Baspa II HEP/ ISTS Power is based on the Average participation method under the CERC (Sharing of inter-State Transmission Charges and Losses) Regulation, 2020. However, the CERC (Sharing of inter-State Transmission Charges and Losses) Regulation, 2020 provides for the Hybrid Methodology for determination of utilization of the transmission assets using Marginal Participation Method and Average Participation Method.

Hence, the methodology as provided in the 2020 Sharing Regulations has not been used but a part of it has been used. We observe that Baspa-Jhakri Transmission Line has been constructed as a dedicated transmission line of the Baspa II HEP over till Jhakri, which has been planned for evacuation of the power of Baspa II HEP exclusively, therefore assuming the pro-rata distribution of power of Baspa II HEP and Karcham Wangtoo HEP beyond Karcham Wangtoo using the average participation method does not reflect the principle of planning nor the methodology as per the 2020 Sharing Regulations. The power

flow on the Karcham-Jhakri Section over and above the generation of Baspa II HEP can also be assumed as Karcham power flowing through such line since Karcham power flow to Abdullapur , and Jhakri would depend on the impedance as well as well as the Load generation balance.

We have calculated the % utilization of 400kV Karcham - Jhakri D/s Section as ISTS for the calendar year 2022 and 2023 as under based on the above assumptions:

Month / Year	Baspa Generation (MW) A	KWHEP Generation	400kV Karcham - Jhakri D/C total flow (MW) B	Net ISTS Power flow through 400kV Karcham - Jhakri D/C line C= B-A (if B>A) and C=0 (if B<A)	% utilization of 400kV Karcham - Jhakri D/C as ISTS with respect to total ISTS power flow D (in %) =C/B*100	Remarks
Jan-22	51	91	404	353	87%	
Feb-22	116	589	-4	-120	--	Reverse power flow
Mar-22	154	1049	-104	-258	--	Reverse power flow
Apr-22	49	360	212	163	77%	
May-22	73	584	163	90	55%	
Jun-22	163	1180	385	222	58%	
Jul-22	174	1107	222	48	21%	
Aug-22	330	1141	237	0	0	
Sep-22	330	1143	178	0	0	
Oct-22	292	1036	74	0	0	
Nov-22	48	1042	-129	-177	--	Reverse power flow
Dec-22	136	0	213	77	36%	
Jan-23	40	0	306	266	87%	
Feb-23	35	0	308	273	89%	
Mar-23	215	0	215	0	0	
Apr-23	84	991	-5	-89	--	Reverse power flow
May-23	212	505	263	51	19%	
Jun-23	326	1014	228	0	0	
Jul-23	330	1122	220	0	0	
Aug-23	330	1060	289	0	0	
Sep-23	198	1115	307	109	36%	

Oct-23	83	212	368	285	77%	
Nov-23	60	149	240	220	91%	
Dec-23	88	0	45	0	0	

As per above, it is observed that for only four months in a calendar year the quantum of Karcham power flows through the Karcham-Jhakri line making flow in Karcham-Jhakri line as more than 50% power as ISTS for four months. Further, in the case of low hydro seasons, when both Baspa and Karcham are not generating enough power, the power is flowing through displacement through available paths. This is not the case of Karcham power being evacuated using Karcham-Jhakri line.

31. A line that has been constructed as a dedicated line is not mandated to follow the process of competitive bidding for construction of the line. A dedicated line is connected to multiple generating stations in specific terrains such as hilly states may use the same dedicated line to optimise their cost. Such dedicated lines, if considered as ISTS on the premise that the power of multiple generators flows through it would lead to many of such dedicated lines being billed on to beneficiaries of India at large when the lines were constructed as dedicated were by the generator to evacuate its power. Levying of transmission charges for such dedicated lines is not as per the scheme of the Act, where a generator is required to construct its dedicated line for which no licence is required.
32. This Commission vide order dated 23.09.2022 in petition 57/MP/2022, has observed as follows:

“22. The Electricity Act 2003 lays down the framework of transmission system development in our Country as divided into intra-State transmission and inter-State transmission. The responsibility of development of inter-State transmission system lies with CTU, while the development of intra-State transmission system with STU. Inter-State transmission system is planned by CTU for evacuation and transmission of inter-state power after consultation with CEA and the concerned RPC, and mode of implementation of inter-state transmission system is either Tariff Based Competitive Bidding (TBCB) route or Regulated Tariff Mechanism (RTM) route, as decided by the committee constituted by MOP, Govt. of India. However, there are some transmission lines connecting the systems of two neighboring states which have been constructed over the years by concerned States under bilateral arrangement or the intra-state lines converted into inter-state lines due to bifurcation of a State. Such transmission lines connecting two states are eligible as inter-State lines

under Section 36(i) of the Act and they are being approved by the Commission as inter-State transmission system upon application by the Concerned States. Commission had also introduced identification of intra-State transmission lines as inter-State based on load flow under Sharing Regulations, 2010. However, load flow varies in a transmission system on continuous basis depending on the load-generation balance scenarios. A transmission system planned as intra-State transmission system cannot be termed as inter-State for one month and then intra-State for another month. There are cases where intrastate power flows through inter-State lines where such inter-State lines cannot be declared as intra-State. Since the network is meshed, it is not appropriate to identify an intra-State transmission system as inter-State and levy its transmission charges on beneficiaries of other States.”

As per the above Order, the Commission had observed that load flow varies in a transmission system on a continuous basis depending on the load-generation balance scenarios. Therefore, a transmission system planned as intra-State transmission system cannot be termed as inter-State for one month and then intra-State for another month. There are cases, where intra-state power flows through inter-State lines and such inter-State lines cannot be declared as intra-State. Since the network is meshed, it is not appropriate to identify an intra-State transmission system as inter-State and levy its transmission charges on beneficiaries of other States. Therefore, the Commission has taken a view that planning the transmission line plays a vital role in declaring a transmission system as inter-State or intra-State.

33. Based on the above discussions, we are of the view that the 400 kV Baspa-Jhakri D/c Transmission line was planned and executed as a dedicated transmission system of Baspa II HEP owned and maintained by the Petitioner. It is observed that after the LILO of 400 kV Baspa- Jhakri D/c Transmission line, power of Karcham generating station and Jhakri generating station may also flow through the Karcham wangtoo-Jhakri Portion of the above transmission line. Further, as already observed above, the methodology used by NRLDC is Average Participation and not the hybrid methodology as per the 2020 Sharing Regulations. Therefore some additional information with respect to the power flow in the subject transmission system would be required from the NRLDC.

Further, we are also of the view that before taking decision regarding the grant of the Transmission Licence to the Petitioner, the comments of the Public may

also be invited in light of discussions in Paragraphs 31 and 32 of this Order and that it is being proposed to levy the transmission charges of the said dedicated line on beneficiaries at large. Therefore, we direct that a public notice under clause (a) of sub-section (5) of Section 15 of the Act be published to invite suggestions or objections to the grant of the transmission licence to the Petitioner. The objections or suggestions, if any, be filed by any person before the Commission by 16.08.2024. NRLDC is further directed to furnish the percentage utilization of the Kharcham-Jhakri line month-wise under ISTS using a hybrid methodology as per the 2020 Sharing Regulations within two weeks of issue of this Order.

34. The Petition shall be listed for the hearing on 22.08.2024

Sd/
(Ramesh Babu V)
Member

Sd/
(Arun Goyal)
Member

Sd/
(Jishnu Barua)
Chairperson